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KANSAS FARMER

MAIL & BREEZE

Volume 67

September 7, 1929

Number 36



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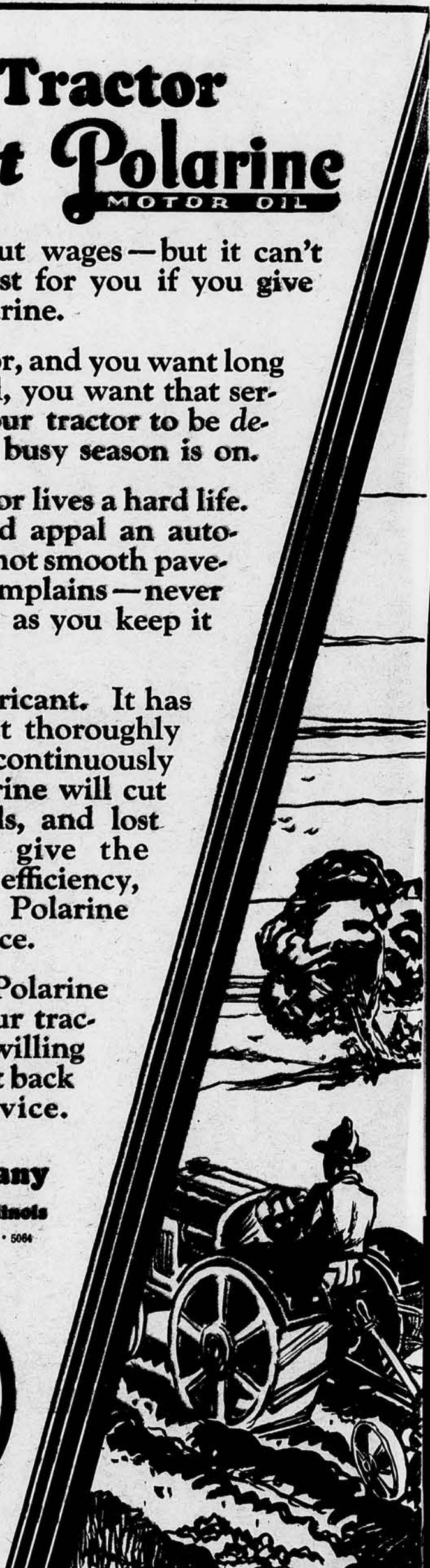
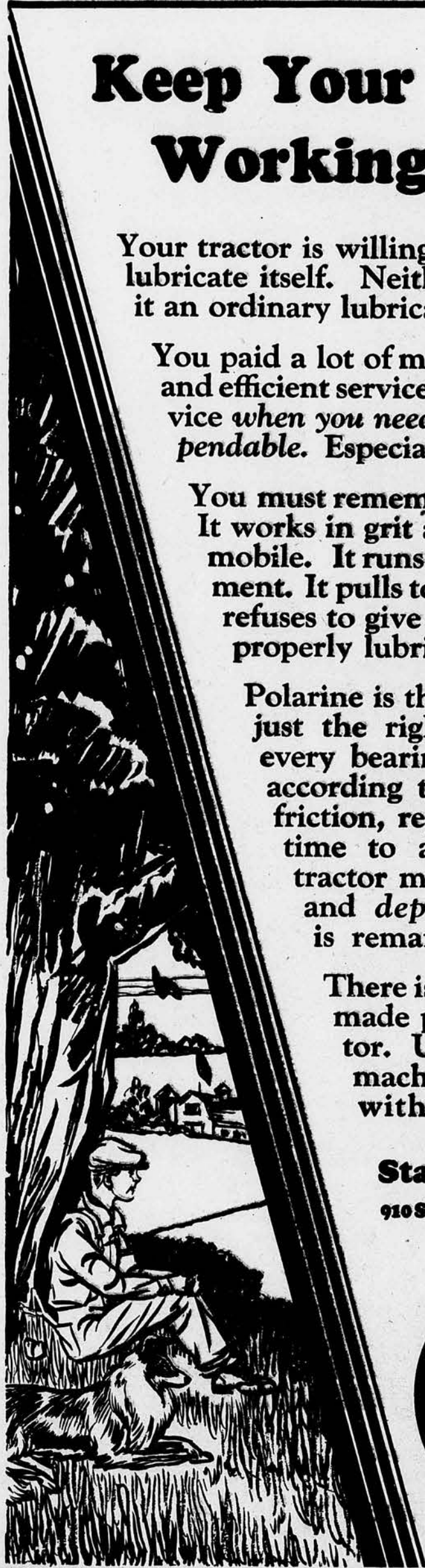
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KANSAS FARMER

By ARTHUR CAPPER

Volume 67

September 7, 1929

Number 36

"We Came; We Saw; We Conquered!"

Second Jayhawker "Expeditionary" Force in Northwest and Canada Had Plenty of Memorable Thrills

By Roy R. Moore

WELL, it's all over—this second great adventure of Kansas Jayhawkers into the Pacific Northwest and Canada! "All over" isn't exactly the expression to use either, for every member of the 340 Kansans who journeyed into the fairy land of vast plains, mighty forests, majestic mountains and the blue Pacific itself, not to mention the foreign cities, will live over in fancy this wonderful two-weeks' period for years and years.

It is difficult to put down in cold type even the highlights of this great trip, so varied were the many experiences. And when I recount some of them you will agree with me.

For instance: Thursday noon of the last week, we all sat down to luncheon in a wonderful hotel in Regina, the guests of the provincial government of Saskatchewan. Clear across one end of the big dining room was the speakers' table, occupied by officers of the province of Saskatchewan and the city of Regina, and even the prime minister himself.

It was an unusual meeting in many ways, mainly because it was the biggest group of Americans that ever assembled for a meal under one roof in Regina. To me, however, one other incident stood out foremost.

The toastmaster stood up after the orchestra had played its medley of American tunes running from "Old Black Joe" to "Broadway Melody," and asked that everyone present drink to the health of his Majesty the King.

Imagine the bewilderment of the average Kansan, being asked to drink to the health of anyone, let alone King George V! But the tune the orchestra struck up at that moment sounded familiar—in fact, it was the same as "America," and we all joined in right heartily, very few of us aware that the air was "God Save the King" from which our own America was copied.

There was a silence after the stanza, and the men at the speakers' table raised their glasses—ice water, I might add, and said "To the King." Most of us joined, a second or two late.

But that wasn't all. The toastmaster proposed a

How Jayhawkers "Resolved"

To Senator Arthur Capper:

We, the 340 members of the Second Annual Jayhawker Tour, August 11 to 24, 1929, in mass meeting assembled, at Winnipeg, Canada, August 22, desire to express our sentiments, as follows:

We heartily commend the work of F. L. Hockenhull and Roy R. Moore in providing us with a splendid program and schedule for the entire trip. We enjoyed every feature, and fail to see where anything could have been added to contribute to the pleasure and profit of the tour. They have set a standard for themselves which they will find it difficult to surpass.

It has been a tremendous success from every angle. The fields of grain; the undulating table lands; the mountains; the swift running rivers; the pleasure resorts; and the very arm of the great ocean itself, enthuse and inspire us.

We endorse in an especial manner your determination to give food to the mind as well as afford beauties for the eye. The privilege of visiting many co-operative commodity marketing organizations; mingling with our brethren from Canada and discussing our mutual problems, has been of inestimable value to us as farmers and to the future benefit of our state.

The various transportation agencies, thru their courteous and efficient representatives and employes, did everything in their power to minister to our comfort and convenience. They were at all times solicitous for our welfare, and earned our confidence and esteem.

The meals provided in Pullman diners and hotels were of surpassing excellence, and exceeded our expectations in both quantity and quality of food and in skill of service.

The various communities in which we stopped met us with hearty greetings, and proved their sincerity by the thoughtful courtesies extended and services rendered, which contributed not a little to our enjoyment.

In short, we deem the tour a brilliant success in every particular, and consider ourselves fortunate in having been members of the party.

Supreme Court, as he detailed his sadness in parting, which was joined in by several other speakers. And the meeting broke up like an old fashioned revival, with the company joining in the old favorite "Blessed Be the Tie That Binds" and "God Be with You Till We Meet Again." Incidentally, "meeting again" is not altogether an improbability, for there is a chance that a reunion will be held some time this winter or next spring, either in

Topeka, or some other central point, for the members of the Second Jayhawker Tour.

So far the impression may be gained that the trip largely was a series of banquets one after another. Really this phase was only secondary. Primarily the entire trip was one that would delight the average vacationist.

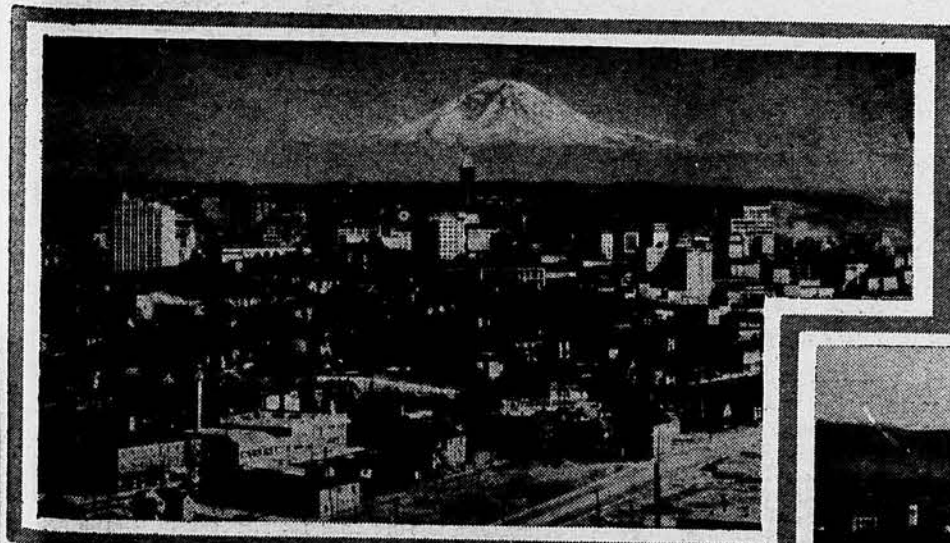
It really would take several pages in Kansas Farmer to go into detail about the day by day experiences of the trip to the Pacific Northwest and back. It is enough to say that the adventure extended nearly 6,000 miles, thru nine states and four Canadian Provinces and included in the itinerary was one day on the ocean.

Stops were made in nearly every important city in the Northwest and Western Canada. The two special trains, each consisting of 12 cars and known as Sections 1 and 2 of the Jayhawker Special, were met by welcoming committees at every stop along the route of the tour. Mayors, governors and premiers were among the dignitaries receiving the Jayhawkers, who were given royal entertainment at every stop-over point.

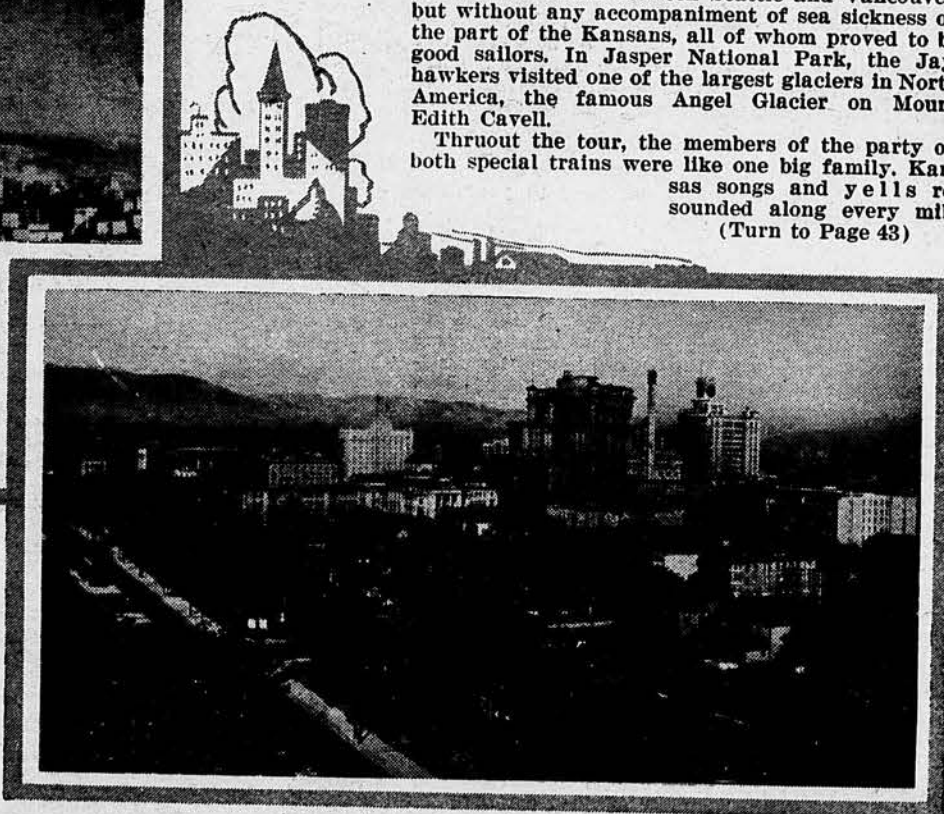
In addition to the important cities visited, stops were made in three national playgrounds, Glacier National Park, Montana, and Mount Robson and Jasper National Parks in Canada. J. W. Leedy, formerly governor of Kansas, headed the welcoming delegation in Edmonton, and the Hon. J. G. Gardiner, Premier of Saskatchewan, who by birth is a Jayhawker from Kingman, Kan., made the address of welcome at a luncheon in Regina, given the Jayhawker tourists by the government of Saskatchewan, which has already been described in part.

A large party of Blackfoot Indians, with teepees pitched in a picturesque setting in the shadows of the mountains of Glacier National Park, received the Kansas tourists and adopted six of the party into the Blackfoot tribe. The new honorary members of the tribe are Mrs. George Southern, Manhattan; D. T. Gore, Larned; Mrs. Mary Kraisinger, Timken; Carl Durr, Pendennis; Miss Alice Magee, Manhattan; and Elmer Wagner, Topeka. "Sea Legs" were acquired by a day's voyage on the Pacific Ocean between Seattle and Vancouver, but without any accompaniment of sea sickness on the part of the Kansans, all of whom proved to be good sailors. In Jasper National Park, the Jayhawkers visited one of the largest glaciers in North America, the famous Angel Glacier on Mount Edith Cavell.

Thruout the tour, the members of the party on both special trains were like one big family. Kansas songs and yells resounded along every mile (Turn to Page 43)



Above is a View of Seattle, Wash., and at the Right is Vancouver, British Columbia, Two Cities Visited by the Jayhawkers



toast to the President of the United States. And how the Kansans did sing when the same orchestra struck up "The Star Spangled Banner." We believe President Hoover would have felt honored indeed at the way we pledged his health in sparkling ice water.

Another high spot in my memory of the trip was the banquet in Winnipeg where we gathered together for our final meal before the 30-hour solid run into Kansas City.

Tears were in the eyes of many folks when they listened to Justice John Dawson, of the Kansas

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Passing Comment

By T. A. McNeal

WOULD you consider it an unkindly act," writes a very religious subscriber, "to express concern about your soul's salvation?" Certainly not, provided the subscriber is acting in good faith and really desires to aid my present and future spiritual welfare. I am flattered if anyone really feels an interest in me and my welfare, either temporal or spiritual.

However, in reading this reader's letter I think I can see that he assumes that spiritually speaking, I am in a rather lost and undone condition, and that he knows just what ails me and what is necessary for my salvation. Now to that assumption I have some objection. I do not doubt this reader's sincerity, but I have very serious doubts concerning his knowledge. I do not think he knows any more about the future than I do, which is nothing at all.

A great many very sincere and conscientious people base their faith on certain assumptions which, to me, seem to be utterly unreasonable. Then, having built up a belief based on these assumptions they conclude that those persons who do not admit the truth of the assumptions are in a lost and undone condition. They may be, and probably are, anxious to save these sinners, and feel grieved because the sinners refuse to be saved that way. To make the matter even worse, a good many of these sinners seem to be, according to worldly standards, quite reputable citizens who attend to their own business, pay their honest debts, help their neighbors when in trouble, and act as if they felt that they have fully as good a chance of whatever future bliss there may be in store for mortals hereafter as these persons who insist that they know the way of salvation.

What causes a considerable amount of prejudice against churches in the minds of those outside of the fold is that seeming assumption of spiritual superiority on the part of those inside. Probably those inside the fold will deny this. They may claim to be "humble followers," and so they may be humble toward a power which they consider superior to their own, but they are not humble toward those who may differ from them in matters of belief. They may tolerate such people, but there is no concession of equality of judgment. The people who differ are, in their opinion, sinners who are really walking in darkness and need to be saved, while they feel that they could show these erring ones the way if they, the sinners, would only accept their guidance. The sinners, on the other hand, may have a kind of superiority complex themselves. Very often they are just as intolerant as these self-appointed spiritual advisers.

Crop Insurance Would Help

IF YOU will take the trouble to study crop statistics covering a period of 10 or 20 years, you probably will be surprised to find how little the average acre yields of different farm crops have varied during that period. In various localities farmers have met with disaster; many of them have suffered from complete or nearly complete failures, but taking the United States as a whole, the average yield from year to year has varied surprisingly little.

Now if it were possible to join all the raisers of any standard crop in the United States together, each one could be insured every year to have an average crop, and the premium necessary to be paid for such insurance would not be heavy. If the equivalent of 1 bushel of wheat for every acre of wheat sown in the United States were contributed every year into an insurance fund it would be ample to insure every wheat raiser of an average crop. It would take care of all losses from floods, drouth, hail or other destructive storms, insects and other pests which damage the wheat crop.

That, together with a nation wide marketing system, would stabilize the farming business and take from it the harassing uncertainty which hangs over every farmer who happens to be in debt. A farmer fortunate enough to be out of debt and with a surplus to fall back on, can weather the many possible disasters that are incident to the farming business, but if he is not in that fortunate condition any one of a number of calamities may leave him stranded.

There are certain expenses which cannot be avoided. A flood may sweep over his farm if he happens to live by a stream and literally clean him out. A hailstorm may, within an hour, ruin his prospective harvest. Drouth, wet weather, in-

sects, any one of these may leave him stranded with his taxes and ordinary expenses to pay and nothing to pay them with. If this farmer could have the assurance of an average crop and a fair price, which could be assured by a comprehensive and orderly system of marketing, it would lift from his mind a burden of worry. It would make farming a business instead of a gamble. Now, my opinion is that this condition is humanly possible, but I do not have much hope that it will be brought about within the near future.

'Twas a Real Trip

THE Second Jayhawker Tour is over, and those folks I have talked with, who were in the big party, are enthusiastic. It was not only a great sightseeing trip, but it also was a liberal education. As you will have the opportunity to read about it as described by some of those who were along, and probably an opportunity to talk about it with some one or more of those who made the trip, I will not dwell on the story of what they saw or what they heard. I do not know just who ought to be given the greatest amount of credit for the success of this tour. But I take off my hat to the young men who put it over. Next year there will, in all probability, be another tour arranged



that will be fully as enjoyable, maybe even more so, if that is possible, than the one just completed. The readers of the Kansas Farmer will do well to begin now to make their arrangements for next year. I am certain they will have a bully time.

Times Are Better Now

A READER, who is much disturbed over present conditions, tells me that he rather despairs of the future. It seems to him that very little progress is being made, and he fears that conditions are going to be worse. Well, of course, I do not know anything about the future. There may be evil times ahead of us, worse than anything seen or experienced heretofore, but when one tells me that conditions are worse now than they have been in the past, I beg to differ. It seems to me that the person who makes such an assertion as that, either does not know what he is talking about or else he has cultivated a tendency to pessimism until he has become abnormal.

A former mayor of Topeka, who apparently has become almost insane in his opposition to prohibition, makes the statement that, here in Topeka, there are three or four places in every block where drinking is carried on every day and every night. He also says that there is more drinking in Kansas than before we had prohibition; that the

younger generation drinks more and does not carry its liquor so well as the old generation carried its liquor, and that drinking among the women of Kansas, or at least among the women of Topeka, has increased 1,000 per cent.

Now if what he says were true, then necessarily there would be more evidences of drunkenness than there used to be when the saloons were running wide open. We, who are old enough to remember that time, know that drunken men were very common, not only on the streets, but also in the offices and other places of business. If there is more drinking now than then, and if the drinkers do not carry their liquor so well as the drinkers did then, there should, of course, be more evidence of it. The truth is that it is a very rare thing now to see a drunken man on the street. Drinking, no doubt there is, and drunken men may be somewhere, but they certainly are not in evidence. All the evidence that can be obtained tends to prove that there is nowhere nearly so much liquor consumed as during the days of the saloon. His statement that drinking among the women has increased 1,000 per cent is not supported by any evidence, and is absurd.

I have lived a good while, and have had opportunity to mingle with a great many people, some rich, some poor, some wise, some foolish, some religious, some just the opposite. That does not prove, however, that I know just how much devilment is going on, how much drinking or how much violation of the commonly accepted standards of morals. The mere fact that I do not see people drink does not prove that they do not drink. All I can say is that so far as their public conduct is concerned, people are better behaved than they were 50 years ago. Crime has increased, certainly; there are a great many more people now than there were then; there are more laws to violate and there is a great deal more property. Ninety per cent of the crimes are crimes concerning property. The desire to acquire property wrongfully is the chief incentive to crime, and therefore at the present time there is far more incentive to commit crime than half a century ago. If you could imagine a community where there is no property and no temptations to spend money for luxuries or high living, there would be very little crime; there would be little larceny because there would be nothing to steal.

There would be no bank robberies because there would be no banks to rob; there would be no defalcations because there would be no opportunity for defalcations. As there would be almost nothing to spend money for, there would be little temptation to get money illegally. Differences in conditions must always be taken into consideration in comparing one period with another. And taking difference of conditions into account, it is my opinion that the world and the people who inhabit it are not growing worse.

Jules Verne Was Slow?

LESS than a generation ago, and within the memory of many millions of people now living, a Frenchman by the name of Jules Verne, gifted with a vivid imagination and a scientific turn of mind, wrote a book entitled, "Around the World in 80 Days." The book had a wide sale. It was pronounced interesting, but of course wholly improbable. The story was an account of the supposed journey of a man who set out to circle the globe in the shortest possible time. He made the trip, according to Verne, in the astonishingly short period of 80 days. That was only about 60 years ago. Now a journey 'round the world even without the aid of a flying machine can be made easily in half the time consumed by the hero of Jules Verne's tale. As this is being written, the Graf Zeppelin is finishing its flight around the world. The total time consumed will be 21 days or a little less, and if the airship had made no stops longer than were absolutely necessary, the trip might have been made in 15 days.

The journey of this airship has seized the public imagination as nothing else has done since the trans-Atlantic journey of the young, lone eagle, Lindbergh. During the flight of the Zeppelin across Kansas, the young lady in charge of the Daily Capital's central telephone was kept busy for hours answering hundreds of calls from folks who wanted to know about the big airship.

While this is a remarkable achievement, it will be eclipsed within a year or two, so that to fly 'round the world in 21 days will no longer seem

remarkable. However, it is hardly probable that the Zeppelin type will be the coming vehicle of air transportation. It is too large, unwieldy and too slow. Heavier-than-air machines will be made that will travel twice as fast, carry more passengers, and be at least as safe as the Zeppelin. One of these huge machines, manufactured in Switzerland, has already been tested to the extent that it is known that it can make a successful flight and carry 120 passengers. The greatest difficulties to be overcome with the heavier-than-air machines, are those of getting into the air and making successful landings. To get off the ground and to land safely, requires large landing fields, which are not always handy in case of a forced landing, and to land without such a field, is highly dangerous. However, this difficulty will be overcome. A type of airplane is already being developed and has just about reached the successful period of development, which can light as safely and within almost as little space as a big bird. It just settles down easily and gradually and requires no runway, either, to get into the air or to come down again.

Already the airplanes are perfected to the extent that there is very little danger while they are actually flying. It is when some major accident happens to the wings or motors and the machine is forced to land, that the danger occurs. There is no doubt that in the near future travel by air will be at least as safe as travel on the land, even in well equipped railroad trains, and much safer than in automobiles. And space will be nearly eliminated. It is already possible to breakfast in Kansas City and take dinner at either Los Angeles or San Francisco.

But Why Move the Rock?

AMONG the questions asked the 40 young men by Edison in his celebrated test was this: "If you were alone on a desert island and wanted to move a rock weighing 100 tons, how would you do it?" The young fellow who got the best grade answered that if he wished to move the rock he would use the lever and inclined plane. What strikes me as the most sensible thing about that answer is that part of it, "if I wanted to move the rock." As a matter of fact, why should an individual alone on a desert island wish to move a 100-ton rock?

Speaking of what seems to me to be a decidedly unimportant discussion, here is a question from a rural high school which the writer says has been the subject of earnest argument for some time: "There is a freight train at a depot 1 mile long. Caboose stands at depot; engine 1 mile out of town. There is a man on top of the caboose. When the train starts for the next town 10 miles away, the man starts to walk on top of the train to the engine. When the engine gets to the station it stops and the man gets off at the depot. How far did he walk and how far did he ride?"

According to the language of this letter this was undoubtedly the longest depot in the United States that I have ever heard of. I have no recollection of ever having seen a depot 1 mile long. However, I presume what the writer meant to say was that the train was 1 mile long; that the caboose was standing at the depot and the engine at the other end of the train was 1 mile out of town in the direction of the next town. The train starts for the next town 10 miles away and at the same time the man on top of the caboose starts to walk toward the engine, arriving there either before or just as the engine arrives at the depot. If the man had stood still on top of the caboose when the engine arrived at the depot of the next town he would have been 1 mile from town, and therefore would have ridden 9 miles. He walked the length of the train, 1 mile. If the man had been on the engine when the train started and had walked back toward the caboose, arriving there just as the engine arrived at the depot, he would have walked the same distance as in the

other case, 1 mile, and have ridden the same distance, 9 miles, but in that case would have been 1 mile from town at the end of his walk. Perhaps the confusion in the minds of some of these high school students comes from mixing up the distance between the two towns and the distance the train actually travels. The distance between the towns is 10 miles, but the train only travels 9 miles. The man walks the rest of the way.

At first thought this question seems trivial and unimportant, but possibly it may have some educational value in helping these students to think. However, I cannot understand why it should occasion any extended discussion.

The tramp knocks out most of the supposedly scientific rules of health. He eats irregularly. He



rarely, if ever, takes a bath; he sleeps where night overtakes him with little regard to shelter or weather conditions. He is generally lousy and decidedly unsanitary. According to all the rules of health he ought not to last more than a few years at the most. He ought to be subject to all sorts of disease, but is he? Not so you can notice it. Did you ever see a sick tramp? All the tramps I have ever seen were remarkably fat and healthy and odoriferous. If the lice troubled them they gave no indication of it. They had no worries that were apparent.

Not that I want to discourage the practice of bathing, but I am compelled to admit that the healthiest people I have ever seen were the dirtiest. I once had a seatmate at school who generally had lice and often had the itch, but his general health was excellent. I might also say that he shined with wholehearted generosity what he had, with me.

One of the questions asked in the Edison questions was whether lying was ever justified. The young fellow who won the high grade is quoted

as answering that lying was justified if necessary to save a friend from unmerited pain or danger but never justified if the lie was told for the advantage of the liar. Which answer was illogical, to say the least. The rights of each individual are just as important to him as the rights of any other individual, and perhaps more so. If he is justified in telling a lie to save someone else from unnecessary pain or punishment, he is equally justified in telling a lie to save himself.

What the Law Says

Can a county commissioner in a district force the farmers to organize a drainage district so he can, as he says, fix the road? There is a creek that overflows its banks twice a year and overflows the road. What votes does it take to make a drainage district effective? Can those that do not vote for it be made to stand their share of the cost?

Section 401 of Chapter 24 of the Revised Statutes provides for the organization of drainage districts by the county commissioners. But before such a district is organized the statute requires that a petition for the incorporation and organization of the district shall be addressed to the board of county commissioners of the county in which the lands it is proposed shall constitute the district are situated. The petition must be signed by not less than two-fifths of the taxpayers residing within the boundaries of the proposed district. When a proper petition is presented the board may declare upon a hearing that the territory described in the petition shall constitute a public corporation and the inhabitants within such bounds shall be incorporated as a drainage district under the name of the drainage district, county, Kansas.

It then becomes the duty of the board of county commissioners to call an election to choose the officers of the drainage district. Any taxpayer who is a resident of the drainage district who is over the age of 21 has a right to vote in the election of directors. The drainage district corporation may be dissolved whenever the owners of a majority of the acres of land within the district shall file a written petition with the secretary of the board of supervisors asking the board to disorganize and dissolve the drainage district. The last legislature also provided that any district court in the state may upon proper petition organize what is called a conservancy district which takes over all the rights of the old drainage district.

As you will see, first, it is not required to take a vote on the question as to whether the drainage district shall be organized. It may be organized by the board of county commissioners or it might be organized by the district court under the recent law providing there are the requisite number of valid petitioners. Once organized, of course, it is binding on all the residents of that district. They have a right if they are residents and taxpayers over 21 years old to vote for the election of directors, but whether they do or not they would be bound by the action of the board of directors.

Good Crop of Sunflowers

We rented 10 acres to a man who said he would attend to it in good shape. It has big sunflowers on it, some of them nearly as tall as the corn. Have I the right to cut them out? We had no written contract, and he does not live on the place. Who has the right to the corn stalks after the corn is all husked?

M. A. P.

You would have a right to go into this field and cut out the sunflowers or other weeds if you see fit to do so. I do not think, however, that you could collect anything from the renter for your labor.

Where a contract is made with the renter that he will furnish a certain share of the grain delivered either on the place or at some other place designated, and he husks the corn and delivers the landlord's share, he has the right to the stalks so long as he is in possession of the land under his rental contract.

The March of the Mergers

WITH the boom in the stock market, we are having an epidemic of mergers. Big business is getting bigger—even gigantic. Chains and consolidations of every sort are underway, from food products and chemicals to banks and railroads and other utilities. About 20 great railroad systems now control 75 per cent of the country's 800 railways, and need only the consent of the Interstate Commerce Commission to take over and operate this mileage directly.

Congress has purposely made laws which tunnel thru the Sherman Anti-Trust act and the Clayton law. And the merger-makers are marching thru this breach where it has been made permissible for them to go thru.

The government, itself, is encouraging the merger of railroads where it believes a merger will in time benefit the public thru the unity, economy and increased efficiency of such operation; where it believes the usefulness of the merged roads will be augmented.

The natural and logical tendency of business, the world over, is to grow bigger. The movement is inescapable, it is an evolution. But as this is not yet an entirely altruistic world, during this drift toward larger and larger combinations of capital, the welfare of the consumer must be as-

sured, or at least safeguarded and looked after.

To have a boom in the stock market and an epidemic of mergers at the same time—both going strong—doesn't look like a mere coincidence. Such a market offers a fine opportunity to float merger stocks. And the public has some warrant for suspecting that the chief reason for some of these mergers is what the promoters can get out of the stock-market exploitation of these properties. With thousands of Americans gone speculation-mad, it seems there are millions in stock juggling.

The Department of Justice is preparing to devote more attention to anti-trust violations. Attorney General Mitchell has asked for an additional \$75,000 for this work.

Not long ago a well-known industry effected a nation-wide merger. In full-page announcements published in newspapers all over the country, this concern made known the reasons for the merger and the belief that it would result in economy of operation and superiority of product.

Not only was that good business advertising for the corporation; it probably went far to convince the public that this consolidation was on the square and had honest intent behind it.

Every time a big merger goes thru, many men are thrown out of work regardless of their years

of faithful service to the former owner. Ultimately it may be that more jobs will be created than were lost, but that does not help the displaced man who needs a job here and now.

Considerations such as these and the interests of the public, require that mergers for mere stock-jobbing considerations, or purely promotional reasons, should be prevented by law, as are other get-rich-quick games and speculative swindles. We must have a care, too, that no monopoly is created by a merger of great competing corporations.

I believe Congress should enact further protective legislation, permitting consolidations and mergers to be effected only when good cause for such combinations can be shown, one prime reason to be that the public as well as the corporations shall be served by them.

That would be only good business and common sense, for no other sort of merger could succeed except as a scheme to unload something on the unwary, to the injury instead of the benefit of general business and the public.

Arthur Capner

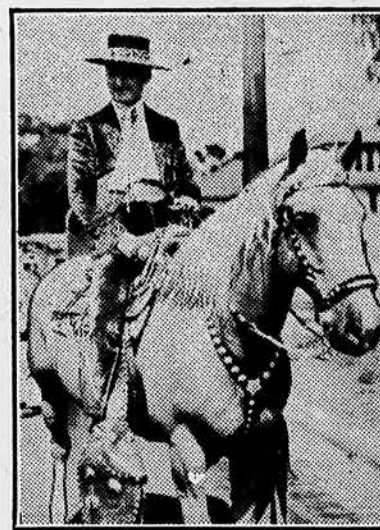
World Events in Pictures



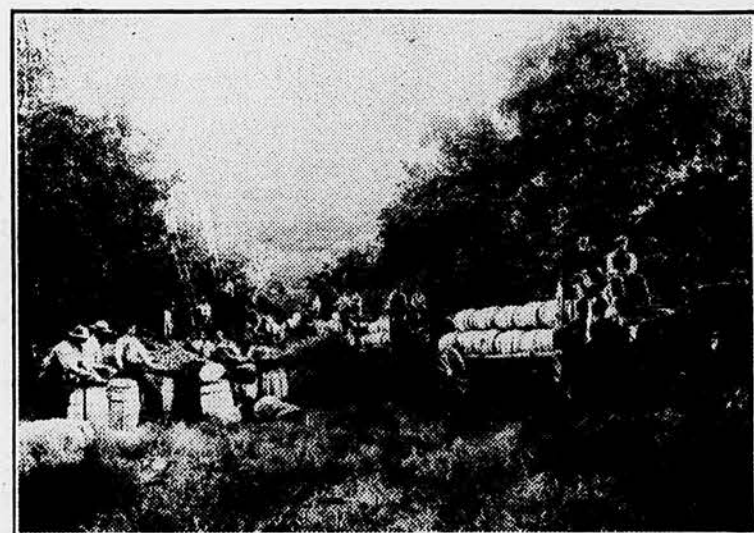
This Bronze Statue of Abraham Lincoln Was Unveiled Recently at Freeport, Ill., 71 Years After the Memorable Debate With Stephen A. Douglas



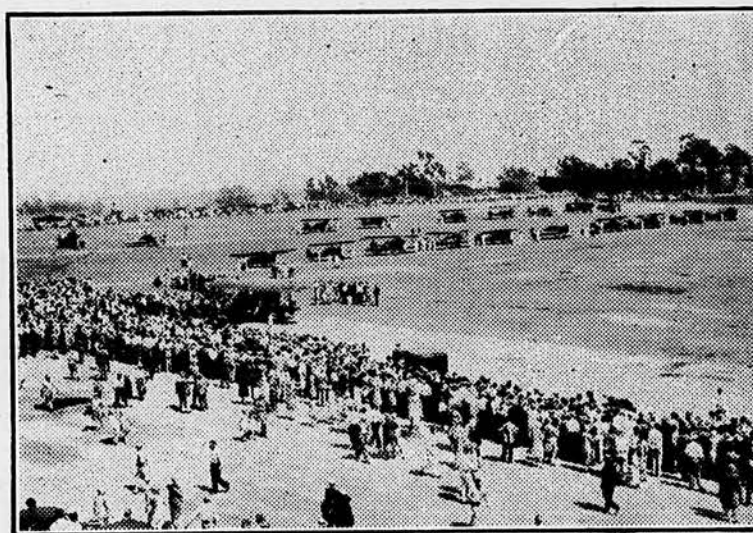
Here Is Italy's Dictator, Mussolini, Reviewing the Boy Scouts of All Nations at His Residence, Villa Torlonia, Near Rome. Two Thousand Scouts From All Over the World, Attending the Great Jamboree, Sent Their Representatives to Rome to be Reviewed by Il Duce



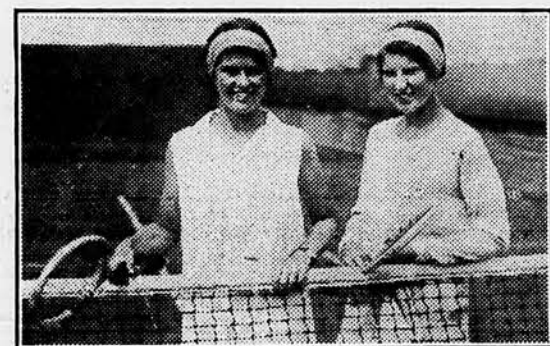
William Gibbs McAdoo, Former Secretary of the Treasury, as He Appeared Recently in the Picturesque Parade at Santa Barbara, Cal.



Virginia's First Export Apples Are Now Being Picked in the Winchester Region. Several Carloads of These Apples Are Now on Their Way to England, the Forerunner of Virginia's Usual 1-Million Barrel Export Crop. The Quality of This Year's Production Is Unusually Good



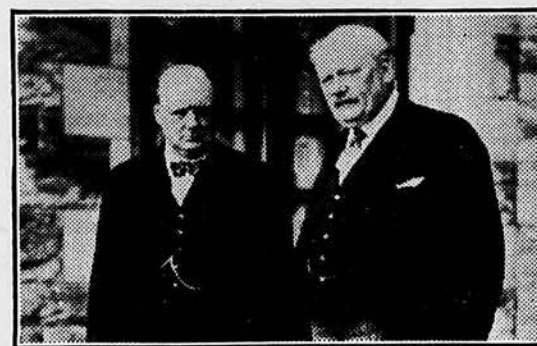
Here is the Line-up of the Planes of the First National Women's Air Derby at Santa Monica, Cal., Just Before the Takeoff for Cleveland—the Trip Was Made in Several Stages. The Pilots Included the World's Foremost Women Flyers. It Attracted a Vast Amount of Attention



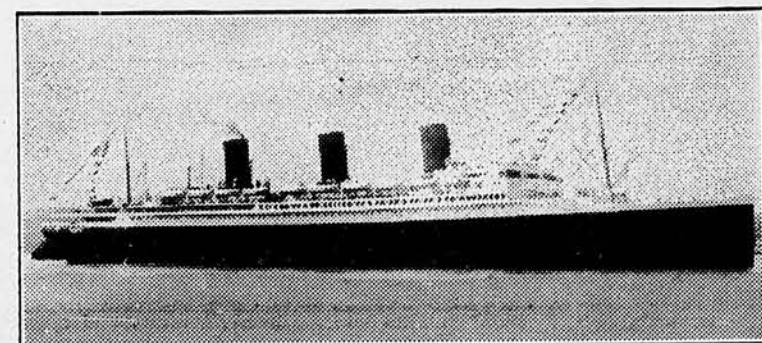
Left, Miss Sarah Palfrey, 16, With Her Sister, Photographed at the Women's National Tennis Championships at Forest Hills, L. I., Where Sarah Defeated the British Star, Mrs. Shepherd-Barron



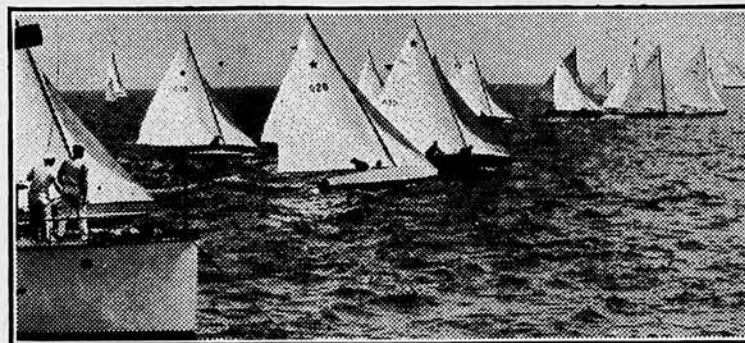
Baron Kikugoro Shidehara, Foreign Minister of Japan, as He Appeared After Delivering a Statement on the Russo-Chinese Controversy



Left, Rt. Hon. Winston Churchill, M. P., Former Lord of the Admiralty, With Lieut. Gov. W. D. Ross, at Government House, Toronto, Canada, During Mr. Churchill's Recent Visit



The Pride of the French Nation: the Ile de France, a New and Fast Ship of the French Line, Which Runs Between New York and Havre. A Brokerage Office Has Been Installed on This Ship by the New York Stock Exchange Firm of De Saint-Phalle & Co., the First Office of Its Kind That Ever "Went to Sea"



Three Hundred Yachts, the Fastest on the Pacific Coast, Competed in Races Recently During the Ninth Annual Regatta Which Was Staged at Santa Barbara by the Southern California Yachting Association as the Aquatic Event of Fiesta Week. The Events Called for the Participation of Boats of All Classes

3 Hours Work for 10 Bushels of Wheat

But That Is With a Combine---Binder Records Are Different!

DEVELOPMENT and use of improved farm machinery in the United States closely followed the opening of large fertile tracts for settlement. This development has come about largely since the middle of the last century; during the last 60 years production a farm worker has more than doubled. The practice of planting grain by hand, cutting with the cradle, and threshing with the flail has given way to improved methods with the introduction of seeder and drill, the reaper, the binder, the mechanical power-driven thresher, the header, and the combined harvester-thresher. Production of other farm commodities has been similarly speeded up by the development of large units of motive power and large tillage, planting and harvesting machines.

No measure is available of how much of the increase in production a farm worker is due to the use of more power, to the working of larger areas of land, and to general improvements in the technique of production. It is a fact, however, that from 1870 to 1925, the average acreage of improved land a farm worker increased from about 32 acres to approximately 49 acres, an increase of more than half. At the same time the value of machinery on farms in terms of the 1913 price level increased nearly 10 times, or from 270 million dollars in 1870 to more than 2,666 million dollars in 1925. The number of agricultural workers increased also, but the value of machinery on farms (in terms of the 1913 price level) increased from \$36 a farm worker in 1870 to more than \$200 a worker in 1925. In less than 60 years the value of farm machinery a worker increased 5½ times.

American Farmer is Good Producer

The American farm worker produces from two to five times as much as do similar workers in the important European countries. His high production capacity may largely be attributed to the use of large units of machinery and power and to the relatively small amount of field work done by hand.

Even with these increases in the value of machinery, and in acreage handled and physical production a worker, there is room for a further increase in the efficiency of labor on many farms thru the extended use of larger machines and units of power and improved methods of production. But not all farms are suited to the use of the largest or even the larger machines and units of power. One man and two horses operating a 2-section harrow will cover only 12 to 15 acres a day, whereas the same man with a 4-section harrow and tractor will cover 40 to 45 acres a day; but the saving of labor and the performance of operations on time

By M. R. Cooper

do not alone determine the wisdom of using the larger outfit. The lay of the land, the cost of the machinery, and the amount of work done each year must be considered.

Small farmers have nothing to gain and much to lose in buying expensive machinery larger than is needed. Where the saving of labor is practicable, the following examples of machine performance for operations common to most farms may be used as a guide. The indicated machine performances are only approximate, because wide variations exist in the physical and climatic characteristics of different sections of the country.

The usual day's work for a 12-inch walking plow drawn by two horses is 1½ to 2 acres; for a two



Such a Generous Soul!

14-inch bottom gang plow drawn by four horses, 3½ to 4 acres; and for a three 14-inch bottom gang drawn by tractor, about 8 acres. The two larger outfits require from one-fourth to one-half as much labor to plow a given acreage as is required by the 12-inch walking plow.

One man and four horses with a 1-row lister can normally list 6 acres in a day, whereas the same man with a 2-row lister drawn by tractor will list 16 acres a day, an actual saving in labor of over 60 per cent.

The performance of cultivators varies, widely depending on the number of rows cultivated and unit of power used. In cultivating corn and cotton under usual conditions, a fair day's work for a 1-horse cultivator making two trips to the row is 4 acres; for a 2-horse 1-row cultivator, 8 acres; and for a 4-horse 2-row cultivator about 15 or 16 acres. Two-row and 4-row cultivators drawn by general-purpose tractors cover daily around 20 and 40 acres, respectively, under favorable conditions. Each of these cultivators is operated by one man. Ten days of one man's time are required with the 1-horse outfit to cultivate the same acreage that the 4-row outfit cultivates in one day; with the 1-row machine a man cultivates in one week what he can cultivate with the 1-horse cultivator in two weeks.

There are so many sizes of harrows, drills, planters, mowers, rakes and other machines that the farmer needs only to study his requirements and farm organization to determine and install the size best suited to his purpose.

New Machines Save Labor

The use of different sizes of machines and units of power is only partly responsible for variations in the amount of labor devoted to the production of each farm commodity. Some soils need more work than others. Production methods differ under different geographic and economic conditions. Introduction of new types of machines for performing certain operations and combinations of operations has resulted in a distinct saving of labor. About 1830 the farmer used a crude plow, seeded his wheat by hand, cut it with a sickle, and threshed it with a flail. From 30 to 35 hours of labor were then used in producing 10 bushels of wheat. In recent years, those farmers in the central Great Plains states who cut their wheat with a binder and thresh from the shock use about 8 or 9 hours of labor for producing and hauling to elevator or shipping point 10 bushels of wheat. Farmers who grow wheat on land that was summer fallowed the previous year and harvest with a combine use only 3 hours for each 10 bushels.

Different practices and labor requirements prevail even in the same region. In the Great Plains wheat region, the total labor for harvesting and threshing is reduced from about 4.6 hours an acre for cutting with a binder and threshing with a stationary thresher to about 3.8 hours for cutting with a header and threshing with a stationary thresher, and further to about ¾ hour an acre for harvesting with a combine. In Illinois wheat

(Continued on Page 12)

Let's Cut the Livestock Costs

By Arthur T. Semple

WITH our knowledge of breeding, of differences among feeds, of the processes of animal nutrition, and of sanitation, we have become accustomed to 1,000-pound beef yearlings, ton-litters of pigs at 6 months old, and cows producing 1,000 pounds of butterfat in one year. As the engineer becomes familiar with the chemical composition, the tensile strength, the coefficients of expansion, the absorptive capacity, and the rusting and corrosive qualities of the materials with which he works, so the feeder needs to know the composition, the palatability, the digestibility, and the growth, reproductive, maintenance and fattening qualities of the feeds which are available for his livestock.

Chemical analyses as they are used commercially give the percentages of water, ash, or mineral matter, crude protein, crude fiber, starch and sugar (nitrogen-free extract), and fat or oil (ether extract) which a feed contains. These analyses require expensive and elaborate chemical apparatus and the services of an experienced chemist. All of these five substances—mineral matter, crude protein, crude fiber, nitrogen-free extract and ether extract—are in reality names for groups of chemical compounds. What differences do variations in these substances make? For instance, while water is a very necessary nutrient, any excess of it in feeds is objectionable, for two important reasons. First, one does not want to pay a dollar a bushel or \$40 a ton for water when it can be obtained free wherever there is rain. Second, the drier feeds are, except extreme dryness, the longer and better they keep.

Nothing Takes Its Place

Another nutrient—crude protein—is absolutely essential for the growth, repair and reproduction of animal tissue, and nothing else will take its place. Protein can be used in the body to produce heat and energy, but in most instances crude fiber, starch, sugar and fat or oil are much cheaper fuels. Altho crude fiber is used similarly to starch and sugar, it is much bulkier and harder to digest,

hence less valuable and oftentimes objectionable when present in large quantities. Cattle wintered on straw, which is largely crude fiber, lose heavily in weight, altho they are getting as much as they can eat. Oats, however, having 11 per cent of crude fiber, are an excellent feed for horses.

Fat also is a very valuable component of animal feed despite the fact that animals can produce fat from protein, crude fiber, starch and sugar. Fat is a very concentrated feed, as a pound of it will produce about 2¼ times as much heat or energy when it is oxidized or burned as crude fiber, sugar or starch. Food for human consumption is often spoken of as rich when it has a high content of fat or oil. Fat has another important quality in animal feeding when it contains essential fat-soluble vitamins.

Ash or mineral matter, like protein, is essential in the structure of animal tissue. The bones, especially, are rich in mineral elements, the principal ones being calcium and phosphorus. Hogs fed on corn alone, a ration deficient in ash, develop leg weakness and their bones break very easily. Either the sun's rays or a vitamin abundant in the leaves of plants and the livers of fish are essential for the utilization of calcium as found in plants and inorganic forms. To be effective, the sun's rays must strike the body directly and not pass thru ordinary glass.

In general, the feeds usually raised on a farm supply adequate mineral matter. There are notable exceptions, however, in certain localities where there are shortages of certain mineral elements, such as calcium and iodine. Such deficiencies may be supplied by the addition of the common salt which should be always available to all livestock. Unfortunately, analyses for mineral matter obtained by burning and weighing the residue or ash do not show a deficiency of any particular element. The same is true of protein. There is a considerable

number of proteins; some are essential for certain vital processes, such as growth and reproduction, and cannot be replaced by any of the others. Generally speaking, the proteins of animal origin are superior to those of vegetable origin, and those found in leguminous plants, such as alfalfa, are superior to those found in cereals, such as corn.

In addition to the nutrients shown by chemical analyses, there are several factors essential to proper animal nutrition, such as certain rays from the sun, vitamins and the oxygen of the air. Vitamins are present in feeds in such minute quantities that they cannot be separated and weighed. A shortage of certain vitamins causes deficiency diseases, such as rickets, scurvy and beriberi. Other vitamins are essential for such vital processes as growth and reproduction. In the plant world the leaves and the germ of the seed are generally richest in vitamins, while in the animal body the digestive organs are richest in vitamins.

Costs Can be Reduced

Farmers who are accustomed to feed their livestock exclusively on home-grown feeds, which do not contain an adequate quantity of all the necessary nutrients, may lower their costs of production by marketing a part of the grain or hay which they raise and buying some feed which makes a better balanced ration of the resultant supply of feed. For instance, should corn, oats and timothy be the crops raised the rations fed to the livestock would be seriously deficient in the character of the protein and ash. Both fattening and maintenance costs in pounds of feed could be reduced considerably by selling a part of the grain, hay, or both, and purchasing some meal rich in protein, some legume hay, or both.

A much better solution, however, for obtaining a properly balanced ration would be to grow a sufficient quantity of some legume, such as alfalfa, clover, soybeans or cowpeas. Legume hay alone, or legume hay and oat straw or corn stover, make a satisfactory maintenance or wintering ration,

(Continued on Page 33)

Why Not Produce High Quality Milk?

Profits Are Much Better When You Reach and Hold a Quality Trade

By M. J. Prucha

MILK occupies a unique place in man's diet in that it is the principal food and at times the only food that infants and children can take. It is largely on this account that the public is so concerned about the quality of its milk supply. A healthy cow, having a sound udder and being properly fed, will give milk of high quality. Whether the milk will retain that quality until it is delivered to the consumer depends entirely on the manner in which it is handled and on the care it receives.

The production of milk of high quality need not involve undue expenditure of money, but it does require a certain knowledge and effort at the right time. In the past the dairyman has not always received a sufficient financial inducement to make him eager to produce milk of high quality. Usually the benefit he has reaped has been the assurance of a steady market for his milk and the freedom from loss due to spoilage. The demand for milk of high quality is steadily increasing, however, and the dairyman who learns to produce milk of high quality economically is bound to profit by it.

There is a wide variation in the definitions of high-quality milk in different communities. In all cases, however, there are recognized a few essential qualities which the milk must have in order to be classed as high-quality milk.

It has been established beyond any doubt, both by experiments and by experience, that milk sometimes carries disease bacteria. Tuberculosis, typhoid fever, septic sore throat, diphtheria, scarlet fever, and a few other diseases of minor importance have been known to be carried by milk. The safety of the public milk supply is therefore a serious public question about which consumers are concerning themselves more and more.

Must Obey the Law

It is a good business practice on the part of dairymen and dealers to satisfy this demand for safe milk. The dairyman's duty in this matter is not difficult. There is only one thing for him to do; namely, to comply conscientiously with the legal requirements concerning the health of animals and attendants, purity of the water, and sanitary surroundings of the barn.

One especially annoying problem in keeping milk free from disease bacteria is the control of flies. Milk should be well protected from these pests, for they are a serious source of contamination. A good dairyman usually works out some scheme to do this. One man who has a reputation for clean milk uses a large tin cover for the milk strainer. The cover is suspended on a pulley and is operated by foot so that the milker can pour the milk into the strainer without inconvenience. Another dairyman keeps his milk cans in a dark cupboard during milking, and still another uses an electric fan so set that the air current keeps the flies from crawling over either strainer or can.

The law requiring certain minimum amounts of solids in milk was passed mainly to prevent the watering of milk. This practice, which was always confined to a few unscrupulous individuals and companies, has practically gone out of existence. As there is no special difficulty in the matter of complying with the law, there need be no further discussion of it.

Undesirable flavors in milk may be derived from three sources:

1. They may be absorbed from the air.
2. They may be the result of the cows having eaten certain weeds and feeds.
3. They may be produced by bacteria.

The "cowy" smell in fresh milk usually comes from stale air in the barn or from dirt in the milk. As the streams of milk pass thru the air during milking, or when the milk is left in the barn, it absorbs odors. The remedy is simple; remove the milk from the barn as soon as it is drawn, and keep the barn free from bad odors.

Wild Onion Is a Pest

Certain weeds, such as wild onion, and some feeding materials, when eaten by a cow, will impart undesirable flavors to the milk. This is quite annoying in certain localities. The intensity of such flavors is influenced by the length of time that intervenes between the time the cow eats the feed or weeds and milking time. The longer the interval, the less pronounced the flavor will be. There is, however, only one remedy, and that is not to let the cow eat such things.

Certain undesirable flavors are due to bacteria which are present in the milk or to stale-smelling utensils.

The old saying that "cleanliness is next to godliness" still holds true, certainly in the dairy business. In a measure the term cleanliness is relative; what seems clean to one person may not appear clean to another. However, there is a common-sense judgment about cleanliness. Anyone can tell whether a cow is reasonably clean or whether it is dirty.

In high-class dairies, covered milk pails are used extensively to prevent dirt, dust, and bacteria from falling into the milk. Such pails keep

out of the milk from 30 to 70 per cent of the dirt and bacteria that would otherwise fall into it. Various types of such pails are on the market.

Barns, stalls and floor should be kept reasonably clean, and the milker must observe certain rules of cleanliness. His hands should be well cleaned when he starts milking, he should not wet his hands with the milk, his clothes should be clean, and he should handle the milk as any public food should be handled.

Dirt that has fallen into milk may be removed by straining the milk carefully thru cotton pads. It is far better, however, to keep dirt out of milk than to allow it to fall in and then try to remove it. Dirty milk cleaned is not high-quality milk.

If a large number of samples of milk from different sources are taken and kept at the same temperature, some will spoil sooner than others. Different samples may develop different off-flavors. The milk that will remain sweet and without any off-flavors the longest will have the best keeping quality. The spoiling of milk and the development of off-flavors in it is due to the growth of bacteria. The larger the number of bacteria the sooner will the milk become stale and spoil.

Since bacteria are the cause of the deterioration of milk, it is the aim in high-grade milk production to control the bacteria; that is, to keep them out of the milk so far as possible and then to prevent those that get into it from multiplying. The number of bacteria in milk is of very great importance in determining its quality. This has led to the practice of grading milk largely on the basis of the number of bacteria in it.

As the milk passes on its journey from the cow's udder to the final container in which it is delivered to the consumer, it is exposed to bacterial contamination at almost every step. It is really impossible to produce milk commercially

THE dairy business is expanding rapidly in Kansas. The income from this source was 38 million dollars last year, and it will be considerably greater this season, for both production and prices are higher. Naturally it is important that dairymen reach the quality markets, as they are the most profitable. This requires the production of clean milk. As Mr. Prucha shows in this article, the three most important points in producing milk of low bacterial count are these:

1. The animal must be clean and free from dirt.
2. The utensils that come in contact with milk must be properly sterilized.
3. The milk must be promptly cooled to 60 degrees F. or lower, and held at that temperature until delivered.

which will be free from bacteria. Bits of feeding material, dust in the air, milkers' hands and clothing, dirt from the cow's coat and the utensils—all these contribute some bacteria to the milk.

Bacteria and dirt are not the same thing, but dirt usually harbors large numbers of bacteria, especially the kind of dirt that is found on the cow's coat. In one case it was discovered that such dirt contained 4 billion bacteria a gram. If the cow is dirty, some of the dirt will fall into the milk during the milking operations. A thorough straining will remove what can be seen, but it will not remove the bacteria. A small-top milk pail will reduce this contamination to some extent. There is, however, only one way to guard against such contamination—that is, by keeping the cows as clean as possible.

Many dairymen fail to realize the great importance of clean utensils in high-grade milk production. As dairy utensils are handled today they are by far the most important source of bacteria in milk. Dirty cows add many bacteria, dirty barns will also add some, but these sources are quite small in comparison with the utensils. Every utensil that has a stale smell, no matter how well it was once cleaned and sterilized, may add millions of bacteria.

Of the different utensils the shipping cans, the cloth strainers, and the milking machines are the greatest contributors of bacteria to the milk. The cans are supposed to be washed and sterilized at the milk plant or receiving station. No matter how well the washing and sterilizing is done, however, by the time the cans are used for milk on the farm, from 12 to 40 hours later, the bacteria may have increased in them to such an extent as to make the cans unfit for use. They may add as many as 500,000 bacteria to a cubic centimeter of milk. It is advisable that the dairyman sterilize the cans regardless of what is done to them at the milk plant.

Under ideal conditions of milk production,

straining of milk would not be necessary. Such conditions do not exist yet. One excellent strainer uses a small pad of cloth or cotton, which is discarded after each milking. Such pads are not expensive and are sterile when bought. Large cloth strainers, are, as a rule, a source of many bacteria, are hard to keep clean, and difficult to sterilize. Such strainers may harbor as many as 4 million bacteria to a square inch.

The milking machine with which the milk comes in contact during the process of milking, may add many millions of bacteria. In one case the milking machine added 15 billion bacteria to the milk of five cows at one milking.

The first step in effective control of bacteria in the utensils is cleanliness. No method of sterilization and no amount of sterilizing will make the utensils that are not washed clean, fit to hold milk. There is no difficulty in the matter of washing the utensils clean. Anyone can tell whether the surface of the utensil has a film of grease or whether the seams and crevices have traces of old milk dried on them. The only thing necessary for proper washing is plenty of warm water with enough washing powder in it, thorough scrubbing, and thorough rinsing. There is one good rule to follow—wash the utensils as soon as possible after they are emptied. If they are permitted to stand for several hours before they are washed, the dirt and milk dry on them.

The Steam Acts Promptly!

Anyone can tell whether a utensil is clean, but it is very difficult to tell whether it has been sterilized properly. For this reason sterilization of utensils has not as a rule been done effectively. There are several different schemes that the dairyman has at his disposal.

Steam is available on very few farms. The steaming of utensils usually is done either by jet steaming or in a steam chamber. Both methods are effective if done correctly. When jet steaming is used, each can and pail should be steamed about 30 seconds at least. When the steam chamber is used, no definite directions can be given. The amount of steam necessary for proper steaming must be determined by actual tests.

Hot water is used quite extensively on farms for sterilizing utensils. A thorough rinsing of each can with 2 quarts of boiling water is as effective as thorough steaming. Smaller amounts do some good but will not give thorough sterilization. At the rate of 2 quarts of boiling water a can and 1 quart a pail, about 3 gallons of boiling water will be required to sterilize 4 cans, 2 pails and 1 strainer.

Since on most dairy farms steam is not available, and even hot water is difficult to get in sufficient amounts, chemical sterilization offers dairymen a very practical method of treating utensils.

Not all chemical sterilizers are suitable for dairy utensils; some have undesirable odors, and some are highly poisonous and must not be used in connection with food handling. The chlorine sterilizers, however, have none of these objectionable qualities. Following are some that are being used for sterilizing utensils:

1. Calcium hypochlorite, commercially known as bleaching powder or chlorid of lime.
2. Sodium hypochlorite, sold in liquid form under various trade names, such as B. K., Germ X, Hypochlor, Belle Disinfectant.
3. Diversol, sold in granular form; it is sodium hypochlorite combined with alkaline phosphate in crystals.
4. Chloramine-T, sold in powder form or in tablet under various trade names, such as Santamine, Sterilac, Chloron, Hoover 40, Chlorazene, Alklorine.

The method of applying these sterilizers is simple; a certain amount of the sterilizer is put into the wash water or rinse water, or both, and the utensils are washed and rinsed in the usual way. As a rule the directions given by reliable manufacturers are essentially correct.

Are Alive With Bacteria

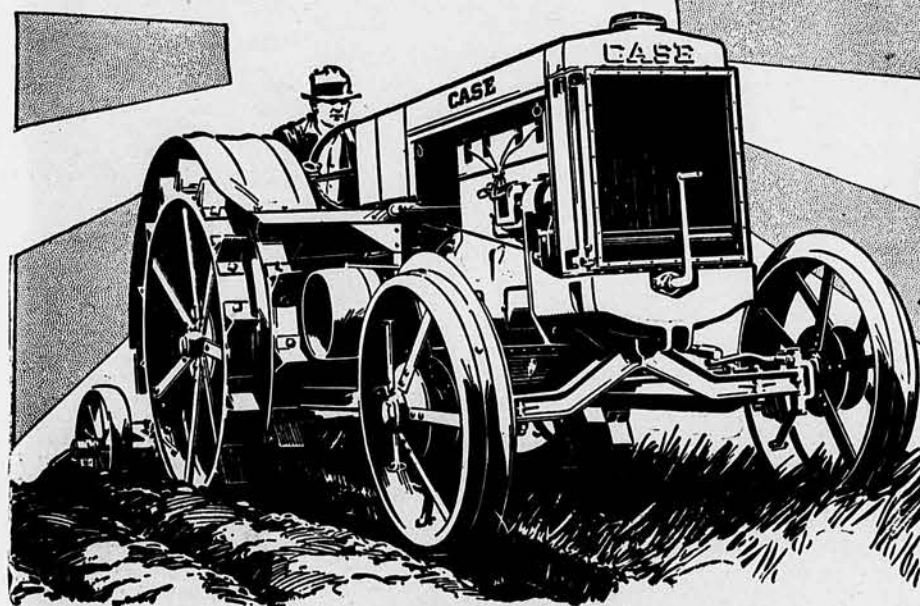
Some of these chemical sterilizers tend to lose their strength; others have been stabilized and standardized. For best results on farms it is advisable to use the stabilized products. In case of doubt as to the proper way in which to apply these sterilizers a dairyman can get information by writing Kansas Experiment Station at Manhattan.

The inverting of utensils on a rack to air is an old dairy practice and a good one. No matter how well the utensils, particularly the milk cans, may be washed, and even if they are steamed or scalded with hot water, they soon develop a stale smell when they are covered in such a way that they cannot dry. In other words, a utensil may be properly washed and steamed and be in an excellent condition to receive milk, but if it is not used until some 12 to 40 hours later, it usually becomes stale and not fit for milk. Such utensils become literally alive with bacteria, the moisture in them making conditions right for their rapid growth.

Drying of the utensils does two things—it kills some bacteria and prevents others from increasing. A screened rack is highly desirable. It keeps the flies and birds away from the utensils.

In view of the tendency for the utensils to (Continued on Page 41)

A NEW TRACTOR



Great Power
for its size and weight



TO APPRECIATE fully the outstanding performance of the Model "L" Case Tractor, it is necessary for you to see it in operation. That's why this public announcement has been withheld until a few thousand could be put into the hands of users scattered throughout the United States and Canada. You can now see for yourself the many unusual features and advantages offered by this new tractor. You will find the Model "L" to be years ahead in work output, adaptability and ease of handling.

Great Power for its Size and Weight:

Here is a tractor weighing only slightly more than three ordinary draft horses that will pull three, four or even five 14-inch plow bottoms, depending upon soil conditions, and that will operate a 28-inch thresher with all attachments. With no useless weight to drag around, you can get to your fields and be working when a heavier machine would be useless. The efficient power of the Model "L" sets a new standard of tractor performance. Farming can be made more certain and profitable by the use of this tractor.

Wider Range of Usefulness: Because of this great power for its weight, the Model "L" is highly efficient for every job from plowing heavy gumbo soil to light tillage operations. Three forward speeds of $2\frac{1}{2}$, $3\frac{1}{4}$ and 4 miles per hour enable you to perform any field operation at a rate of travel best suited to the work being done. The tractor is equally effective for a wide range of light to heavy belt operations, or the power may be made available through a power take-off.

Ease of Handling: A boy can operate the Model "L" Case Tractor as easily as a man. Spark and gas controls are on the steering column close to the 18-inch steering wheel. The steering is both quick and irreversible. For the operator's comfort and convenience, the platform is low and roomy. The spring seat is adjustable to any position. Full fenders and protecting shields keep the dust away. In short, the Model "L" is remarkably convenient and easy to handle.

It will pay you to investigate now the superiorities of this new Case Tractor.

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Heavy 3-bearing crankshaft drilled for pressure lubrication.
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Low, roomy platform—adjustable spring seat.
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Irreversible steering gear—13 ft. outside turning radius.

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ETHYL BRINGS NEW LIFE TO AN OLD CAR

A MESSAGE
OF SPECIAL
INTEREST
TO FARMERS

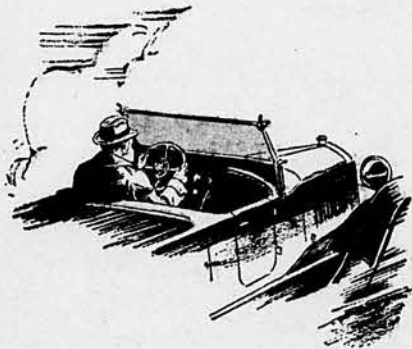


THOSE faithful old cars on the farm which have done their thousands of miles up and down hills and over rough roads are given new life by Ethyl Gasoline.

They still have power in them. But ordinary gasoline cannot bring it out. Ethyl Gasoline utilizes the latent power in any engine. It greatly reduces gear shifting and eases the strain on the engine parts. It means a new response to the accelerator, swifter pick-up, and additional power over hills and heavy roads.

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Ethyl is gasoline *plus*. Mixed with it is a vital ingredient—Ethyl fluid. This anti-knock compound was developed by automotive science to make gasoline a better motor fuel. Outstanding oil companies add it to their good gasoline to form Ethyl Gasoline. And you will find Ethyl on sale everywhere now.



Stock up on Ethyl. Give it a trial. You won't go back to ordinary gasoline. Look for a pump bearing the Ethyl emblem.

Ethyl Gasoline Corporation, 25 Broadway, New York City, 56 Church St., Toronto, Canada, 36 Queen Anne's Gate, London, England.

ETHYL GASOLINE



Knocks out that "knock"

A Good Shower Fell, Anyway

But a General Rain Is Needed at Gridley, and That Right Promptly, Too

BY HARLEY HATCH

AFTER a week of very hot weather a shower has fallen this morning, and the mercury has gone down at least 10 degrees, but unless the wind hauls out of the South and more rain falls it will not take it long to reach 95 again after the sun comes out. For almost a week the weather forecasters have been promising us "showers and cooler," but when the time arrives the cooler weather is adjourned until the next day. Early corn is hard and rain now would help it little; in the Gridley locality early planted corn will make at least an average crop, but that planted later will not do so well. Kafir and cane are headed, and while they will make some grain in any event, a good rain now would bring on almost an average crop on everything planted before June 10. There is a considerable acreage of both corn and kafir in this county which was planted so late that it can make nothing but fodder, and if a soaking rain does not come soon it will make but little of that. I am more than ever convinced that early planting is necessary here if the best results are attained with any grain crop.

Corn, \$1 a Bushel

The partial failure of the corn crop over a large area and the prospective high price for corn during the feeding season is holding many feeder buyers back, and explains the drop in price of grass steers in the Kansas City market. Buyers today are paying \$1 a bushel for corn in Burlington, and there is not much to indicate any lowering in price when new corn comes on the market—if there is any to come. There is nothing in the pasture or water situation to cause anything more than the regular movement of cattle to market; if the crop situation had been combined with short pastures and scarcity of water it is not pleasant to think of what might have happened to the cattle market. I do not think there is anything to fear from the future cattle market; there has been no increase in cattle numbers nor is there likely to be any if the present marketing of "she" stock continues. At the present market decline many shippers say they have no profit left, and some complain of a loss. If there is an actual loss of any volume financial interests are likely to take notice; bankers and commission men finance much of the cattle handling, and a loss to cattle owners is all too likely to turn into a loss to those who provide the money. For this reason many folks think the decline in cattle prices will be checked.

More Profit on High Corn?

With more cattle on hand on Jayhawker Farm than we usually winter we had thought of selling some of them off grass if prices held up to the July basis. Now that the price of the class of cattle we wished to sell has dropped \$1 a hundred we have given up the idea of selling any this fall. It appears as if enough corn had been raised on the farm to feed out a car of calves beside providing enough for other feeding. There are 43 spring calves on hand; out of these we would pick the top heifers to keep and have a carload left to feed out. We have 18 to 20 tons of alfalfa hay, all the bluestem hay needed, 20 acres of growing cane now headed out and promising well and all the good corn fodder we care to cut. In addition we will have corn to feed the calves and some 350 bushels of oats that can be spared from those needed for horse feed. One can be fairly certain that the corn these calves will eat will be worth \$1 a bushel, but an old feeder whom I know says that the time to feed cattle is when corn is high; that he always made greater profits at such a time than when corn was cheap and everyone was feeding.

Good Haying Weather

It has been very hot here for the last four days, altho at times light clouds have tempered the heat to some extent. It has been good hay weather,

and that work is being closed today on this farm. By taking some time off during haying to plow, the hay in the two barns settled so more could be put in than we planned, and there are but two stacks out in the meadow, the two holding perhaps 15 tons. We started out with 85 acres to cut, but saw we would not need all of it, so we sold 20 acres of standing grass to a neighbor. The 65 acres which we cut made at least 85 tons; 15 tons is stacked and the rest is in the two barns along with about 15 tons which was carried over from last year. By hauling with three wagons and using the new hayloader we could put about 70 per cent as much hay into the barns in a day as we could stack in the field, which, to our way of figuring, is a gain for the barn method, as not less than 25 per cent of the stacked hay will be wholly or partially spoiled, and the loss may be even greater if we have a wet winter. In addition, the barn hay is right where we can feed it directly into the racks.

Fall Plowing Is Best

I have taken time during the last week to go thru the cornfields inspecting the crop, making the trips as much as possible when the sun was under a cloud. One thing that stands out greatly is the superiority of the corn that was listed on summer or fall plowing as compared with that listed in cornstalks. Most of our plowing last fall was done rather early, and I can note that the earlier the plowing, the better the corn. One field was partly plowed in early August and the rest was left to be covered with manure and then plowed. The manure was spread and the plowing completed in October; even with the manure in the soil this October plowing is short at least 5 bushels to the acre as compared with that done in early August and which had no manure. Perhaps the manure harmed the corn instead of helping it. We have a field of cornstalk ground which was listed to corn at about the same time as the other field of which I have been speaking. This field was disked before listing, but it will yield at least 10 bushels less than the plowed field and perhaps more. I believe that is the way to raise corn on this soil; plow in the fall or even in the winter or even very early in the spring and then list as early as the season will permit.

Too Much Borrowed Money?

The fact that many of the larger western banks are lending money to be used in Wall Street speculation because of the high interest rate and supposedly sound security has been making money scarcer in western territory and interest rates higher. Most farmers and stockmen, in fact, nearly all, are in no position to get aid from the Federal Farm Board because they have no organizations with authority to make loans. This brings up an always debatable question; if farmers had not been able to borrow so heavily in the past would they not now be in better financial condition? What is the proportion of average men who can borrow money and pay 8 per cent interest, the regular bank rate, and make a profit on their borrowings? One of the leading bankers of Kansas City gives it as his opinion that the average man cannot make a profit on money borrowed at 6 per cent. I have often asked bankers what proportion of their customers borrow money at the going rate and profit by it and their answers have run all the way from 25 to 40 per cent. This does not mean any single transaction but the sum total of their dealings from year to year. It is my opinion that the greatest loss in all such transactions is the money borrowed at a high interest rate with which to buy motor cars.

We are considering having nothing to do with the Chinese-Russian dispatches until they number the players.

A fortune awaits the genius who can succeed in crossing the homing pigeon with the umbrella.

*If you had to fry a dozen
chickens you wouldn't
fry them* **all
at
once**



For the same reason, Hills Bros roast their coffee a few pounds at a time instead of in bulk. This continuous process—Controlled Roasting, produces a matchless, uniform flavor.

SUPPOSE you did try to fry them all at once. What a time you'd have cooking that tender meat evenly!

The right way to fry a lot of chickens is obviously one at a time. That's just the way Hills Bros. roast their fine blend of coffee. By their patented, continuous process—Controlled Roasting. Never in bulk. Only a few pounds at a time pass through the roasters and the flavor is perfectly controlled because every berry is roasted evenly.

No bulk-roasting process can produce the matchless, uniform flavor of Hills Bros. Coffee. And you get all this

delicious goodness because Hills Bros. Coffee is sealed in vacuum tins at the time of roasting.

Ask for Hills Bros. Coffee by name. To be sure, look for the Arab—the trade-mark—on the can. Hills Bros. Coffee is sold everywhere.

HILLS BROS COFFEE

HILLS BROS. COFFEE, INC.
2525 Southwest Blvd.
Kansas City, Mo.

*Fresh from the original vacuum
pack. Easily opened with the key.*



ATWATER KENT RADIO

HERE IT IS...from the
LEADER OF RADIO
New Screen-Grid, Electro-Dynamic
BATTERY SET
of course it's an Atwater Kent!

YOU families who haven't electricity—who use batteries to run your radio—how you will relish the news that Atwater Kent has ready for you a completely new battery set with all the very latest proved improvements.

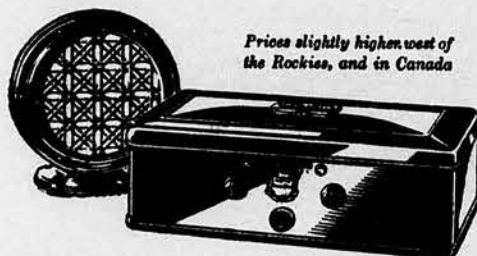
It, too, is Screen-Grid. It, too, is Electro-Dynamic. It, too, has the power to leap across the map and bring in those far-off stations. It, too, has the depth and richness of tone heretofore thought possible only in house-current sets.

It comes from the same 32-acre factory built by the good-will of 2,550,000 owners of Atwater Kent Radio. It's made with the same painstaking care that keeps an Atwater Kent working without time

ON THE AIR—Atwater Kent Radio Hour, Sunday Evenings, 9:15 (Eastern Daylight Time), WEA network of N. B. C. Atwater Kent Mid-Week Program, Thursday Evenings, 10:00 (Eastern Daylight Time), WJZ network of N. B. C.

IN CABINETS

The best American cabinet makers—famous for sound design and sincere workmanship—are cooperating to meet the demand for Atwater Kent Screen-Grid Radio in fine cabinets like these.



Prices slightly higher west of the Rockies, and in Canada

IN COMPACT TABLE MODELS—For batteries, Model 67 Screen-Grid receiver. Uses 7 tubes (3 Screen-Grid). Without tubes, \$77.

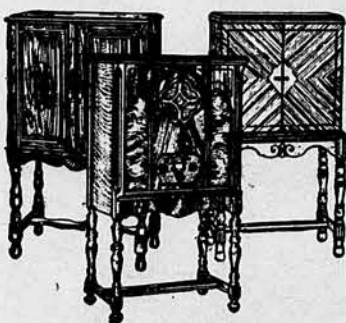
For house-current operation, Model 55 Screen-Grid receiver. Used 6 A. C. tubes (2 Screen-Grid) and 1 rectifying tube. Without tubes, \$88. Electro-Dynamic table speaker, \$34.

out for trouble. For months it's been tested—and tested—and tested again, on farm after farm, in state after state.

It's the modern battery set that you have been asking Atwater Kent to make. You can have it in the compact table model or your choice of fine cabinets designed and made by the leading furniture manufacturers of the country. And, best of all, you pay only a moderate price.

ATWATER KENT MFG. COMPANY

A. Atwater Kent, President
4769 Wissahickon Avenue, Philadelphia, Pa.



The State Fair Is Growing!

A Big Program is Being Arranged for This Year,
From September 14 to 20

BY E. H. KIMBALL

AS THE result of 20 years' development, the Kansas State Fair of 1929 will be the center of interest for farmers of a large section of Kansas during the week of September 14 to 20. The State Fair was established in Hutchinson 20 years ago, as the Central Kansas Fair and was officially made the Kansas State Fair in 1913, at which time the state of Kansas took over the large grounds and buildings of the Central Kansas Association.

Attendance figures give a good indication of the growth of the popularity of this Fair. In 1927 the attendance was 205,000, and in 1928 it jumped to 280,000. The attendance goal this year is 300,000.

From the Grandstand

One of the most complete entertainment programs ever offered in the Hutchinson Fair is scheduled for this year. The entire Hagenbeck-Wallace Circus will form the larger part of the entertainment program, and will be presented daily in front of the grandstand. The Thearle-Duffield Fireworks Company of Chicago will close the entertainment each evening with a presentation of its pyrotechnical display "The Last Days of Pompeii." As usual, there will be horse races, automobile races, and in addition the famous six-horse team from the Chicago Stock Yards.

The displays and exhibits of thousands of members of the various 4-H Clubs of Kansas will form a very interesting part of the educational exhibits, and the 4-H Club state encampment, which will also be held at the Fair, will attract several hundred Kansas boys and girls.

Special effort is being made by the fair management to provide plenty of entertainment for small children. Additional playground equipment has been installed, and there will be hundreds of features thru which they, like their elders, can learn by seeing. For the very small children a nursery also will be maintained where mothers may leave their babies while attending the fair.

The recent Hutchinson flood, which seemed to be seriously threatening the State Fair Grounds for several days, receded before any damage was done to the race track, grandstand or any of the permanent fair buildings. All roads and bridges have been properly repaired, and the usual automobile roads may be depended on in making plans for attendance.

A Real Tent City

Last year Fair visitors were favorably impressed with the huge concrete and steel grandstand, which was two-thirds completed for the 1928 Fair. The remaining portion of the structure is now finished, and visitors to the 1929 exhibits will find the entire grandstand ready to seat 12,000 persons. The big three-story grandstand is so constructed that the under portion will be used for display rooms, which will be given over largely to State and Federal Government exhibits.

One of the most attractive features of the State Fair has always been the arrangements made for the comfort of visitors who travel by automobile. A great number of folks have made a practice of spending the entire week of the fair in Hutchinson, and they bring their own camping equipment to enable them to set up a temporary home in Tent City, a portion of the Fair Grounds which is conveniently located on the northwest part of the space given over to exhibits. More than 2,000 folks used the free camping space last year.

At Hutchinson, thousands of cars may be parked right on the State Fair Grounds without the necessity for finding parking space on the streets or in private parking stands. This particular section of the fair grounds is known as Auto Park, where the guest may drive his car into a police patrolled parking ground at a cost of 25 cents for all day and night.

The Hutchinson Fair has kept pace very well with the present tendency in

all state fairs in the country, toward paying more attention to the decoration of the fair grounds by the wise planting of trees and shrubs and flowers. The fair grounds have been made as attractive as possible in the last few years, and they now are growing more than 30 kinds of forest and ornamental trees and tens of thousands of flowering plants. This feature of the fair serves a double purpose. It makes the grounds more beautiful and thereby attracts more exhibitors and more visitors, and also furnishes as practical proof that a wide variety of plants and shrubbery will flourish in the region surrounding Hutchinson.

As a general institution fairs have enjoyed a greater existence than practically any other method of selling and educating now in general use. The old fairs and bazaars of medieval times were primarily for the purpose of enabling the traveling merchants to better display their wares. The selling feature was the original purpose of this institution. As cities developed in the old countries these fairs became permanent institutions, and their educational side was later developed. In America the modern fair as an institution of learning has been in vogue for about 160 years. This fundamental method of teaching by comparing like things has developed slowly and gradually, until now more than 35 million persons form the student body of the fairs of America. The great growth of the Fair as an institution and the universal attendance which fairs in this country now enjoy indicate that it has an element of fundamental reason. Thru the co-operation of agricultural colleges and Government agencies interested in the development of agriculture, the last 10 years have seen a far greater growth of fairs in Kansas than any previous period of the same length.

The Kansas State Fair in its foundation 20 years ago stated that its purpose was to present exhibits for the study of the general public and to provide good entertainment. Thru its adherence to this policy it has established itself in the minds of Kansas people as a state institution of practical education.

3 Hours for 10 Bushels

(Continued from Page 7)

harvested with the binder and the stationary thresher requires about 6.5 man hours an acre. If it is harvested with the combine only 1.5 hours are required.

The husking and cribbing of corn from the standing stalk requires from 6 to 8 hours of labor an acre, compared with 25 to 35 hours when cut by hand, shocked, husked by hand, and the corn and stover hauled to the crib and feed lot.

Hay cut with two 6-foot mowers drawn by a tractor and stacked with push rakes and stacking equipment is handled with about one-half the labor required when it is mowed with one 5½ foot mower, raked, loaded from the windrow with a hay loader, hauled to the barn, and unloaded with a mechanical fork or sling; and with one-third of the labor required when cut with a 5½-foot mower, raked, cocked, and loaded and unloaded by hand.

Economical labor-saving equipment and practices are increasing in all lines of crop and livestock production, and the point of maximum efficiency is still distant. Continued improvement is expected, and any changes made by the individual farmer should be made with a full understanding that a corresponding change must be made in the organization of the business. Labor is only one of the numerous items of cost, and the saving of labor is but one of many ways of increasing the income from the farm. The farmer's task is to select wisely the equipment and method of production best suited to his conditions after considering probable expenses and returns incident to contemplated changes.

High unit production lowers costs.



Tractor Fuel

*-that gets the fall plowing done
on time and without trouble*

You know that fall plowing must be done before the ground becomes wet or frozen. It's one of the tractor jobs on which a little delay may cause a lot of trouble.

Thousands of farmers, who take no chances with weather or tractors, have found that one fuel — Shell Kerosene — gets the work done on time and without trouble or back-talk from the engine.

Shell Kerosene is preferred because it is a quick-firing, hard-hitting tractor fuel. It vaporizes quickly, burns completely and delivers full power.

Shell's power content starts with the crude. Advanced refining processes take only the power-producing elements from this crude. Repeated testing insures uniform quality in every gallon. Shell Kerosene is free from objectionable smoke and fumes. It is so clean-burning, that it can be used with

safety in incubators and brooders, as well as in power machinery.

Thus, in using Shell Kerosene, you enjoy the convenience and economy of one all-purpose kerosene — a fuel which delivers abundant power in tractors and stationary engines, and burns cleanly and completely, with no smoke fumes or deadly odors.

Farmers who use Shell do not have to bother with more than one grade of kerosene. Shell, costing no more than ordinary kerosene, provides greater efficiency, brings more profitable results wherever used, and permits the economy of larger bulk purchases. Order from the Shell tank salesman, from any Shell dealer, or the nearest Shell bulk station.

Shell Petroleum Corporation,
Shell Building, St. Louis, Mo.

Safe—
*through long, hard work
with Shell Tractor Oil*

Shell Tractor Oil has stamina, courage and a fighting heart. Long and grueling service finds it fresh and fit for jobs ahead.

Shell provides the four essentials of complete and proper lubrication: ideal body at all operating temperatures, low pour point, low carbon content, non-fouling carbon. Honest virtues which add improved efficiency to long life for the Shell-lubricated tractor.



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GASOLINE . . . MOTOR OIL . . . KEROSENE . . . TRACTOR OIL . . . GREASES



JUST NOTICE THE PEP SHE HAS... when you start her purring with Quaker State

IF YOU want to see what a difference there is in Tractor Oils—just put a filling of Quaker State into your tractor!

Just try it—and you'll notice she has more pull, more power, more get-up-and-go than she ever had before! You can feel it! And the reason is this...

Quaker State Tractor Oils are made especially for tractor lubrication. They aren't just "oils"—they are specialized tractor oils, made for the job of keeping a tractor up and humming by Quaker State engineers.

These men study tractors—they study each bearing, each working part. They take tractors apart. They put them together. They drive them under extreme loads for hour after hour—and they know the kind of lubrication a tractor needs!

That's one big reason why

Quaker State Tractor Oil will give your tractor the smoothest, safest, sweetest lubrication it ever enjoyed. And here's another mighty important one...

Quaker State Tractor Oils are made from 100% pure Pennsylvania Grade Crude Oil—the very finest crude oil the world produces!

Buy a drum of Quaker State—your dealer will tell you just what grade is best for your make of tractor. Then fill her up—and your tractor will show you what a difference the right oil makes!

For Your Automobile

REMEMBER—from every gallon of Quaker State Motor Oil, super-refining removes the quart or more of non-lubricating material found in every gallon of ordinary oil. And in its place you get a quart of the finest lubricant—an extra quart in every gallon!

QUAKER STATE SPECIALIZED TRACTOR OILS

Trade Mark Reg. U. S. Pat. Off.

Refined from 100% Pure
Pennsylvania Grade Crude

QUAKER STATE OIL
REFINING CO.
Oil City, Pa.



Away With Consent Decree

The American Farm Bureau Federation Demands That It Be Modified

BY PAUL I. ALDRICH,
Editor, The National Provisioner

LEADING producers in the major livestock sections of the country are giving serious thought to advertising meat. Plans are being laid for raising the money to keep meat as an important part of the diet before the American people at all times. This will supplement the large sums already being used by packers to advertise their own brands of meats.

Coincident with this movement on the part of livestock producers have come changes in the methods of distributing meat to the ultimate consumer. More and more, meat cuts are being prepared in the packinghouse ready for use in the home.

This has the double advantage of relieving the retail meat dealer of much expensive handling of meat, and at the same time it carries the name of the packer preparing the product all the way to the consumer.

Sold Tabs of Lard

Thus two great changes are under way in livestock and meat marketing.

In the old days a meat packer sold beef carcasses, tubs of lard, slabs of bacon, pork loins, and many other items which were not identifiable with the packer beyond the more or less undistinguishable numbers contained in the Government inspection stamp. The consumer who purchased a steak, pound of lard, sliced bacon, or pork chops, hadn't the slightest idea where they came from—and probably didn't care.

Today Mrs. Housewife is very likely to insist that her steak bear the brand of a certain favorite packer whose products she has found are dependable.

She buys lard in a carton, which not only identifies the refiner, but also makes him responsible for its quality.

She buys her bacon in a similar way, and has begun to do the same with pork chops.

There is reason to believe that before long all meat items will be processed by the packer in such shape that he will be wholly responsible for their quality and the manner in which they are packed. And naturally, under these circumstances, he is going to identify his output thru the medium of special containers or brands.

Great economies can be effected in the distribution of meats by packinghouse preparation of retail cuts. The packer can cut meat on a large scale and reduce handling costs materially, whereas the retailer must handle the wholesale cut each time the buyer of a retail cut comes into his store.

Lower Handling Costs

While cutting and packaging in the packinghouse will necessarily make the packaged cut somewhat more expensive than this same cut would be when sold as part of a carcass or a wholesale cut, the cost of handling between the packinghouse and the ultimate consumer will be materially less.

Now that such large quantities of meat are handled thru chain stores, and in view of the fact that this type of distribution makes possible the reduction of cost in handling, there is a larger field than ever before for the packinghouse-packaged retail meat cut.

In addition, packaged cuts can be distributed thru many channels not heretofore handling meat.

The livestock producer wants to get just as much meat to the consumer as possible. It is immaterial to him thru what channels this meat passes so long as the costs of distribution are kept at the lowest point, and the most efficient service given. The new trend in packaging retail cuts would seem to furnish the basis for the kind of distribution the producer wants.

If the packer packages meat ready for the ultimate consumer it is only logical to think that his distribution facilities would be among the most economical that could be used. At least, if this is found to be one of the least expensive channels of distribution, the packer should be given the right to distribute on a retail basis.

As it happens, the principal meat

packers cannot engage in retailing because of a court decree engineered some 10 years ago by A. Mitchell Palmer, Attorney-General of the United States in President Wilson's cabinet. This decree—resulting largely from competitive agitation—barred the packers from engaging in the retail meat business.

An Uneconomic Plan

It also barred them from handling products unrelated to meat, which had the effect of placing upon meat the burden of carrying the entire overhead expense of the packer organizations. This is uneconomic, because their facilities for handling foods other than meat are such that they could do so without materially increasing their overhead in the aggregate, while decreasing it a unit of product.

The American Farm Bureau Federation took cognizance of the situation on June 29, 1929, when it adopted a resolution which reflects the attitude and beliefs of more than a score of livestock organizations which had already gone on record in the matter. The American Farm Bureau Federation resolution is as follows:

Recognizing the change in conditions which brought about the issuance of the Packers' Consent Decree; recognizing that the decree is now discriminatory in that it bars four prominent packers from a field open not only to their present competitors, but to all others who are now entering or may enter the field of processing and retailing meats, appreciating that the widening margin between wholesale and retail cost can and does curtail the consumption of meats, it is the opinion of the American Farm Bureau Federation that the interests of its members can be best served by modification of the decree.

With the livestock producers outspokenly in favor of modification of the decree, and with the decree quite evidently standing in the way of further improvement in the marketing of meat food products, there is reason to believe that the Government at Washington will give serious consideration to the matter, so as to aid rather than obstruct the movement toward better marketing of the farmer's output.

15 Cars a Day

In its last business year, ending May 31, 1929, the Copeland Co-operative Equity Exchange, Copeland, Kansas, handled 1,300,000 bushels of wheat, shipping an average of 15 cars a day, with about 1,400 bushels to a car. All this wheat passed thru the old elevator building, which has a capacity of 20,000 bushels. The exchange also handled corn, coal, flour and feed. The year's operations amounted to \$1,186,522, and resulted in net earnings of \$43,709, the largest sum in its nine years of existence. Seventy-seven per cent of the business was with members and 23 per cent with others.

From the earnings the exchange paid 5 per cent interest on capital stock, charged off \$1,331 for depreciation, prorated \$27,434 on members' business, and carried the earnings from non-members' business, amounting to \$8,390, to the building reserve.

One member received \$748 in proportions and dividends; five received more than \$600; nine, more than \$500; nine more than \$400; 17, more than \$300.

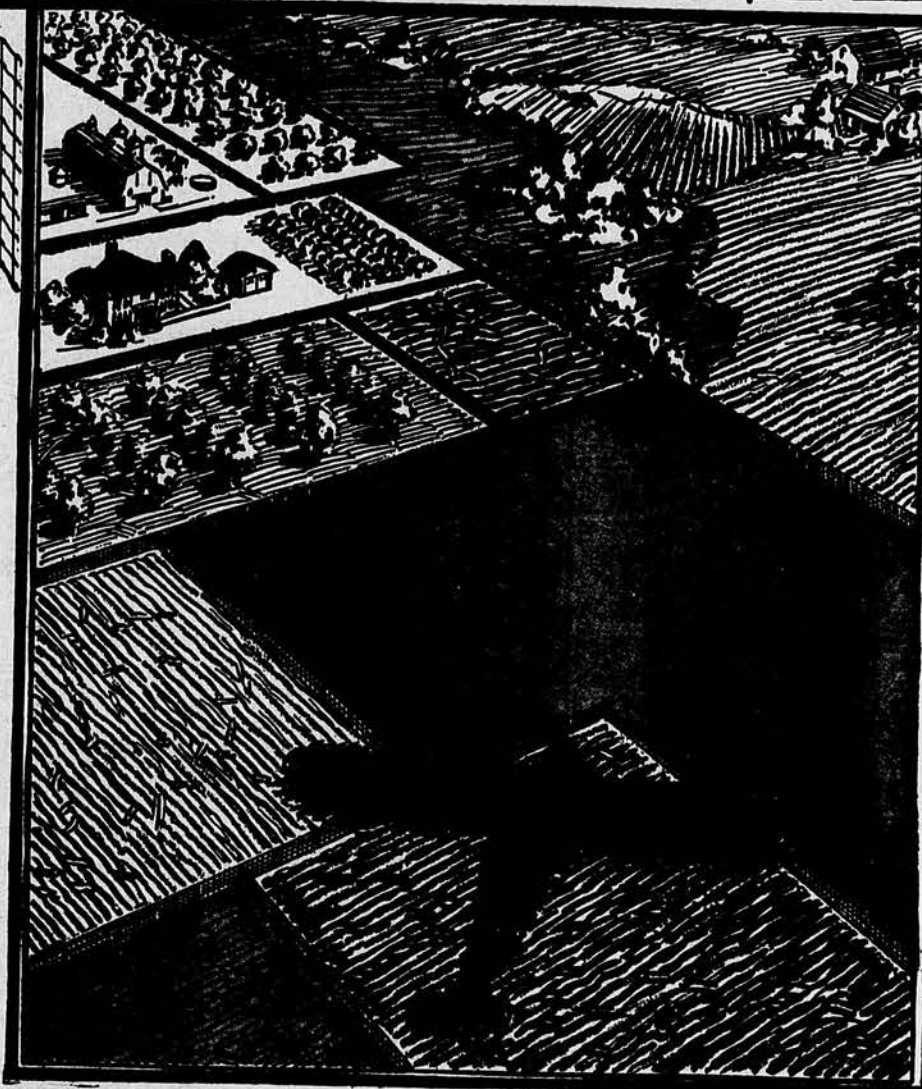
In six of the nine years the organization's records show substantial earnings, the other three years there were small losses.

The exchange has recently built a new elevator with a capacity of 130,000 bushels, making a total capacity, with the old elevator, of 150,000 bushels of grain. The new elevator was completed and turned over to the association July 1.

Tells of Cyanamid

Circular No. 64, Cyanamid, Its Uses as a Fertilizer, has just been issued by the Government. It should be of special interest to any farmer who uses commercial nitrogen as a fertilizer for his crops. It may be obtained free on application to the Department of Agriculture, Washington, D. C.

HOW WOULD YOUR FARM LOOK FROM AN AEROPLANE?



Zinc Insulated Fences
in the following Brands:
American, Royal,
Anthony, Monitor,
National, Prairie
and U. S.

In your vicinity are certain farms that pay real dividends—and others that operate on a loss. From an aeroplane you could easily determine why this is so. The poorer farm would appear to you as a confused and irregular jig-saw puzzle—the prosperous one would show clearly the defined fields and pastures divided and controlled by Fence.

Zinc Insulated TRADE MARK **Fences**

The need for fence is too vital to be overlooked—or even postponed, for under present conditions the difference between profit and loss depends upon securing the utmost value from every acre of land. The rotation of crops—the condition of livestock and the hogging down of corn, are a few of the essentials in profitable farm operation that the proper use of fence makes possible.

Yes—fence is a definite need—and American Steel & Wire Company Zinc Insulated Fences best fill this need. Years of service have proven them to be the best investment. Sturdily constructed of the finest material and covered with a heavy *uniform* coat of zinc, they will give longest life and resist corrosion to the utmost.

Near you is one of our dealers. His store is Fence Headquarters and he will render every assistance in helping you select the type of fence that you need. He also carries either the Banner or Ideal U-shape Steel Posts—the best foundation for the best fence. Also ask him about the new National Expanding Anchor Dirt Set End and Corner Posts.

AMERICAN STEEL & WIRE COMPANY

Subsidiary of United States Steel Corporation

208 South La Salle Street, Chicago

30 Church Street, New York

Other Sales Offices: Atlanta Baltimore Birmingham Boston Buffalo Cincinnati Cleveland Dallas Denver Detroit Kansas City
Memphis Milwaukee Minneapolis-St. Paul Oklahoma City Philadelphia Pittsburgh Salt Lake City St. Louis Worcester
Pacific Coast Distributors: U. S. Steel Products Co., San Francisco, Los Angeles, Portland, Seattle, Honolulu Export Distributors: U. S. Steel Products Co., 30 Church Street, New York



So We Gained One Full Day!

And Thus I Was Paid Back for All Those 23-Hour Days Along the Trail

BY FRANCIS A. FLOOD

SOME time I want to go back to Japan, that picturesque Empire of the Dolls, and really see the little island and its people as they should be seen. I had only a few days to spend in various seaport towns of Japan while our boat, the Rakuyo Maru, was taking on cargo and passengers for the Hawaiian Islands, San Francisco and South American ports.

Brief as these days seemed to me, they seemed far shorter, no doubt, to the members of the Japanese crew. The South American cruise is a long, long tour, and the short stops at home, between trips, three or four times a year, are the only opportunities that the ship's officers and sailors have for visiting their families and homes.

I knew something about that for I had been away from home for nearly a year myself. My wife had expected to meet me in San Francisco but from Hong Kong I had sent her the following cable:

Arriving Honolulu wedding anniversary. Cable me Yokohama if you can meet me there.

I didn't mention the date; I thought she would remember. At Yokohama a message was waiting in the Consul's office advising me that she would be in Honolulu by the time I reached there. We left Hong Kong on the 28th of May and were scheduled to arrive in Honolulu on June 27. A long time and a long way to go. I hoped we would be on time.

We had one interesting passenger that traveled up with us from Hong Kong to Japan. A baby tiger 6 weeks old. An elderly Japanese couple had picked up the savage little kitten in Hong Kong and were taking it home to Japan on board the ship.

The little wild babe was most lonely and unhappy. There was no bed of grass and gravel and soft dirt for him to wriggle in and stretch. There were no squirming little brothers and sisters for him to cuddle with in a nest. There was no huge, lithe mother to lull him to sleep with her growls and keep his striped tummy full of milk. There was nothing soft or woolly that he could nuzzle into and sleep. The lonely little waif probably was as worried and as frightened as a beast of his royal heritage could be.

Every Inch a Tiger

But he was every inch a tiger, this classic little cub. The regal stripings of his coat, from his massive little jaw to the tip of his tail and down to his huge and clumsy feet were the royal decorations that only a tiger's son may wear. Here was no effeminate, domesticated cat mewing about and accepting caresses from a mere human hand; here was no common wildcat or leopard cub, coarse and stulen and crude. Here was no feline

yokel. Here was a young tiger. Back of him was the royal heritage of the entire jungle. Ahead of him he had a royal life to lead—or none.

His brave little tail slowly and ceaselessly lashed the deck just as his regal father's had lashed the jungle floor. His low-hung body, lithe as anything in the pudgy days of babyhood could be, swung down between his sprodling paws, and his great, soft feet pad-padded on the sunny deck just as his lordly ancestors' had prowled thru the jungles for centuries. And his classic head, heroic-sized for such a miniature savage beast displayed all the character of his stripe.

His face was a paradox. All the noble savagery, the cruelty and courage, and pride of his fierce maturity showed in his wrinkled baby features. Even in such a gesture of innocent infancy as nursing from a bottle his inherent savagery was revealed. Today, his massive little jaws drooling with milk from his bottle; tomorrow, his brutish jowls dripping with the blood of his kill. Both scenes were written in that face.

Fed on Condensed Milk

We fed him condensed milk from a nursing bottle and tried our best to teach him to drink from a pan. We piled grass mats about the deck so he could burrow back among them and feel that he was at home. We worried about his feline majesty and gave him every care we could. And then I tried to buy the tiger from the Japanese who owned him. The Jap had given about \$10, he said, in Hong Kong for the tiger and wanted to present him to a zoo in his own home town. I arranged with the ship's purser to lend me \$100 on the security of my baggage and curios I had bought and then I began making offers, thru an interpreter, for the purchase of the cub. I finally offered the entire hundred, but the Japanese was firm. He would not sell. At Yokohama he and his wife and the clumsy little cub got off the ship.

Twice a week we had moving pictures on the after deck. Most of the pictures had been filmed in Japan, and even the movies that were American-made carried the titles in Japanese, but these were the only diversions we had except for a program put on one evening by the Filipino passengers who were riding steerage, and the festivities occasioned by the passing of the 180th Meridian.

Some 50 or 60 Filipinos were enroute to Honolulu to work in the sugar cane fields and their accommodations on the Rakuyo Maru were so much better than had been given them on an English boat from Manila to Hong Kong that they were finally inspired to stage an evening's program for the



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benefit of the first and second class passengers and the ship's officers and crew.

First, there was an oration, in Filipino, by a fiery young master of ceremonies, a tall young man with a suit that seemed to be made of starched awning canvas. Then the same oration was given in English by an inspired boy in a yellow silk shirt and patched duck trousers. This was followed by a violin solo, a stringed quartet, and then another oration (in both languages.) Followed then by a vocal solo with encore, and then two orations, one on Filipino independence and the other an impassioned speech, in Japanese, of appreciation for the courtesies shown them by the ship's officers. The program continued for about 3 hours, and the orations became more and more fervent as the young statesmen warmed up to their subjects. Altogether it was a very welcome diversion on a month's voyage on the Pacific.

Lived Two Days in One

The big day, however, was the day we crossed the 180th Meridian, the day when we lived two days in one, when the clocks and calendars were set back, not an hour, but 24 hours at once.

I had known, after a fashion, that somewhere out in the Pacific Ocean, one either gains or loses a whole day, depending on which direction he is sailing, but I had never thought much about it and never really understood the how or the why. I had often, of course, set my watch an hour back or an hour ahead, when coming to a place where the time "changes," as from Eastern to Central or from Central to Mountain time, right here in the United States. That was easy to understand. But this was 24 hours at once.

When I had first started out, a year before, I had changed my watch an hour ahead as I went east to New York. From New York, east across the Atlantic on the boat, we had set our watches ahead in the same way, half an hour or so each day, depending on how fast we traveled. As we went across Africa on our motorcycles we had set our watches an hour ahead as we came to the various zones for the changing of time, just as we do here at home. Across the Indian Ocean, across India, Burma, and Siam, all the way so far, I had always been setting my watch ahead. If I should continue doing that I would arrive home, the chief steward reminded me, with my watch and calendar a whole 24 hours ahead of everyone else.

Wife Had 24-Hour Days

"Why?" I asked.

"You have been setting your watch ahead all the time, since you left home. Your wife, for instance, has left hers as it was. If one person always sets his watch ahead and another leaves his alone, where will they be? At first you are 1 hour apart, later you are 8 hours, and 18 hours, and finally 24 hours apart. It is Wednesday for one and Thursday for another. That will not do. Some place you must set it back so you will be with the rest of the world. That is the 180th Meridian, here in the Pacific."

That was fair enough, I could see. Every time I set my watch ahead an hour I had had only a 23-hour day to live. I had cheated myself out of an hour every time. I had spent many 23 hour days, then, during my year's journey to the East. At home everyone had had the full 24. I was entitled to an extra day of 24 hours to catch up with those at home.

It was easy enough to see—but it was strange when it actually happened. And it was especially strange when it happened to us for we reached the 180th Meridian on the 21st day of June, the longest day of the year! If it had been on my birthday, I would have had two birthdays; if it had been Christmas, I would have celebrated twice. But it was June 21, the longest day of the year.

Longest Day in the Year

I woke in the morning. It was Thursday morning, June 21. I spent that day about the ship, eating my three meals, the longest day of the year. I went to bed that night, awoke the next morning and, voila!—it was again Thursday, June 21, the longest day of the year. Again I spent the day about the deck, ate three more meals and

(Continued on Page 43)

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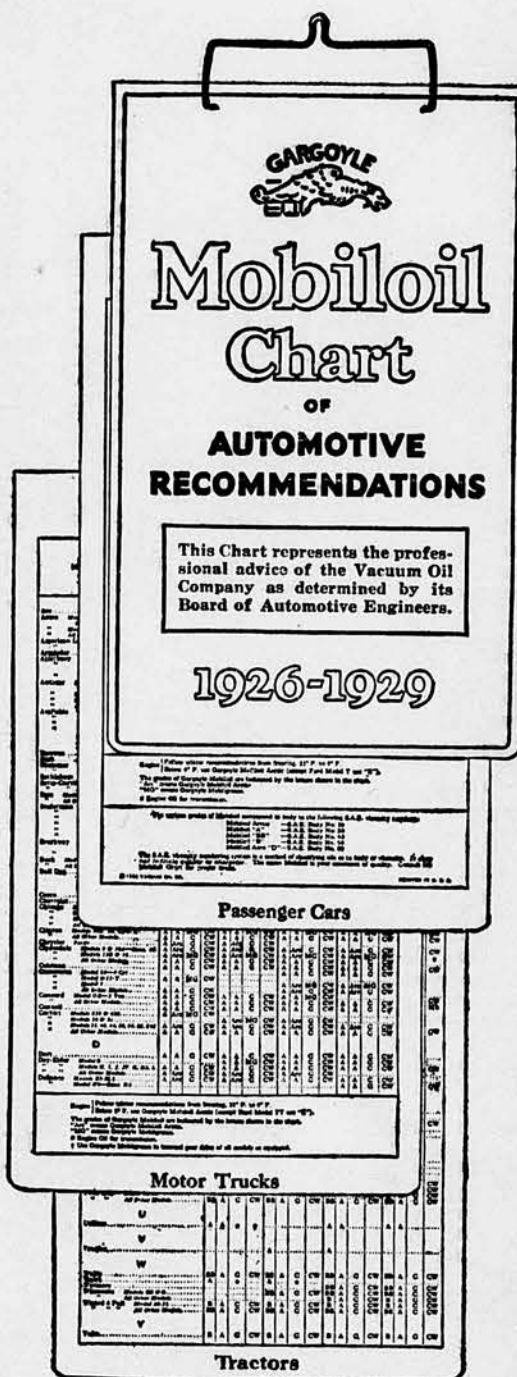
90% of the tractor manufacturers whose machines have gone through the grueling Nebraska State Tests relied on Mobiloil—they couldn't take chances on unnecessary repairs and high fuel consumption.

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What the Folks Are Saying

EVERY farm has its own peculiarities, many of which have to do with its soil. One field has always been a good producer; a hillside has an outcropping of clay or rock; or a low corner of the farm has the characteristics of gumbo. These and many other less obvious "secrets" become known to the man who operates one farm for several years, altho a neighbor or passer-by may overlook them.

Any man who plows, plants and harvests in the same fields season after season, knows which crops "do well" on certain parts of his land and which crops are generally disappointing, but he cannot always be sure of the reasons. Sometimes he is not sure whether his land needs limestone, whether it is deficient in nitrogen or phosphorus, or what sort of a subsoil he has—facts which can be determined accurately only by chemical analysis.

When a trained farm manager takes over a new farm, one of the first things he does is make a soil map showing among other things the limestone requirement of various parts of each field. These maps often reveal that certain sections of a field need lime while other spots do not. With such information at hand, no lime need be applied to areas where it is unneeded, and considerable money can be saved.

This is only one illustration of the advantage of knowing the soil. It should no longer be necessary to go along hopelessly from year to year with the knowledge that "something is wrong" with this or that part of the farm. Soil tests reveal the chemical deficiencies which exist, and these results, when coupled with the practical reasoning and observations of the operator, often suggest remedies.

Chicago, Ill. Bert S. Gittins.

Dairy Herd Management

Expensive buildings are not necessary to take good care of livestock, but make it much easier. A good dairy barn must be warm, well lighted and well ventilated. Cork brick floors are much more comfortable and better for the cows. Automatic drinking cups installed in the barn will soon pay for themselves in increased production; if they cannot be installed a tank heater should be used in cold weather or the cows will not drink enough water to keep up production. A little carrier makes the heavy work much easier, and I like a feedway as high as the top of the mangers; it makes it easier to feed and to keep clean.

By keeping milk and butterfat records, every cow can be fed the right amount of grain according to her production; 1 pound of grain should be fed to every 3½ to 4 pounds of milk produced. The grain mixture should be in proportion to form a balanced ration; a good ration is made of 400 pounds of corn, 200 pounds of bran and 100 pounds of linseed oil meal. The cows that do not respond to the good feeding practices should be disposed of and replaced with heifers from the good producers. A high producing dairy cow does as much work in manufacturing milk as a horse does at hard work, and should, therefore, be handled with care and regularity. They should be fed and milked at regular hours, and not be excited or handled roughly.

A cow producing over 20 pounds of milk while on pasture should have about 1 pound of grain, low in protein content, to every 5 pounds of milk produced. It is essential to keep up the production in summer when pastures get short, as it usually is impossible to bring up the production if once left to go down in that lactation period.

Sweet clover or Sudan pasture is better for dairy cows in Kansas than the native pasture in the western and central parts of the state. Good pasture in the hot part of the summer is more economical than heavy grain feeding. Sweet clover should be pastured close or it will get too stemmy and will not be as palatable. High protein feeds usually can be grown cheaper than they can be purchased. The cheapest feed is roughage, and every dairyman should have alfalfa and silage. Cane produces more silage in Kansas than corn. Soybeans could be grown to replace cottonseed meal or linseed meal in the rations. Kafir produces more in Kansas than corn,

and can be used to take the place of corn in the grain ration.

The only way to make more money than the average dairyman is to have better cows than the average. Cows that produce more profit above feed cost. The success of a dairyman depends largely on the value of his product. It costs very little more to produce a better and cleaner product than it does to produce an inferior one. It costs very little more to produce clean grade A milk, and a dairyman cannot expect a better price unless he has a product cleaner and better than the average.

Every dairyman should be prepared to meet emergencies with the proper instruments, if a cow gets bloated, has milk fever, or udder trouble. Good disinfectants should always be on hand. I think every herd should be tested for tuberculosis. The blood test is the safest way to keep a herd free of contagious abortion.

I think every dairyman who looks into the future will add an exceptionally good purebred heifer to his herd, as he can soon grow into the purebred business by disposing of his poorer grades as the purebreds come into their place. A proved sire is the safest to use if one can be secured. A bull from a high producing family does not always transmit high produc-

tion. His sire should be proved and have high producing progeny in the advanced registry. A large percentage of daughters of good average production is better than only a few exceptionally large records. His dam should be a producer and of good type and from a proved sire that is known to transmit high production. When the purebreds are all descendants of one cow they are of more uniform type and a more pleasing appearance. When the dairyman is in a position to sell purebred stock the purebred cows appeal more to a buyer than herds of various types. A good breeder will not misrepresent the value of an animal, and will dispose of all inferior stock for beef, regardless of pedigree. His herd will be advertised by its official records, by showings at fairs, advertising in breed papers or selling at large breed sales. Good letterheads and well written pedigrees help to sell stock by mail.

Manhattan, Kan.

Roads Are Better Now

Western states constructed the largest part of highways last year, according to a bulletin of the Department of Agriculture, with Texas leading and Kansas next in order. Of the 20,577 miles of highways newly surfaced in 1928, Texas constructed 2,356, or more than one-tenth of the whole, and Kansas 1,785 miles. Arkansas is a close third, Iowa and Illinois rank-

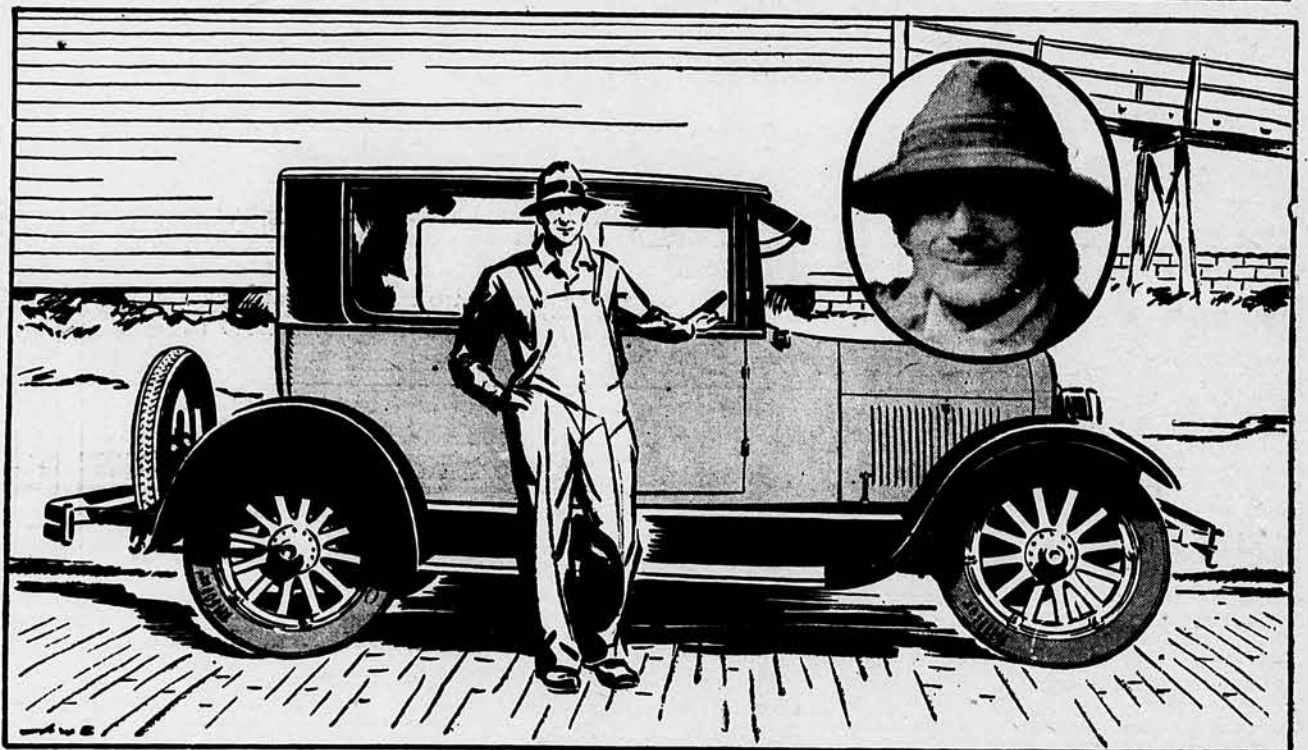
ing fourth and fifth, Minnesota sixth, North Dakota seventh, New Mexico eighth and Kentucky and Ohio ninth and tenth, all the leading 10 states in road construction during the year being western states between the Alleghenies and Rocky Mountains.

The Middle West, in short, is now beginning to catch up with the East in highway building. Of 20,577 miles, all told, for the 48 states and District of Columbia, nearly one-half, or 9,623 miles, are graveled, and 6,055 miles are of Portland cement concrete, these two forms comprising more than three-fourths of all road surfacing constructed during the year.

Similar proportions apply to the finished total mileage of the country. Of 306,442 miles all told 193,138 are surfaced roads and of this total 75 per cent, or 136,081 miles are divided between 93,124 of gravel and 42,957 Portland cement.

The road construction program of the country now takes more money every year than was required 20 years ago for all costs of the federal government, the sum expended last year being something over ¼ billion dollars. More than half a billion of the total was for construction, over 158 millions for maintenance and over 37 millions for interest on bonds for roads.

But machinery and equipment of road and highway departments is also a large item in the total, and accounted last year for 20 millions of the cost of roads. In 1929 this will be a much



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TO the farmers—whose cars get double the rough treatment of any city-driven car—this is a message of good cheer. Miller Tires will stand the gaff. That's being proved every day, in all seasons of the year, in every farming section of the country.

Right here in your own state are many of the farmers who have proved for themselves that Millers give greater mileage—and far greater security of travel—than any tire within their long experience. Many have turned to Millers—after years of experience with all of the leading makes—and are finding them superior in every way.

In the complete Miller line there are tires to suit every farm requirement. And a price range that enables you to secure good tires at whatever price you want to pay.

See your Miller dealer first. We will help you to reduce your tire expense.

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larger item in Kansas than before, by reason of the installing of the state highway system, purchase of equipment and machinery and getting the system started. Kansas from being behind is now one of the leaders in highway building.

In taxes for road improvement all the states combined last year had available funds amounting to over \$40 million dollars, of which the greater part, or 250 millions and 234 millions were derived from motor license fees and the gasoline tax, these two sources supplying practically half a billion dollars, bond issues 121 millions and federal aid about 81 millions of the total funds. Federal aid, in other words, provides a little less than 10 per cent of revenues for highways.

Topeka, Kan. Harold T. Chase.

Bulb Time Is Coming

Soon it will be bulb planting time. Prepare the land by deep spading and an application of acid phosphate or wood ashes. Do not add manure. Order your bulbs. Your local florist has the varieties that do best in your locality. If you must order away, get named varieties, and do not order collections or unnamed kinds or buy merely on price. When the bulbs come, keep them dry and cool till early October, when they should be planted. After arranging to suit yourself, water them. Apply no mulch 'til Christmas time, but keep the ground loose and free of weeds till frost.

Manhattan, Kan. Walter B. Balch.

A Protein Supplement Helps

When hogging down corn it will be profitable to feed the hogs some protein supplement, such as tankage or skimmed milk. The hogs will not require quite as much tankage as they would if they were being fattened in a dry lot, but if they are fed $\frac{1}{2}$ pound of tankage a pig a day they will make faster gains and they will not require so much corn to produce 100 pounds of gain. If skimmed milk or buttermilk is used to supplement the corn, the pigs should be given at least $\frac{1}{2}$ gallon of milk a pig daily.

Manhattan, Kan. F. W. Bell.

Capital at Low Rates

The Federal Land Bank of Wichita now has in force 30,205 farm loans. These loans were made for an original amount of a little more than \$9 million dollars. Payments of more than 9 million dollars have been made on these loans, the total of net loans in force on July 31, 1929, being \$90,804,326.74.

The average rate of interest being paid by borrowers on these loans is 5.464 per cent.

Thru voluntary, co-operative effort, these farmers have obtained capital for the farming business at rates materially lower than is paid for funds used in other businesses.

About a fifth of all borrowing owner-operators of farms in Colorado, Kansas, New Mexico and Oklahoma have loans from The Federal Land Bank.

The other four-fifths pay less interest than they would be paying if it had not been for the energy of those among this fifth who organized National Farm Loan Associations, and developed the business of the bank to the point where it maintains great influence in holding down interest rates on all farm loans.

All farmers have profited by The Federal Land Bank's development and operation, whether they have borrowed from the bank or from other sources. But those who have loans from the bank are making the greatest saving.

Not all farmers have need for long-time farm loans. Many in the Ninth Federal Land Bank District are entirely free from mortgage debt. It is quite probable, however, that at least another 30,000 farmers could materially reduce their expense for interest by obtaining loans from The Federal Land Bank of Wichita, and that they would do so if they knew about the bank and how to proceed to obtain loans.

The volume of loans of The Federal Land Bank might be greatly extended if it charged higher rates for loans, and thus had greater earnings from which to pay the cost of soliciting new business.

It is expensive to travel about the country, visiting farmers and talking them into taking loans. The rate of interest makes very little difference to the resourceful salesman of loans.

He "talks 'em into it" and gets them to sign on the dotted line.

Doing this would, however, defeat the very purpose for which The Federal Land Bank was established. The bank's influence in holding down interest rates would soon disappear.

The management of the bank must be content with whatever volume of applications for loans on good security comes to it thru the efforts of officers, directors, and members of National Farm Loan Associations who know thru experience that loans from The Federal Land Bank are the best loans for farmers.

Wherever the officers and directors of an association take an active interest in the upbuilding of their community, the business of the bank increases. They keep telling their neighbors about it and urging them to get loans from The Federal Land Bank, and thus reduce their outlay for in-

terest. Doing this strengthens the bank and insures the continuation of its helpful influence in making it possible for all farmers to obtain capital at low interest rates.

The business of The Federal Land Bank is virtually at a standstill in some localities. Having formed an association and obtained their own loans, the members of the association have no further interest. They elect officers who make no effort to induce other farmers to apply for loans, and thus still further reduce the unnecessary outlay of the community for interest.

Since the bank makes loans at a lower rate of interest than farmers borrowing from other sources, with scattering exceptions, are paying, it should make good loans only.

Associations which submit applications for doubtful loans are not doing the right thing by their stockholders,

who have made investments in stock of the association to the extent of 5 per cent of the original principal of the loans they obtained.

Officers and directors of associations should first of all work to manage their business so as to earn net profits from which dividends may be declared and paid to these stockholders, just as it is the first duty of the officers and directors of The Federal Land Bank of Wichita to manage its business so that dividends may be declared and paid to the 455 National Farm Loan Associations which own its capital stock.

Loans to farmers who do not pay their installments and taxes when due weaken the financial position of the association and of the bank. It is fully as important to avoid making such loans as it is to obtain applications for good loans.

Wichita, Kan.

John Fields.

Corn Picking Costs Cut in Half

say These Real Business Farmers



THE NEW IDEA Two Row Corn Picker has certainly come to stay, if you ask the opinion of Leo Bros. of Dysart, Iowa.

These men know the cost of their operations. They take into account all expenses, including board for their men, and allow generously for depreciation of equipment. Last year they harvested their corn crop with this wonderful time- and labor-saving machine. 345 acres in 21 days — nearly 16½ acres per day! Read their letter and go over their figures.

NEW IDEA TWO ROW Corn Picker

The first successful two row picker — a typical New Idea development. Tested by thousands of farmers. Covers field with half the driving required by a single row picker. Picks, husks and loads ten to twenty acres of corn a day.

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Used the machine to husk 345 acres with a force of 3 to 4 men *** corn yielded 45 to 75 bu. per acre. Our daily average picking was 160 rows eighty rods long, or 800 to 1200 bu. *** machine was lighter to pull than a two bottom plow. We worked several days during a muddy season when single row pickers were unable to operate. *** machine shows very little wear. If we consider its value depreciated 1-3, then the cost of cribbing the corn is less than 1-2 the cost of that which is picked by hand — taking into consideration the expense of boarding the men.

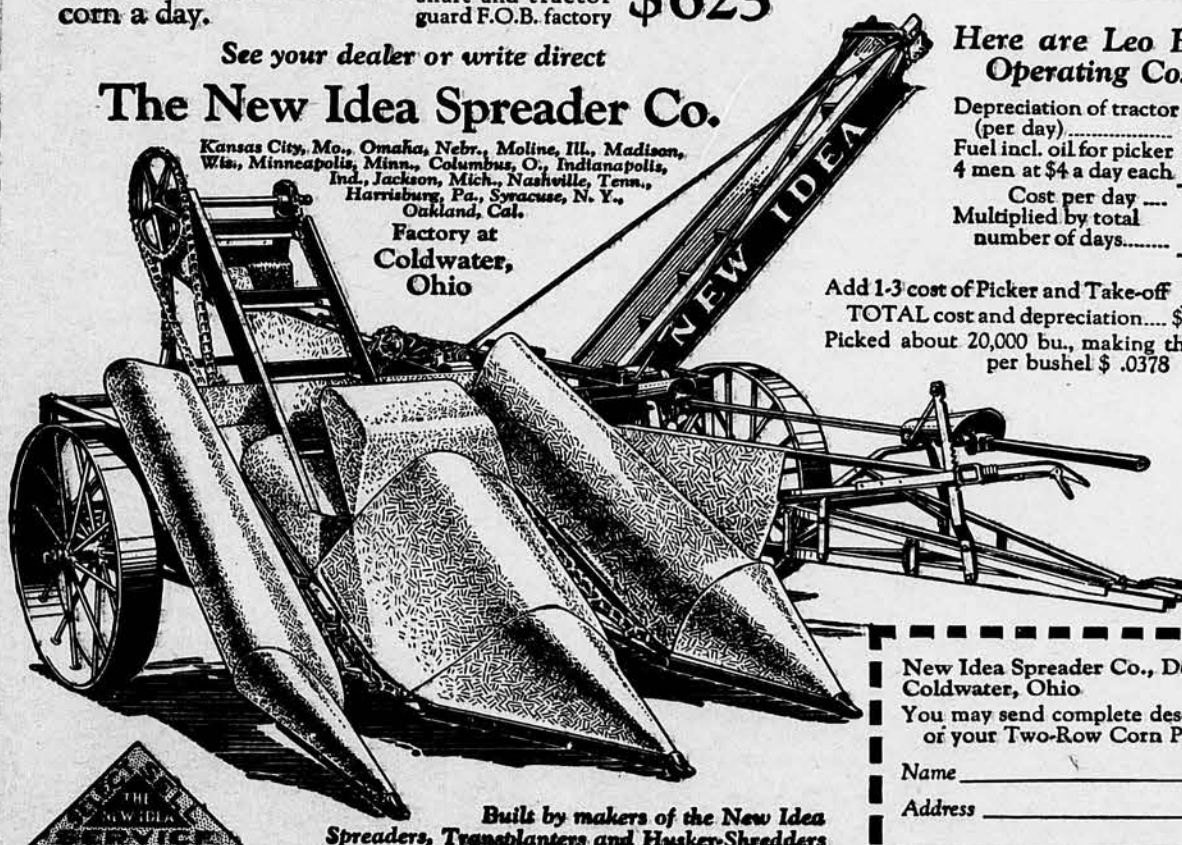
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Depreciation of tractor (per day).....	\$ 6.00
Fuel incl. oil for picker.....	3.70
4 men at \$4 a day each.....	16.00
Cost per day.....	25.70
Multiplying by total number of days.....	x 21
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Add 1-3 cost of Picker and Take-off 218.00
TOTAL cost and depreciation.... \$757.70
Picked about 20,000 bu., making the cost per bushel \$.0378

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You may send complete description of your Two-Row Corn Picker.

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Back to the Mosaic Plan!

The Proposed Change in the Calendar Is an Effort to Simplify It

BY C. F. MARVIN

HUNTING, fishing and agriculture were the chief occupations of primitive man, except when he was involved in conflict and warfare with neighboring tribes for either conquest or defense.

Success in farm operations depends very greatly upon the calendar employed to fix the times for planting. Primitive man began, of course, without a calendar of any kind to guide him. First, he discerned the regular and frequent recurrence of day and night; then he learned that the moon went thru its changes in sometimes 29, sometimes 30 days. Discovering these two calendar units, the day and the lunar month was a comparatively easy matter, but these units did not help him much in learning the time to plant and sow.

Many centuries of time certainly elapsed before the number of days and months in a solar year was found out even approximately. Man's only guides to the cycle of a year were the slow, seasonal changes from heat to cold; the high and low sun at noon, or its northern and southern points of sunrise and sunset, and especially the seemingly mysterious return of nature's growing season, seed time and harvests. These were so irregular and indefinite that early man could not successfully tally the days, and even within historical times we find that thousands of years passed before anyone learned that the solar year contains very nearly 12 7-19 lunar months, a fractional relation which even today baffles man's ingenuity to utilize in any practical calendar.

Moon Has No Influence

The moon has no influence of any kind upon the growth of vegetation or farm operations, many proverbs to the contrary notwithstanding. On the other hand, the sun alone is the ultimate source and control of all life on earth, and the changing phases of vegetation are nature's true calendar, which varies little and never fails.

These great calendar truths, including knowledge of the number of days and fractions in a solar year, were learned by the priests and astronomers of Egypt long before they became known elsewhere. Thus the Egyptian calendar ignored the lunar month and was composed of 12 months of 30 days each, the year being rounded out with a festival of five additional days. By watching and measuring the shadows cast by the great pyramids at noonday, the priests were able to fix the exact dates of the equinoxes, a thing impossible and unknown to all others in those days. Aided by this vital information, and favored by the annual inundations of the Nile, the priests proclaimed from the temples the necessary instructions to the populace and tillers of the soil as to the best times to plant and gather their crops, mate their stock, and, in fact, gave Egypt the unrivaled prosperity and power it enjoyed in the days of its prime.

The superior calendar knowledge of Egypt's priests and rulers was jealously guarded and kept secret from all other nations, and unquestionably was a very important factor which assured abundant crops, and explains and proves the truth of the old saying, "There was always corn in Egypt." Babylonians and other competing nations were using crude forms of lunar calendars. Even the best of these which the ingenuity of modern man can devise, causes wide calendar variation of the date of the equinox, that is, in the dates of seed times and harvests, ranging irregularly from one to 28 days, which variations repeat themselves in a cycle of 19 years, known as the Metonic cycle.

When Moses Lived

Reared in the palace of Pharaoh, learned in all the wisdom of the Egyptians, Moses, while leading his people from Egyptian bondage, set up, as is proved by an interpretation of the Bible, the first perpetual solar calendar recorded anywhere in history. By perpetual is meant that year after year the first day of the year was always

the same day of the week. The calendar year began on or very near the day of the vernal equinox. The first five months contained exactly 30 days each. To commemorate the great events of the exodus which were enacted at the base of Mount Sinai on the 49th and 50th days after leaving Egypt, when the Ten Commandments and many other laws were proclaimed to the Israelites, Moses joined these two days, the fourth and fifth (afterward called the Pentecost) of the third month, into a prolonged double Sabbath and rest day. This made his calendar perpetual.

The sixth month contained 33 days, and the first half year 183 days. The nearly equal second half-year of 182 days, like the first of the year, began with a Sabbath which was on or near the autumnal equinox. Its first five months without the double Sabbath were almost exact duplicates of the five 30-day months of the first half year. The 12th month, with 32 days, ended the year, and the new year began again on a Sabbath.

Altho a definite leap-year rule is absolutely essential to the prolonged maintenance of any calendar, in order to take account of the fraction 0.242 day by which the solar year is longer than 365 days, Moses, like the Egyptians, probably kept this knowledge secret among the high priests, and it seems probable that a complete week of seven days was interpolated in the middle of each cycle of 28 years.

In the vicissitudes of the life of the Hebrew nation, the Mosaic calendar fell into confusion, or failed possibly from loss or misapplication of the leap-year rule. At any rate, we find that an imperfect lunar calendar replaced the solar calendar of Moses after the Jews returned from the Babylonian captivity.

Controlled by the Priests

In ancient times the calendar was made and controlled entirely by imperial or priestly authority, with which the common people had nothing at all to do. Out of this, a superstitious belief has come down and is held by a few even to the present day, that the calendar is a sort of God-given institution which it is sacrilegious to alter or change. It is a fact, however, almost everywhere recognized today, that the calendar belongs to the people and can be changed whenever good and sufficient reasons for doing so are shown. Moreover, history shows that change after change has been made in the calendars of every nation, nearly always to suit the business, industrial, or religious needs of the people, but in some few instances, to cater to the innocent vanity of some mighty ruler.

The Gregorian calendar now in use by every important nation of the world is itself less than 350 years old, and it has been in use in England and America less than 200 years. Even since the World War, Russia first, then the Greek orthodox churches, and still more recently the Mohammedan nations, have all taken over, in part or in whole, this system of reckoning time, and the evolution of the calendar still is going on.

Our present calendar comes down to us from the 10-month calendar Romulus gave to his new city, Rome. Less than 30 years later, Numa added February to follow December, and January to precede March, which it replaced as the first month of the year. The reckoning was on a lunar basis, which failed more or less in the next 300 years, and the Decemvirs shifted February from its place as the last month of the year to become the second month. Thus December, originally the last and 10th month of the year, became the 11th month by Numa's change, and later (452 B. C.) was made the 12th month by the Decemvirs, as it still remains.

Again the calendar got into great confusion by the time of Julius Caesar, who rejected the whole principle of lunar reckoning, acted on the advice of Sosigenes from Egypt, and gave alternate months 30 and 31 days, except February with 29 in common and 30

As your crops need
sun and rain, your farm
equipment needs

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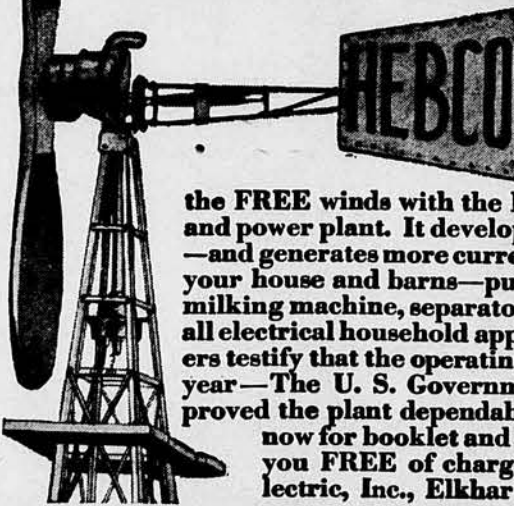
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In leap years, which were to occur every four years. The month Quintilis was renamed July. A few years after the death of Caesar, Augustus, to rival Julius and gratify his vanity, renamed the month Sextilis August in his own honor, increased October and December from 30 to 31 day months, reduced September and November to 30 day months, and made August a 31-day month by taking a day from February. This lawless arrangement is what inspired some poet to pen the lines—

Thirty days hath September
April, June, and November.
.....
.....

The present-day movement to simplify the calendar is in reality an effort to restore the ancient and lost Mosaic plan to begin every year on the same day of the week. The last day of the year will be called "year day." In leap years another day called "leap day" will be inserted in midsummer as a holiday. Other changes plan to make the year consist of 13 equal 28-day months of exactly four weeks each, thus:

ALL MONTHS LIKE FEBRUARY						
With Day-Names Fixed to Dates						
Sun.	Mon.	Tue.	Wed.	Thu.	Fri.	Sat.
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28

After a special study of the question by the League of Nations, all countries were requested to form so-called national committees to study and report upon the question of the public sentiment for or against calendar improvement. The committee for the United States is unofficial, but a number of Government departments are represented. George Eastman is chairman of the committee. The writer is vice chairman, and will be glad to give further information or correspond with any readers who may have questions to ask.

Grain View Farm Notes

BY H. C. COLGLAZIER
Pawnee County

Just how much drier and hotter it is going to get is a subject even the wisest folks rather hesitate to discuss. The only hope of cooler weather is in the fact that August is passed, and we usually begin to have better weather in September. Rain would be of little benefit to the corn, since most of it is pretty well dried up. When we returned from our vacation we found some of the neighbors all ready to fill silos. Last week we managed to get three filled in the neighborhood. So far the filling time has been unusually good. Only minor trouble has occurred, and a silo of good size has been filled every day. From all present indications there will be but one or two silos in a radius of several miles that will not be filled this season. On most of the corn there is considerable grain, but it is hardly as mature as it should be for the best feed. The time of filling is much earlier this year than usual, and it suits most everyone better. Usually silo filling comes right in wheat sowing, and sometimes it is difficult to get help. But this season the silo job will be out of the way in good time.

Wheat sowing will soon be the big thing in this community. Unless rain comes soon the same conditions are going to exist as existed last fall. The seedbed is going to be dry, and likely the wire worm will be ready for his share of damage to the seed. A rain now would start the volunteer wheat, and unless one wishes to sow very early it would have to be cut out. There are several things against early sowing. One is the fly. In the last four or five seasons we have had considerable damage by fly. Another disadvantage comes in that the wheat will use up a lot of moisture that usually is needed most in the spring. The experimental work on different dates of seeding shows quite a difference in favor of late seeding. For this immediate locality about October 1 to 10 has given the greatest yield over a period of years. This year there seems to be a general tendency to sow earlier than usual. Some men are planning on beginning within the next few days. We were fortunate again this season in securing some seed from first-year sod. It is free from rye, and we believe will yield better and ripen sooner than seed from old ground. There is quite a difference of opinion as to what is the best amount of seed to plant to the acre. The people who

sow early sow less seed than is usually sown later in the season. For average conditions of time and the ordinary seedbed we believe a bushel to the acre is plenty. In fact we usually sow less than a bushel.

Last week considerable alfalfa seed was threshed in the community and thruout the county. A great deal of alfalfa has been left for seed. Some of the threshing results have been very good. But usually if we get 2 to 4 bushels an acre we think it is a very good yield. We heard some years ago of a man who threshed 15 bushels an acre from an old stand of alfalfa, but it must have been a fairy story. The spring sowing of alfalfa has made a hard fight against the weeds, hoppers and dry weather, and the outcome still hangs in the balance. But if a good rain comes soon I think we will have a fair stand left.

For about three years we have been using an electric motor and pump jack to supply water to the house and to the barn. The arrangement was not very satisfactory in cold weather. The

past week we installed an automatic electric pump with a small pressure tank. We chose the smaller sized tank so that we could have fresh water directly from the pump more quickly. The pump will supply two half-inch hoses.

This is the season of the year when the boys and girls are thinking pretty seriously about going to school, at least they should be thinking seriously. Those that are fortunate enough to get to go to college this year are indeed lucky. A great many who go to college within the next few days will fail to make good in their opportunity. At the end of the first term they will for various reasons decide they do not wish to have an education. But the boy or girl who goes to college with the determination to stick and make good will many times in the years to come be thankful he stayed on the job and finished. When we see a student just too lazy to learn we always think of the little busy bees. They absolutely refuse to have a lot of drones about the hive to feed and be in the way of the workers. The bees just take the

drones to the edge of the hive, kill them and throw them over the edge. The human race is more kindly to their drones. They continue to pay taxes to maintain schools and colleges where an occasional drone enjoys an easy life, but fortunate for the workers, most of the drones never get to college.

Not for Muddy Fields

BY F. W. BELL

Hogging down corn is a satisfactory method of fattening hogs for market when conditions are favorable, but does not work out well if there is much rainy weather. Hogs running in a muddy field waste too much grain. The best plan is to restrict the hogs to a part of the field small enough that they will clean it up in about 10 days. This means stringing a temporary fence and then moving the fence to enclose another area as soon as the hogs need more grain.

The man who never makes a mistake will be found taking his orders from one who does.



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Belts Are Vital Power Links

And If They Receive Proper Care They Will Give a Long and Adequate Service

BY R. E. FREY

A BELT is a vital link in many operations. Belt failure causes inconvenience and delay, which is often more expensive than the cost of the belt. Faulty installation, neglect, and mistreatment are responsible for most belt failures.

Leather belts should be selected and installed according to the advice of reputable belting manufacturers, most of whom maintain a department for advising their customers regarding installation requirements. A leather belt of first quality, adapted to the work, properly installed, and kept in condition will run from 10 to 25 years, or even longer.

First-quality belting is cut from a definite part of the hide, extending from 15 to 18 inches on each side of the backbone and from the root of the tail for about 48 to 50 inches toward the shoulder. This part, known as center stock, commands the highest price. It is more uniform in texture and strength than the rest of the hide, and consequently is less prone to stretch unevenly. In wide, first-quality belting, the backbone line can be plainly seen in the center of the strip. Narrow first-quality belting also is cut from center stock, but on one side of the backbone line. A lower grade is cut from side stock.

Without Soft Spots

Close inspection affords the buyer some protection against low-grade belting. A belt should be uniform in texture, thickness and width, and should feel uniformly pliable and firm, without soft spots, hard spots or limp places. A belt should not have defects, such as cuts, holes, or brand marks. The grain should show hair holes of a uniform distribution and size, but should not show wrinkles; wrinkles indicate that the leather is from shoulder or neck stock.

When the leather is bent grain side out over a round pole or pipe from 2 to 4 inches in diameter, depending on the thickness of the leather, the grain should not crack. When similarly bent, flesh side out, there should be no wrinkling or lifting of the grain, which is known as piping and indicates either side or belly leather, or poor hides or tannage.

Laps should all run in the same direction and should be well made, with perfect overlapping and tightly glued edges, and without inserted shims or thin pieces of leather to build up false thickness. Likewise, there should be no shims between the plies of double or triple belting. The wider the belt the longer the lap, but no lap should be less than 3 inches. Laps should not open on bending the belt. Gluing or cementing laps is preferable to other

methods of fastening, as the holes for laces or other fasteners weaken the leather.

A dull, oil finish, of a soft grippy nature, is desirable. A high, glossy finish, until worn off, promotes slipping and heating. For the sake of a light color and glossy finish many belts are deprived of a final touch that would make them more pliable and would keep them longer in prime condition.

Operating conditions are sometimes severe, the belting being exposed to water, steam, oil, heat, dirt and fumes. As all leather belting is not alike in withstanding such adverse conditions, it is advisable to use belting that has been specially tanned or treated for the particular condition existing.

Overloading Shortens Life

It is false economy to select a belt that is too narrow or too light for the work. In addition to lowered operating efficiency, a belt constantly overloaded is under a strain that shortens its life. Often it is cheaper in the end to use a narrow two-ply belt than a wider single belt. As a general rule it is best not to use a single belt wider than 8 inches.

A new leather belt stretches from $\frac{1}{8}$ to $\frac{1}{4}$ inch a foot. This is not a sign of poor quality. On the contrary, it indicates that the manufacturer has not taken out all of the life of the leather by overstraining it. If this stretch is not allowed for in making the belt, it should be promptly taken up as it develops.

When making a lap or joint, cut the ends of the belt square. Do not trust the eye; use a try-square. If the ends are not cut square with the edges, a crooked belt, which will not stay on the pulleys results. If laces or other fasteners are used the holes should not be punched too close together or too near the ends and edges. The holes in one end of the belt should be exactly opposite and correspond to those in the other end, for even tension on the belt.

Belts should not be run over needlessly small pulleys or on drives unnecessarily short. It is advisable not to run a double belt over a pulley less than 10 inches in diameter. Pulleys should always be wider than the belt. Vertical drives should be avoided if possible. For smooth, continuous running, shafts must be true and pulleys accurately adjusted. A leather belt works better with the grain side against the pulley.

Belts should be put on so that the feather edge of the laps on the outer surface of the belt does not run "into the wind"—that is, so that the pressure of the air or contact with objects while running will not lift the lap.



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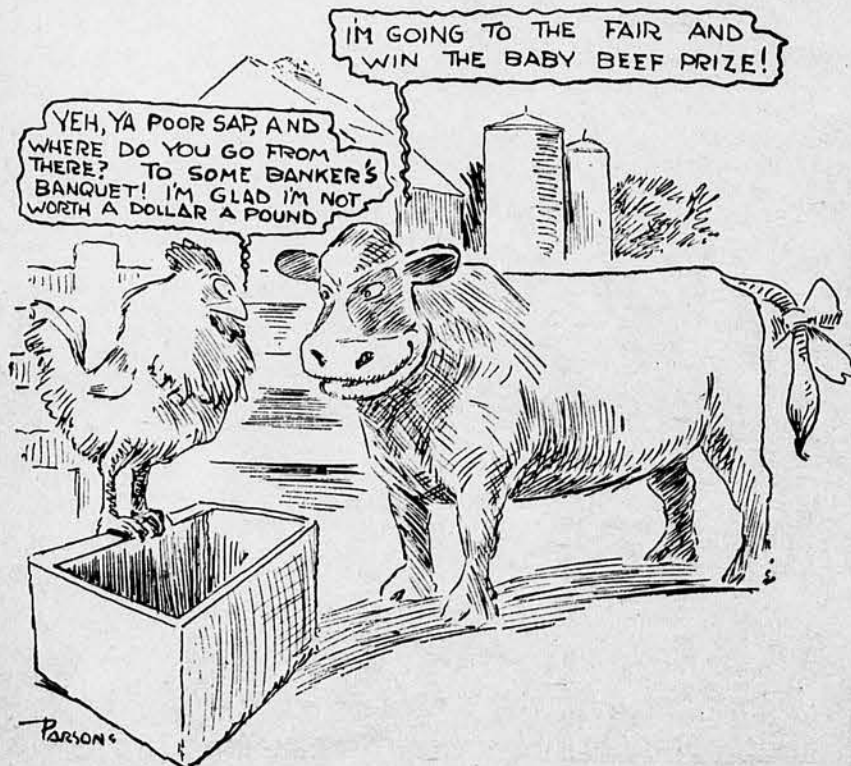
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The tension of a belt is important; if the belt is either too tight or too loose it will slip, and the result will be both loss of power and a burned belt. A belt should be run slack rather than tight, and the slack should be on the high side so that the sag of the belt is toward the pulleys.

Guides should not be used to keep the belt on the pulleys. If it will not stay on without guides the installation is faulty. The constant rubbing against the guides tends to turn up the edge of the belt and to open laps.

Becomes Dry and Harsh

A belt needs care and nourishment, as it gradually loses some of its lubricating constituents. In time, if this loss is not replaced, the belt becomes dry and harsh, and the leather begins to rot, resulting in loss of strength and elasticity, and finally failure. An effort should be made to keep a good belt in its original condition. Once a belt loses its original good properties no amount of artificial dressing can fully restore them.

When a belt is slipping there is a temptation to put on it anything that is sticky and will make the belt take hold. Instead the trouble should be located and corrected. Most sticky materials, such as rosin, pitch, asphalt and tar, temporarily make the belt cling, but they do more harm than good, as they have no belt lubricating properties and "gum" or glaze the surface of the belt, or "cake" on the belt and pulleys.

A suitable dressing penetrates and lubricates the leather, thus affording protection to the fibers and imparting flexibility so that the belt hugs the pulleys. Neat's-foot oil is considered very good, as is also castor oil. Among the best belt dressings are mixtures of cod and neat's-foot oils with tallow and wool grease free from mineral acids. Most belting manufacturers make belt dressings.

Belts should be kept clean. Dust and dirt should be frequently wiped off. Mixtures of dirt and oil can be removed with gasoline or naphtha, but precautions should be taken against explosions and fire. Oil-soaked belts should be sent to a manufacturer to be de-greased.

Clean With Castile Soap

Belts can often be cleaned by washing with warm water and a neutral soap, such as castile or white toilet soap. The washing should be rapid. Under no circumstances should the belt become wet, as it will then stretch and slip, and laps may become loose. Dressings or other materials that have caked on the belt injure it and cause uneven running. They should be completely removed. After the belt is clean apply the dressing to the outside while the belt is at rest, and let it soak in over night. The dressing should be applied evenly and rubbed in with waste, felt or some similar material. If necessary a light dressing may be applied to the pulley side, with waste or felt. Even distribution and penetration should be obtained. Belts should be dressed to the extent that the leather feels mellow or pliant, but not so that it feels greasy and soggy. Because a little dressing is good for belts, it does not follow that more is better.

Repair belts in time. Prompt attention is cheaper and safer in the end. Joints especially must be periodically inspected, and at the first signs of weakening should be repaired. A weakened fastener may break but part way, and, as a result, the belt may be badly ripped, even from end to end.

Belt stocks and belts not in use should be stored on open shelves in a well-ventilated room of even temperature and humidity, and not where it is either dark and damp or exceedingly hot and dry. A belt that is not to be used for some time should not be left on the pulleys.

A Senator-Editor's Reaction

In Springfield, Mo., Leader

Senator Arthur Capper, one of the outstanding successes in the newspaper publishing world, doesn't take at all kindly to the plan now under way looking to the merger of American daily newspapers on a colossal scale. The plan, originating in the brain of Eugene Greenhut of Hahn Department Store fame, is being furthered by one of the big St. Louis trust companies, which mailed to Editor Capper, as to other newspaper men of prominence over the country, a form letter

setting forth the plan and concluding with the paragraph, "Your reaction to the above will be greatly appreciated."

Well, the Kansas publisher's "reaction" was prompt and directly to the point. "I cannot see anything in common," he wrote, "between goods sold by the yard, pattern or weight . . . and a good newspaper."

"A newspaper, worthy of the name of newspaper, is not merely a commercial enterprise. Commercialism enfeebles it with a creeping paralysis. A newspaper is far more of what is intangible and of the spirit. It is this vital, unseen, unpurchasable element which makes the American newspaper the breath of life of this republic. Next to the downfall of the nation no greater calamity could befall its people than that its newspapers should be bound up with, or be beholden to, anything or anybody. The reason for their existence forbids it. A free people must have a free press."

"It is the free American newspaper more than the American Constitution that keeps us a free people. The greatest, most constant influence in our life today is the newspaper. It directs our

thought and purpose into every avenue of life; it is our greatest educator; it makes of more than 116 million souls a united and a homogeneous nation; its leadership and guidance in our daily life is indispensable and unique, as necessary to our existence as the government itself."

"A newspaper must make money, it is true, profitable newspapers are the best newspapers, but a newspaper allied to any commercial interest cannot live. The fate of the newspaper that sells itself is that of the fallen woman. The scarlet letter of sin is upon it and cannot be concealed from its least literate reader."

"A wise publisher knows that unless the work of his editors has sincerity his paper lacks its most essential quality for a successful existence. A commercial interest could not and would not keep its hands off the editors and what had been a successful newspaper would die just as surely as if it labeled itself daily in a 'scream line' on its first page, 'I am bought; I serve So-and-So.'"

"In its effect upon the nation, war itself might be less destructive than

the commercial exploitation of its newspapers."

The senator from Kansas concludes his sterling statement with the ringing declaration, which is also a most consoling thought that "such a merger, even if it could be effected, could not succeed."

Mr. Greenhut and his backers and brokers might try putting that in their pipes and smoking it.

Editor Capper has vigorously voiced the "reaction" of newspaper folk the country over.

To Propagate Trees

Most woody plants in nature reproduce themselves by their seeds. Since ancient times, however, man has employed grafts and cuttings as well as the natural means of propagating plants and trees. Information for the ordinary planter who wants to propagate fruit trees and shrubs by any of the artificial means is contained in Farmers' Bulletin 1567-F, Propagation of Trees and Shrubs, just issued. Copies may be obtained free by writing to the Department of Agriculture, Washington, D. C.

U.S. Wheat Crop REDUCED 30 MILLION BUSHELLS by Stinking Smut Last Year!

Treat seed wheat with Ceresan to prevent smut losses

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Now there is an easy, safe and economical way to avoid these tremendous smut losses. You can prevent and control stinking smut *before sowing*, by taking one simple but effective precaution. Just treat your seed wheat with Du Bay Ceresan.

Better Smut Control with Ceresan

Leap's Prolific winter wheat when treated with 2 ounces of Ceresan per bushel, showed less than one half of 1% of smut, while the infection on the untreated plots ran from 57 to 67%. Where 3 ounces per bushel of high-grade copper carbonate was used, over 1.5% of smut was present, while over 4.5% of smut occurred where low-grade copper carbonate was employed. Ceresan-treatment of seed wheat also controls seed-borne flag smut and seedling blight caused by seed-borne scab.

Although Ceresan is deadly to seed-borne disease organisms which attack wheat and reduce profits, it is entirely harmless to seed. Treatment with this effective disinfectant will not injure the drill or slow up the rate of drop in planting.

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seed, it is vastly superior to old-fashioned liquid treatment with formaldehyde. Dr. Benjamin Koehler, of the Illinois Agricultural Experiment Station, reports that Ceresan gave perfect smut control and produced a yield increase of 13.8 bushels per acre on 60-Day Oats, and an increase of 19.1 bushels per acre on Big 4 Oats. These increases averaged about double the increases from seed treatment with formaldehyde.

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Just dust Ceresan on the seed grain. No soaking or drying. Only 2 ounces required per bushel of seed wheat or rye; 3 ounces per bushel of oats or barley. Ceresan prevents crop and profit losses at a cost of about a third of a cent per bushel of harvested grain! Treat seed grains now and store them until the sowing season. Ceresan-treated seed tends to repel moths, weevils and certain other pests. Ask your dealer today for our free Ceresan pamphlet, or mail the coupon.



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World Agriculture Is Changing

Tractors Have Been of Great Value in Increasing Crop Production in America

By O. C. Stine

THE World War revealed in high light the basically vital significance of agricultural resources and greatly affected agriculture throughout the world. Many changes in world agriculture since 1914 are directly traceable to the war, while others are the results of forces only accelerated or retarded by the war. The war changed boundaries, which fact has affected international trade in farm products, caused or made possible agrarian reforms which have affected production in many countries, and stimulated the development of new agricultural areas in many other countries.

An increase in the use of machinery, stimulated by the war but due mainly to the development of scientific inventions, and a greater application of science to production have encouraged the continuation of the expansion of production in many countries. The war, directly and indirectly, also affected the demand for farm products. The marked rapid changes in production and in the demand for farm products have given rise to serious agricultural problems in all parts of the world.

Russia Was Eliminated Promptly

The immediate effect of the war was to eliminate Russia from the international trade in agricultural products, reduce the production of most European countries, and stimulate production in overseas countries from which supplies could be had most readily. Most European countries made strenuous efforts to continue and even increase agricultural production with but little success during the war. The end of the war found the cultivated area and the numbers of livestock reduced in many countries. It is estimated that the area of cereals, potatoes, and sugar beets cultivated in Europe, excluding Russia, in 1921 was about 11 per cent below the pre-war average. Production of butter and cheese in Europe outside of Russia has been cut about half and pork production was at least 15 per cent below the pre-war average. Russia, disorganized and with production greatly reduced, was not in position to resume exports to other European countries. Under normal conditions this situation would result in a great demand for products from surplus-producing countries other than Europe.

Outside of Europe, the immediate effect of the war was to stimulate production. The area devoted to cereals in Canada, United States, Argentina and Australia in 1921 was 19 per cent greater than the pre-war average. The greatest development was in Canada, where the area in wheat more than doubled. Livestock production was increased greatly. The production of pork in the United States, beef in Argentina, and butter and cheese in New Zealand and in Argentina was greatly stimulated. From the principal surplus-producing countries in 1921 the exports of butter were 204 per cent of the pre-war average, cheese 130 per cent, pork 180 per cent, and beef 163 per

cent. Thus the surplus-producing countries outside of Europe were fully prepared to make up the European deficits at the end of the war.

At the end of the war the surplus-producing countries outside of Europe faced the prospect of recovery in the agricultural production of many European countries and had to sell to consumers whose purchasing power had been greatly curtailed. The great decline in prices which took place in 1920-21 was due largely to deflation, but it was due in part to the decline in the purchasing power of consumers.

Soon after the war, the United States and all other surplus-producing countries began to feel the effect of the reduction in purchasing power of the

pre-war average, and the production of milk, butter, cheese and pork was far above the pre-war average. Fortunately, the recovery of production was accompanied by a recovery in purchasing power, so Europe has continued to take large quantities from surplus-producing countries. Market demand has been reduced for some commodities, but for others the European market is today as good a market as it was before the war.

Shifts in boundaries have had some effect on the market for agricultural products of the United States in Europe. The creation of Poland has taken an agricultural surplus-producing area out of Germany and out of the protection of German tariffs. Separation of Austria and Hungary has made Austria a better market for our surplus products.

Agrarian reforms and unsettled political and social conditions have had some effect on the agricultural situation. The Balkan countries have recovered from the war but slowly. Agrarian reforms in some areas have tended to reduce production and retard recovery of production of some commodities. This is particularly true of Rumania and Russia. These conditions probably will not persist indefinitely; it is to be expected that eventually production in these countries will recover from the effects of war and unsettled conditions following the war. Although they may not resume exports of wheat in so large a volume as before, it is to be expected that they may again export important quantities of wheat and many other products.

An Expansion in Canada

While agriculture in Europe has been recovering from the effects of the war, production in some countries outside of Europe has been readjusted to meet changing European conditions; in others, production has continued to expand. The United States made some adjustments, reducing beef, dairy and corn production to domestic requirements and making some reductions in the export surpluses of wheat and pork. Canada, Argentina, New Zealand and Australia, on the other hand, continue to expand production and exports. Expansion of the wheat area in Canada was checked temporarily, but it is now greater than ever, and is producing a record export surplus of wheat. From the point of view of the United States, there is no prospect of curtailment of production or weakening in competition from these countries.

Before the war, science was preparing for another "revolution" of agriculture. Agricultural and mechanical colleges in the United States have been long at work developing an agricultural science. Corresponding work was in progress in many other countries. Some great inventions just before the war were preparing the way for the application of more machinery to agriculture. The war stimulated

(Continued on Page 34)



LET THE PUNISHMENT FIT THE CRIME!
THE HIT-AND-RUN DRIVER.

European consumer. Italy began shipping larger supplies of lemons to the United States because few consumers in Germany and other North European countries could buy them. Some Danish and New Zealand butter, and Swiss and Canadian cheese began to be diverted to the United States because of the reduction in the purchasing power of European consumers.

European agriculture recovered rapidly. Recovery was most rapid in those countries, such as Denmark and the Netherlands, which were disturbed but not directly involved in the war. By 1925 many countries had recovered the pre-war acreage of crops and pre-war numbers of livestock. In 1927, the last year for which complete statistics are available, the cultivated area of Europe outside of Russia had recovered to 97 per cent of the

Larger Profits for Poultrymen

By M. A. Jull

ACCORDING to the best estimates available, the average egg production for all domestic chickens of laying age in the United States is about 70 eggs a year. It is estimated also that the number of eggs produced in March, April, May and June approximates 75 per cent of the total production for the year. The correct basis for determining the worth of any hen as a layer should be not only the total number of eggs produced, but also the time of production. Ten eggs laid in November or December are worth 20 laid in April or May. The average farm hen lays principally from March to June, the season of lowest prices, and consequently the season of relatively lower profits than at other times of the year.

A study of the trend in the average monthly farm prices for a period of years shows that lowest wholesale-egg prices prevail in April, and that there is a slight increase in July and August, with a more perceptible increase beginning in September. The highest price is reached in December, which also is the season of highest profits, provided there is good egg production. Moreover, if there is good egg production during the fall and winter, the average price a dozen for the year is increased.

In actual practice there are four primary factors which affect economic returns in the production of eggs for market. These four factors are: (1) The quantity of feed consumed, (2) the price of feed from time to time, (3) the number of eggs produced, (4) the prevailing price of eggs at the time of production. The poultryman has little or no control over the price of feed or the price of eggs. Under ordinary conditions of practice, the average quantity of feed consumed a bird from month to month is fairly stable. He can control the rate of egg production at different times of the year, and it is this particular aspect that deserves special mention. There is some variation in feed prices from season to season, throughout the year, but not nearly to the same extent as pertains to egg prices.

Breeding practice to increase egg production should take into consideration the constitutional vigor of both males and females, earliness of maturity in the pullets, intensity of production, non-broodiness, and persistency of production.

Proper selection of the breeding stock is the keynote in any improvement plan. Whether trapnesting is being practiced or not, considerable progress in the development of a high-laying strain can be made by selecting breeders based on their performance, but if trapnesting is practiced, then the progeny test also should be applied. Then, again, breed type and standardbred quality should be given consideration, especially if hatching eggs, baby chicks or breeders are to be sold.

That constitutional vigor is of paramount importance in laying stock is shown by the fact that a 4-pound Leghorn and a 6-pound Rhode Island Red laying 216 eggs of standard size, 2 ounces each, would produce a weight in eggs equivalent to six times the weight of the Leghorn and four times the weight of the Red. High egg production constitutes a heavy drain on the birds' digestive and reproductive systems. A female must possess abundance of constitutional vigor to stand the strain of continuous production. Since constitutional vigor is inherited, the males also should possess it in abundance in order to transmit it to their progeny.

The selection of breeders based on their performance is a matter of easy application, whether one is trapnesting or not. Where trapnesting is practiced, it is an easy matter to determine and record the pullets that commence laying early in life, those that have a high intensity of production, those that do not go broody or that exhibit very little broodiness, those that show no winter pause in production, and those that lay well during the

summer and fall months before terminating the first-year production.

Where trapnesting is not practiced, the matter of selecting the best annual layers for future breeding purposes is not quite so simple, but still is easily done. In the fall of the year, as the pullets start laying, they should be banded with a numbered aluminum or colored celluloid band. A very easy way of determining the approximate time that pullets commence to lay is by noting carefully the development of the comb and wattles and the width between the pelvic bones. From practical experience it has been found that birds of the lighter breeds, such as Anconas and Leghorns, should commence laying when about 180 days old, and birds of the heavier breeds, such as Plymouth Rocks and Wyandottes, should commence laying when about 200 days old.

Pullets that lay at a high rate can be detected by the degree of bleaching of the yellow pigment, in normally yellow-pigmented breeds, such as Leghorns and Plymouth Rocks. During January and February the layers should be examined, and those with the whitest beaks and shanks should be banded with a numbered aluminum or colored, celluloid band. The banding of birds according to the number of times they go broody should be a very simple matter. The identification of birds that show no winter pause is a more difficult matter and may be dispensed with. Persistent layers during the summer and fall months may be banded readily. Such a system of banding is entirely practicable and should do a great deal to improve the laying qualities of the flock, if practiced from year to year. The banding of the birds should follow a definite method so that at the end of the year the best layers may be identified at a glance. If numbered aluminum bands are used, the numbers may be recorded under the four headings, earliness of maturity, intensity of production, broodiness, and

(Continued on Page 35)



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41Z129—The snappy style of this National Bonded Three-Piece Suit and the smart appearance of the material are bound to catch your eye even before you notice that the price is only \$16.75. You'll know right away that you will be smartly dressed in it—and our bond guarantees your complete satisfaction with it.

The material is a high grade All-Wool Suiting in new shankskin weave and the suit is well-tailored throughout. Two-button single-breasted coat has popular peak lapels and is built with shape-holding pre-shrunk canvas. Half-lined with durable Rayon serge.

Ultra smart English plaited "Tattersall" vest and English-cut trousers with plaits at waist and a separate three-inch band. Embossed genuine leather belt is included. Plain or cuff bottoms on trousers. State choice.

COLORS: grey, brown or blue.
SIZES: 34 to 44 inches chest; 30 to 42 waist; 28 to 34 inseam. In ordering, give measurements and state color desired.

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For Girls and Junior
Misses



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Choice of Three Leathers
530Z7332—Black Patent Leather.
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Collegiate Oxfords for girls and Junior Misses. Perforated moccasin-effect vamp and quarter; good-wearing leather sole; attached rubber heel; light colored leather quarter lining.

GIRLS' SIZES: 1 1/4 to 2 broad toe. \$2.49
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BROWN OR BLACK SUEDE

EMBOSSED LIZARD LEATHER TRIM

730Z169—Black Suede.
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Women's ultra-smart One-Strap Pump of fashionable Suede Leather with lizard-embossed leather strap and inserted panels on the vamp; black on the black pump and tan on the brown pump. Suede-covered spike heel about 2 1/4 inches high; good-wearing leather sole. SIZES: 2 1/4 to 8; widths C, D and E. Order by number for color; state size and width desired.

EACH PAIR, \$3.98
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Snappy New York Model
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18Z1546—Style right from Broadway is shown in the design of this Three-Piece "Longie" Suit for boys. It is well cut and nicely tailored and made of a good quality fancy pattern All-Wool Cassimere. Any boy who is particular about his clothes is certain to be pleased with this manly suit, and he will be especially proud of the material, which is tasteful and "different" without being loud.

The single-breasted shapely sack coat has peak lapels and fastens in the popular two-button style. It has four pockets and is serviceably twill lined. Smartly cut "Tattersall" vest has two plaits and four pockets.

Full cut "longies" have stylish cuff bottoms, usual pockets and fittings. An ideal suit for school or dress wear.

COLORS: grey or brown mixtures. SIZES: 6 to 16 years. In ordering give size and color desired.

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18Z1546
Boys'
3-Piece
ALL-WOOL
Cassimere
Suit
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When Seven Million People say there must be a mighty good



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Leading
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12Z805—Girls' dressy Two-Piece Ensemble for only \$6.98. Consists of a Silky-faced Velveteen Coat and short-sleeved Dress of Washable Rayon Flat Crepe with shirred skirt front. Bow at neck; self sash ties in back. Coat makes a smart wrap to wear with other dresses. Boutonniere. COLORS: navy blue coat with red dress; brown with tan or wine with red. SIZES: 8 to 14 years. —and we pay postage. \$6.98



\$2.98
WE PAY POSTAGE

20Z1030—This Women's and Misses' big, warm, heavy weight All-Wool Sweater is a splendid cold-defying sweater with quality, good appearance and serviceability that only National Bellas Hess could give you at this low price. It is well knit from sturdy All-Wool Yarn in Shaker stitch and has many features usually found only in high priced sweaters. The pockets are knitted in, cuffs are hand looped, and shoulders are reinforced. The great big double-knit, form-fitting adjustable three-piece collar may be buttoned up high around the neck. COLORS: maroon, navy blue, cardinal and black. SIZES: 34 to 46 bust. Give actual bust measure and state color desired.

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 10 Z 810
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**The Coat With
 the New Flare**

9Z854—The flare was the most important new coat fashion shown at the Paris fall openings. An absolutely new flare, beginning at the hips and rippling gradually outward, as shown in this ultra-smart and very beautiful Women's Coat of fine quality All-Wool Lustrous Ram's Head Broadcloth. The slightly fitted new Princess line is another feature of the season's coat styles shown in this model. Adding to it the flattering Arabian Lynx Coney fur collar, deep cuffs and border on the rippling flare side panels, the coat becomes a garment of great elegance and much distinction—a coat we feel more than proud to be able to offer to you at only \$24.98. A full length panel at center back and shaped panels at side-fronts are finished with raised seams. Fine quality silk satin lining guaranteed for two seasons' wear; warm interlining.

COLORS: tan, gracklehead blue, black or middy blue. **SIZES:** to fit 34 to 46 bust. Lengths: sizes 34 to 38 bust, about 43 inches long; 40 to 46 bust, about 45 inches long. Give size and color desired.

OUR PRICE, \$24.98
 —and we pay postage.

**A Little
 Hat of Great
 Chic**

Y15Z1103—Fits heads 21 1/2 to 22 inches. **COLORS:** Madeleine blue (deep Copen), desert sand (new sand), silver grey, Castilian red (bright red) or black. It's all the rage in New York—this adorable Felt Hat in Dutch Cap style. It develops such an amazing amount of chic when you put it on that it's no wonder it has won the feminine heart. Made of good quality Wool Felt, it has long brim in back, with folded flaps at the sides and felt buttons stitched to the front of the "off-the-eyebrow" form-fitting crown and it makes a charming frame for a youthful face. Novelty pin ornament.

OUR PRICE, \$1.98
 —and we pay postage.

The Very Latest!

10Z810—So flattering and dressy a fashion as the All-Silk Crepe-back Satin Ensemble has quickly won favor with New York's best dressed women. And a charming version of that fashionable type of costume we offer you in this new fall model. The material is of fine quality and the glossy satin and dull crepe surfaces are smartly combined in the coat whose gracefully draped scarf collar is faced with contrasting color, and may be worn in several different and becoming styles.

The dress is a sleeveless model with waist to match the contrasting facing of the scarf collar, and skirt to match the coat. Waist has self bow at neck and all-around belt of the skirt material. Plaits at each side of skirt. Each garment is independent of the other and is suitable for combination with other coats and dresses.

COLORS: marron glace or black; each with tan waist and trimming. **Women's Sizes:** to fit 34 to 42 bust. Give bust and hip measures and length from neck to bottom of hem at center back. State color desired.

COMPLETE, \$14.98
 —and we pay postage.

**Full-Fashioned
 PURE-SILK TO GARTER HEM
 SERVICE WEIGHT**

**98¢
 87¢
 WE PAY POSTAGE**

**Women's
 Fine Quality
 Delustered Rayon
 Bloomers....**

Big Special!

5Z944—Handsome Full-Fashioned Stockings knit of Pure Silk to garter hem in fine gauge. Service weight. Double heels, slipper soles, toes and garter straps of mercerized lisle. High-hems of mercerized lisle, reinforced spliced heels of silk, reinforced with lisle. Toe guards. Colors: French nude, gunmetal, dust, bluish, grain, mode beige, boulevard, black or white. **Sizes:** 8 1/2 to 10. **A PAIR, 98¢**
 —and we pay postage.

13Z452—These Women's practical and comfortable Bloomers of heavy quality knitted of delustered Rayon are a remarkable value at only 87 cents. Cut full standard sizes. Roomy seat with large gusset and reinforced crotch. Elastic at waist and knees. Colors: pink, peach, Nile green or orchid. **Sizes:** corresponding to 34 to 42 bust. **87¢**
 —we pay postage.

**39 Z 714
 Good Quality
 ALL-WOOL
 Ram's Head
 Broadcloth
 \$14.98
 WE PAY POSTAGE**

**There's a Paris
 Air to This Very
 Chic Coat**

39Z714—Exactly the sophisticated type on which the young Parisienne has won her reputation for chic, this Junior Misses' Coat is one of the debonair new fall models and is made of a good quality All-Wool Ram's Head Broadcloth. A ripple flare flounce at sides and back emphasizes the season's latest coat silhouette. Mink-striped coney fur collar is held up in back by a bow and buckle. A band of the same fur heads the flare overcuffs. Lined with Rado Chene guaranteed for two seasons' wear; warmly interlined.

COLORS: middy blue, tan, gracklehead blue or black. **SIZES:** 13 to 19 years (to fit 32 to 38 bust). Lengths: sizes 13 and 15 years, about 40 in.; 17 and 19 years, about 42 in.

—and we pay postage, \$14.98

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Six-Cylinder Smoothness

The inherent balance of six-cylinder, valve-in-head design assures, at every speed, the smooth, velvety flow of power that distinguishes the fine automobile.

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A non-detonating, high-compression cylinder head and automatic acceleration pump give the new Chevrolet Six remarkable acceleration.

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Rare beauty, smartness and comfort are provided in the Bodies by Fisher. Composite hardwood and steel construction gives them unusual strength and safety.

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A full ball bearing steering mechanism, a remarkably easy gear-shift, and powerful, non-locking, four-wheel brakes enable you to drive the Chevrolet Six for hours without the slightest fatigue.

Every Modern Convenience

—including twin-beam, foot-controlled headlamps; adjustable driver's seat and VV windshield in all enclosed models; and a completely equipped instrument panel with electric motor temperature indicator and theft-proof Electrolock.

Enduring Quality

Due to the vast combined resources of Chevrolet and General Motors, the Chevrolet Six is built to exceptionally rigid standards of precision, using only the highest quality materials.

**Value that defies comparison—
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The Coach.....	\$595	Light Delivery Chassis..	\$400
The Coupe.....	\$595	1½ Ton Chassis.....	\$545
The Sport Coupe.....	\$645	1½ Ton Chassis with Cab...	\$650
The Sedan.....	\$675		

All prices f. o. b. factory, Flint, Michigan

The Government Favors Co-operation

Organized Selling Will Increase the Returns of Agriculture

By Arthur M. Hyde

Secretary of Agriculture

THE Government's attitude toward the co-operative movement is a natural development of its traditional policy of fostering and encouraging agriculture. The establishment of the Department of Agriculture; the aid granted to the land grant colleges and the experiment stations; the millions of dollars of federal money spent for research, teaching and extension work in agriculture; these are evidence that the Government recognizes the prosperity of agriculture to be essential not only to the welfare of the farmers but also to the well-being of the nation.

Agriculture has inherent difficulties which cannot be overcome by the individual producer. It is a far-flung industry characterized by small producing units. Nearly 2 million cotton growers compete for the markets of the nation and the world. Corn is produced on nearly 5 million farms. All of these farms are in competition with one another. Imagine, if you can, the manufacture of automobiles by 2 million small independent factories! High costs, price-cutting and financial distress would be the inevitable result. Industry has met this problem by mergers. We cannot merge 6 million farms. We have no desire to do so. The one-family farm is a valuable social unit. Its independence must be maintained, but in maintaining its independence we must remember that we preserve a small producing unit in a society where organization and combination are the rule. The farmer must have help, not only to reduce the competition of his fellows, but also to see that social and industrial adjustments do not bear too heavily upon him.

500 or 1,000 Bushels?

Furthermore, the farmer faces the competition of foreign producing regions. The fruits of the tropics compete with the domestic fruits in our own markets. Wool producers in Australia and elsewhere compete with our sheep raisers. Our wheat enters the markets of the world in competition with the wheat of the world. Our cotton likewise must find a world market.

The problems of competition, domestic and foreign, are not the only problems of agriculture. Industry can and does estimate its probable market and plans its production accordingly. Costs can be figured with reasonable accuracy. The farmer is not so happily situated.

If he seeds 50 acres to wheat he cannot know certainly whether his yield will be 500 bushels or 1,000 bushels. He is subject to all the hazards of weather, insect pests and plant diseases. He cannot estimate his output nor figure his costs until after the event.

These and other inherent handicaps justify the Government's policy of assistance to agriculture. The object of this policy has been not merely to increase the farmer's income, but also to maintain and improve his social and educational status, which, after all, is based on income. The welfare of the nation demands that farm people should have standards of living and opportunities equal to those of other Americans.

After all the assistance the Government can give to agriculture has been afforded, certain other inherent difficulties remain.

Generally they can be met only by organization. Organization to develop better grading and packing, to establish and maintain grade standards, and to adjust production to demand. Organization for the purpose of marketing and distributing farm products economically and efficiently. Organization to deal with problems of transportation, legislation and the many other broad questions with which the farmers as a group are directly concerned. In production, in marketing and in the broader field of social and economic problems affecting his interests, the farmer requires organization.

Can't Merge 6 Million Farms

We cannot merge 6 million farms into one gigantic producing corporation. The farmer then has two alternatives. He can depend on private agencies to market his products, or he can develop his own co-operative agencies. He can follow the old course of private bargaining with the buyers who come to his door. In that event, he deals largely in the dark regarding prospective prices and demand with a purchaser who frequently is armed with a firm quotation, set low enough to afford a sure profit to the middlemen who are the undisclosed principals of the transaction. Or he can develop his own co-operative marketing system operated in his own interest, which by combining the products of many farm units can exert an appreciable influence in the market, and thru knowledge of supplies and demands can deal in the light of the same facts as the buyer. There can be but one choice of these alternatives.

Early efforts in co-operation consisted chiefly in the formation of local associations. Legal troubles were awaiting them. Individuals whose business was curtailed by the activities of the associations attacked in the courts the right of the farmers to organize co-operatively. The agreement of

farmers to market collectively, and to pay damages if they violated their contracts, was alleged to be in restraint of trade. Some early decisions upheld this contention. The directors of several milk marketing associations were indicted.

This was a crucial period in the history of agricultural co-operation. Lack of sympathy on the part of the Government might have irretrievably handicapped or destroyed the co-operative movement. Instead, steps were taken to correct the situation. The Clayton Amendment to the Sherman Act was enacted, and later the Capper-Volstead Act wrote approval of the co-operative form of organization into the federal statutes. The status of the co-operative organizations was established and the way prepared for the present large development. The Capper-Volstead Act removed the disabilities which threatened the existence of the co-operative movement. It gave the associations the same opportunity to expand and develop that is accorded industrial corporations. It was not a grant of special privileges, but a simple act of justice.

Other evidence of the sympathy of the Governmental policy toward agriculture and co-operative marketing might be cited. The Agricultural Credits Act of 1923 and the creation of the Division of Co-operative Marketing in the Department of Agriculture are some of them. The Warehouse Act and the Grain Futures Act are others.

The latest expression of the policy of the Government toward the co-operative movement is found in the act creating the Federal Farm Board. It is a further development of the Government's policy of service and assistance to the co-operative movement. In its first section the purpose of the legislation is stated to be to encourage "the organi-



'Tis A Peculiar Coincidence

zation of producers into effective associations or corporations under their own control for closer unity of effort in marketing."

This declaration of policy is borne out by the personnel of the board. Since my membership is ex-officio, I can with entire propriety say that every man on it except the chairman has been active in the growing of farm products on his own farm and in marketing thru co-operative associations. They are leaders in agriculture and in agricultural thought who have been nominated for the position by their own outstanding records, and by the recommendations of their associates in the co-operative movement.

In the chairman of the board, the farmers of the United States have secured the trained service of one of the leading business men of the country; a man of broad sympathy and understanding of the problems of agriculture. Under his leadership, the board will function in a broad way to assist American farmers to enlarge and strengthen their co-operative organizations. And, I cannot refrain from saying that in the President of the United States the farmers have a friend, and the cause of co-operative marketing an adherent whose faith has been proved by his works, and whose devotion to the ideal of equal opportunity for the farmer is as firm and unflinching as that of any man in America.

Policies are more than mere matters of statutes. The services which the Government offers the co-operative associations and the spirit in which these services are performed also may be regarded as expressions of policy.

There are many special problems with which co-operatives have to deal. In the organization and incorporation of the co-operative associations and in their relations with their members, various legal

problems arise. The non-profit form of association cannot be satisfactorily incorporated under the general corporation laws of the states. It was necessary for the states to enact new legislation providing particularly for the formation of co-operative associations. The co-operative organization must be set up in such a way as to comply with the provisions of the various co-operative marketing acts and at the same time be in harmony with provisions of the general corporation laws and the statutes of the various states. In membership contracts, also, many legal problems have arisen which call for careful study. The financing of fixed assets and operating capital by the co-operative organizations presents problems which differ from those of a commercial corporation because of differences in form of organization and in objectives.

Has a Personal Interest

In its relation to its members also the co-operative is confronted with problems for which no precedent has been set in commercial business. The farmer is at the same time the owner and patron of the association. He has become a member of the association, not to obtain a profit on any capital which he may invest in the organization, but to create an agency which will perform certain services for him. Naturally, his interest in the organization is keener and more personal than that of the average stockholder. The organization is dependent on his good will for its support. It is dependent to a greater degree than in the ordinary corporation form of business on the leadership and guidance of the members. The problems may be summed up in a few words by saying that farmers without any extensive previous experience in large-scale business are developing organizations which make large demands on their loyalty and intelligence. It is, therefore, fundamental that the members generally should understand the problems and purposes of the co-operative organizations and should within their own ranks develop the leadership necessary to carry on the co-operative movement.

On the side of management, tremendous problems arise in the merchandising of the product. These are more acute and more important in the co-operative organizations than in private business for several reasons. In the first place, the private handler of farm products can select the kind and quality of products which he wishes to handle. He can reject any grade or kind of products which do not meet his needs and any quantity in excess of his requirements. The co-operative association, on the other hand, must receive and dispose of all products delivered to it by its members. Furthermore, the co-operatives early realized that it was their task to undertake to improve marketing conditions. The average middleman is but one link in the marketing chain. The co-operative associations, on the other hand, represent the farmers, the men who suffer from wastes and inefficiencies wherever they occur. Therefore, the co-operatives have been active in the development of grade standards, in improving methods of packing, handling and processing the various farm products, in developing new outlets and more direct connections with the consumers and in stimulating the demand for farm products by advertising and other mediums of education and publicity.

It can easily be seen, therefore, that the merchandising problem of the co-operative is much larger and more comprehensive than that of its private competitor. Furthermore, the associations have special problems in pooling and accounting, in the equitable allocation of the profits of sales to the various members. Many of them also have the problem of obtaining marketing credit in order to make advances to their members until their crops are sold.

A Real News Service

The Department of Agriculture, thru the Bureau of Agricultural Economics, has organized its research program so as to attack these special problems of the co-operative organizations. Its research work includes studies of legal problems, of financial problems, and of membership and merchandising problems. A part of its work has been devoted to detailed studies of individual associations, studies which inquire into every phase of the association's business, the way in which it has met its various problems and the special economic environment in which it operates. This work has been carried on in response to specific requests by the co-operative associations for assistance in meeting the various problems which arise. Other research work has been undertaken in an attempt to anticipate problems which would appear to be of serious proportions in the near future.

There are also a number of marketing services performed by the Bureau of Agricultural Economics which are available to farmers and to all agencies engaged in marketing. The market news service gives daily prices, shipments, stocks on hand, market trends and other important information. (Continued on Page 41)

Alert Housewives Reveal Pet Economies

Here Are Some Ways of Converting What You Have Into What You Want

EVERY housewife is an inventor altho she may not realize it. But the editors of Kansas Farmer are convinced that farm women are constantly inventing economies and means of brightening their homes. Accordingly in the issue of June 22 an unlimited number of prizes, headed by two first prizes of \$10, was offered to women sending in best ideas. There was a splendid response to the contest and from the many, many letters sent in the editors have chosen 21 which will appear from time to time in this paper. Prize winners are:

Mrs. J. G. Freer, Atchison County
Mrs. Dewey Hammett, Marshall County
Mrs. Artis Hutchinson, Franklin County
Mrs. Zora Martin, Crawford County
Mrs. Floyd Chilton, Wayne Co., Missouri
Mrs. Wm. Wolf, Dickinson County
Mrs. A. L. Markely, Russell County
Mrs. E. O. Winklebleck, Phillips County
Mrs. J. K. Nesbitt, Montrose Co., Colorado
Mrs. E. F. Hampshire, Greenwood County
Pearl J. Metcalf, Rice County
Mrs. John Shaffer, Washington County
Mrs. M. E. Zimmerman, Doniphan County
Mrs. R. D. Crites, Stevens County
Mrs. Grace Ramsay, Sumner County
Lillie Stearns, Lincoln County
Mrs. G. L. Stripp, Neosho County
Lena E. Streeter, Caldwell Co., Missouri
Mrs. Eva Elliott, Phillips County
Mrs. J. F. Zeller, Scott County
Mrs. Peter Warner, Jackson County

Today a first prize letter as well as a number of others are being published with the hope that other farm women will receive helpful suggestions.

Paint Makes "New" Linoleum

LIKE many others, my printed linoleum was worn off and for two years I had wanted to paint it but couldn't find the time when we could stay off of it long enough for the paint to thoroly dry. Then I got the idea of alternating colors, so we could walk on one set of blocks while painting the other.

Since my kitchen is large, 15 by 11 feet, I could use a large pattern. With a pencil I marked my linoleum into 9 inch squares. For a smaller room I would prefer 6 to 8 inch squares.

The colors I selected were gray, like my painted walls, and oak like my oak woodwork.

First I painted the alternate blocks gray, two coats of a good all purpose floor paint, allowing two days for it to get hard. Then I put two coats of tan, or brown, on the remaining blocks, again allowing plenty of time for each coat to harden well. In this way I did not have to hurry the job for we could walk on the unpainted blocks while the others dried. I moved my oil stove to the dining room and "camped" in there during the process. Still I had to have access to my pantry, cupboards and sink.

When the colors were dry, I took a sponge and stippled the grey blocks with brown and the brown blocks with grey. This is easy to do and the mottled effect shows the soil less. The implement for this work is a sponge cut in half across grain. Dip the surface into the paint and drain off or draw across the edge of the can so that it does not drip paint. Then touch lightly the square to be stippled and repeat with a hammer motion until the surface is mottled.

The second advantage of this method is that when the floor wears again where traffic is heaviest, instead of moving out range and furniture to repaint I can just renew the blocks worn off.

Several friends have thought it was a new linoleum and everyone admires it. But, best of all, it cost so little beside the patience and time, using only 1 quart paint of each color and it is much more cheerful and satisfying to work over.

Choose well your kind of paint, take plenty of time, (nearly two weeks) for it pays to let each coat set thoroly, and you will feel well paid for your work. You could apply this pattern to a board floor just as well.

This color scheme, grey and oak in walls and floor, is rather dull and needs a touch of brightness, so I am painting my breakfast set in two shades of green and my cupboard shelves light green edged in dark green, with gay cretonne curtains.

Atchison County.

Hot Linseed Oil Improves Floors

IF THE floors are smooth but unfinished and one does not wish to paint them, heat linseed oil smoking hot and apply with a small brush, rubbing with the grain of the wood. Put on only what the wood will absorb and be sure to keep it hot, as it soaks in better. If there should be a little too much in spots, when the floor is dry it will shine. These spots can be removed with gasoline or turpentine and a cloth. Let dry a few days, overnight will do if absolutely necessary, then wash off what dust may have settled on it and varnish with a good, clear varnish. Use one or two coats as preferred, let dry thoroly and wax. I applied one coat of wax and polished it. This makes a very nice finish and won't have to be repeated for a long time especially in a bed-

room or room not constantly in use. This makes the floor a nice, light tan color and the grain in the wood shows thru. Mrs. Dewey Hammett, Marshall County.

Self-Heating Iron Her Greatest Help

MY HUSBAND gave me \$5 for my birthday, and I decided to buy with it the most helpful thing that I could find for my kitchen. While looking thru Kansas Farmer for a suggestion I came across an article about the new gasoline irons. I made up my mind to order one of them at once.

The iron is the greatest time and labor saver I have. With it I can sit on my kitchen stool out on my cool screened-in porch and do an entire ironing without having to run back and forth to the hot stove to change irons. There is no need to build a hot fire, or have a heated room to work in, since the iron is self-heating. It will burn any low priced gasoline, lights with a match, heats in about 3 minutes, and then holds an even temperature. It has a large 17 inch ironing surface. With the steady heat it holds I can do my ironing in less than half the time it took the old way and when thru I am not tired at all.

Wayne Co., Missouri. Mrs. Floyd Chilton.

Rockery Brightens Kitchen View

HERE is my plan for a small rockery. I built it close to my kitchen door where I can enjoy it most of the day. It takes but a few minutes a day to cultivate it with an old table fork and it gives me pleasure every time I carry a little water to the flowers.

The rockery is about 5 feet in diameter and 2½ feet high in the center. With the help of a child's wagon, I gathered rocks measuring from 6 to 12 and 18 inches in diameter. I placed the

largest ones on edge around the bottom, filled in with good garden soil and then terraced the other rocks up to the center where I left room for a nice, large plant on top. Last year I had a beautiful geranium for the center and this year I have a dark red geranium with Kenilworth ivy surrounding it.

As I raise many chickens and have no fence around the house, I just made a circle of 4 foot chicken wire a little larger than the rockery placed it over the garden and fastened it to the ground with several staples made of plain stiff wire. This is to keep the wind from blowing it off the rockery and at the same time having no posts allows me to reach any part of the garden without removing the fence.

Dickinson County.

A Self Watered Garden

I WAS always forgetting my pan under the ice box and had to figure out a way to save my rug which was getting wet too often. I bored a hole in the floor, put a funnel in, and put the end of the funnel in a piece of pipe which ran out to the side of the house. I put a wash basin under the end of the pipe and after that my small chickens which usually were in the yard had plenty of cool water whether I was at home or not.

I planted golden glow plants by the pan and had the finest blossoms I have ever seen. You may put a cork in the hole in the floor, in winter.

Greenwood County. Mrs. E. F. Hampshire.

Use Cones for Picnic Salads

WHEN serving fruit salad at picnics try serving it in ice cream cones. The cone adds crispness and saves the trouble of providing forks.

Montrose Co., Colorado. Mrs. J. K. Nesbitt.

Drapes We All Can Afford

AUTUMN turns our minds to cozying up the living room. The soft, rifty curtains that have wafted in the breezes all summer long seem inadequate to frame snow piled windows but the thought of drapes brings sighs, for every one of us have made the rounds of drapery counters only to find that drapery material is so expensive that we just can't afford to buy it for our homes.

Now there is a material available that the ingenious housewife can fashion into delightful drapes or adapt to dozens of other household uses.

This material, commercially known as Osnaburgis made from the waste in cotton mills. It is very attractive, rather loosely woven and about the weight of light canvas. The splicing of warp and

woof is unevenly done, giving a rough appearance to the weave. In spite of its coarseness, the material is soft and drapes very nicely.

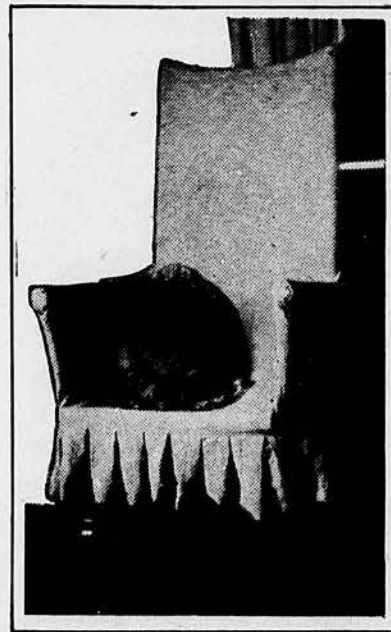
This material comes in one color only, a natural cream, but it responds readily to the dye pot, or color may be achieved with the addition of gay cretonne bindings or decorations in bias tape.

Where draw curtains are desired instead of blinds, and curtains drawn for winter evenings are extremely effective for producing a homey atmosphere, sateen may be used for lining and large open designs embroidered in yarn will furnish the needed color. Stenciling is another practical way of adding color to drapes and spreads made from Osnaburg. Applique is an attractive means of decoration.

That is only one of the uses for this material which comes almost as the answer to a housewife's prayer. It is adapted to upholstering and making of slip covers, for automobile seats, bedspreads, couch covers, pillows, coverings for screens and dresser scarfs. In the purely utilitarian line, it is an excellent material to choose for ironing board covers, shoe bags for closet doors and laundry bags.

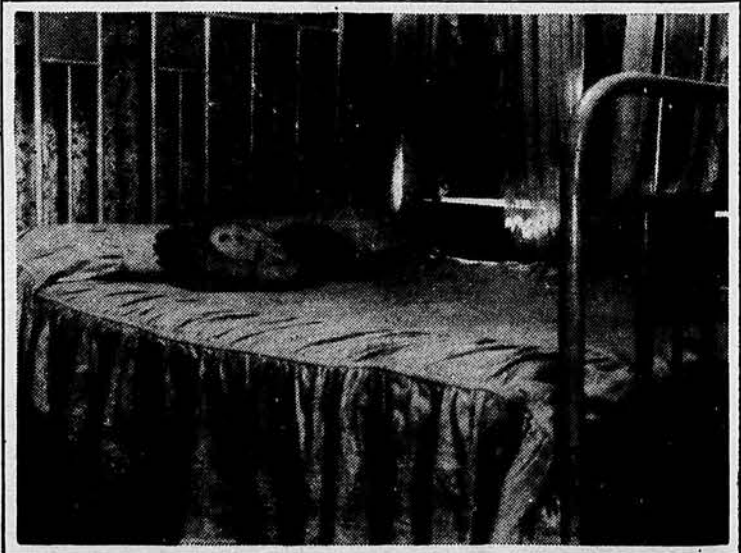
Having something of the same texture of ratine, Osnaburg has been dyed and made up very effectively in the sport jacket suits so popular now. It does not soil easily, washes readily, does not shrink and fills a long felt need for an inexpensive heavyweight material for general use.

We shall be glad to obtain Osnaburg for you in any quantity you desire. The price is 20 cents a yard. Send your orders to Fancywork Department, Kansas Farmer, Topeka, Kan.



An Attic Recluse Dons a Slip Cover of Inexpensive Material and Remains to Grace the Dressing Room. The Quaintly Graceful Chair Above Is at Heart a Crudely Fashioned Old "Swing on a Frame" Chair

At Right: This Charming Bed Spread That Will Stand Unlimited Wear and Does Not Soil or Muck Readily Is Made From Osnaburg. Ten Yards Were Needed to Make It Extra Size With a Bolster Cover



**Crisp
delicious
POST
Toasties
wakes up
new energy
quickly**

**For work or
play, it's the
Wake-up
Food**



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Sport Frocks Reign Supreme

Stylists Meet Whimsy for Flares or Plaits



684—Nothing could be more serviceable than this tweed-patterned silk frock. It is suitable for sports or general daytime wear. It is most effective made up in beige and brown with plain beige collar and cuffs. Designed for sizes 16 and 18 years, 36, 38, 40, 42, 44, 46 and 48 inches bust measure.

1348—A fairly snug waistline and a flaring skirt are emphasized in this charming model for the deb or sub-deb. Trimming is achieved in the diagonal inset pockets and the tailored buttons. This model is especially attractive in novelty prints in wool and silk crepe, canton crepe or Marocain crepe. Designed in sizes 14, 16, 18 and 20 years.

2963—What could be better than a smart ensemble for these days when one is doubtful as to whether she should wear a coat? The suit pictured above is not only practical, but also realizes a charm and sophistication. The simulated tucked-in blouse is one of the very popular styles favored by girls just now. Made up in heather-brown or in mauve-red tweed, nothing could be smarter. Designed in sizes 12, 14, 16, 18 and 20 years.

650—Truly this dress could not be improved upon, with its diagonal lines, yoke effect and box plaits. There is ample fullness in the skirt without bunchiness. The wearer will find the slimness emphasized. A featherweight wool, or navy canton crepe will bring out the very best effects in this dress. Designed in sizes 16, 18, 20 years, and 36, 38, 40, and 42 inches bust measure.

2966—There is something sportive and saucy about this coat frock which buttons straight down the front, with its wide collar and cuffs, and the dip in the circular skirt. Again the natural waistline is accentuated. It is

easily made and will be very fetching in navy blue silk crepe with organdy collar and cuffs. Designed in sizes 12, 14, 16, 18 and 20 years, 36 and 38 inches bust measure.

Bias Tape for School

A NEW dress for the first day of school is as important to a little girl as books and pencils. She wants something that is new and different. The desire for individuality in dress begins at an early age and it becomes the mother's task to produce a wardrobe attractive to her daughter and in keeping with the family budget.

Perhaps one of the simplest ways of achieving individuality is by the use of bias fold tape for decoration. It is inexpensive and is a short cut in sewing, since it is cut, pieced and folded ready for use.

Finishing an edge with a binding or facing is one use of bias tape but the addition of color by means of line decoration is just as important. These lines of colored bindings may be planned to give a definite structural interest to a dress. That is, to emphasize the lines or bring out a certain scheme in the cut.

Decorative motifs made of bias tape will transform a plain ordinary dress into one with individuality. Color is added in a more intricate type of design by this method. In general these motifs should follow structural lines with an orderly arrangement which is consistent in shape with the various parts of the dress to which the motifs are applied.

The new money will be given out slowly. So, then, it's just like the old money.



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Metro-Goldwyn-Mayer Star
and
DOROTHY MACKAILL
First National Star

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All-Wool
BROAD-
CLOTH
Tan or
Black
14 to 44
\$12.95

Be sure to see
the photographs
of Beautiful
Movie Stars
actually wearing
the smart New
Modes for Fall!

6 D 1
All-Silk
CREPE
SATIN
Black
only
14 to 44
\$6.95

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Puzzles Every Girl and Boy Can Work

I AM 15 years old and in my first year of high school. I go to Pleasant View School. My teacher's name last term was Miss Kerchner. I liked her very well. I have two pets. I have a cat named Snowball and a calf named Cherry. My birthday was May 2. I enjoy the children's page very much.
Holyoke, Colo. Evelyn Beard.

Mollie and Rover Are Pets

I am 8 years old and in the third grade. I go to Sunnyside school. I have two brothers and one sister. My brothers' names are Loren and Richard and my sister's name is Lola. For pets we have a dog and cat. The cat's name is Mollie and the dog's name is Rover. I wish some of the girls and boys would write to me.
Texhoma, Okla. Doris Miller.

My Goat's Name Is Bessie

I will be 11 years old July 25. I will be in the seventh grade when school starts this fall. For pets I have a goat named Bessie, a dog named Jack and four little kittens. I go to Bunker Hill school. I walk 1 mile to school. My teacher's name last term was Miss Ford. I have four sisters and one brother. Their names are Pearl, Edna, Imo, Catherine and George. I enjoy reading the girls' and boys' page. I wish some of the girls and boys would write to me.
Clay Center, Kan. Mabel Hammel.



How many dogs can you find hidden in this picture? When you have found the correct number send your answer to Leona Stahl, Kansas Farmer, Topeka, Kan. There will be a surprise gift each for the first 10 boys or girls sending correct answers.



The name of one of our Presidents is concealed in this puzzle. Can you tell which one it is? Send your answers

to Leona Stahl, Kansas Farmer, Topeka, Kan. There will be a surprise gift each for the first 10 boys or girls sending correct answers.

Has Three Police Dogs

I am 11 years old. I like to help my Daddy on the farm. We milk 19 cows. I can harrow, disk, plow and cultivate. I have four brothers. Their names are Jewell, Niles, Ellsworth and Max. My sisters' names are Nola Virginia and Norina Jeanne. For pets we have three German Police dogs and two kid goats. We like to play with them. I am anxious for school to begin. My teacher

will be Miss Thies. I go to Lone Star school and will be in the sixth grade. I would like to have some of the girls and boys write to me.
Pittsburg, Kan. Emmett Owensby.

Word Square Puzzle

1. — — — —
2. — — — —
3. — — — —
4. — — — —

1. A title; 2. Spells among; 3. Belonging to me; 4. Spells paradise. From the definitions given fill in the dashes so that the square reads

the same across and up and down. Send your answers to Leona Stahl, Kansas Farmer, Topeka, Kan. There will be a surprise gift each for the first 10 girls or boys sending correct answers.

The Mocking Bird

Besides his native song, the Mockingbird is able to repeat the notes of many other birds. He imitates the song of the Robin, the Wood Thrush, the Bluebird and the Wren, and can give the clear whistle of the Cardinal Grosbeak. He has been known to mimic the notes of 32 birds during an interval of 10 minutes. It is at night that the Mockingbird is at his best, and sometimes his singing may be heard until dawn. He is our American Nightingale.

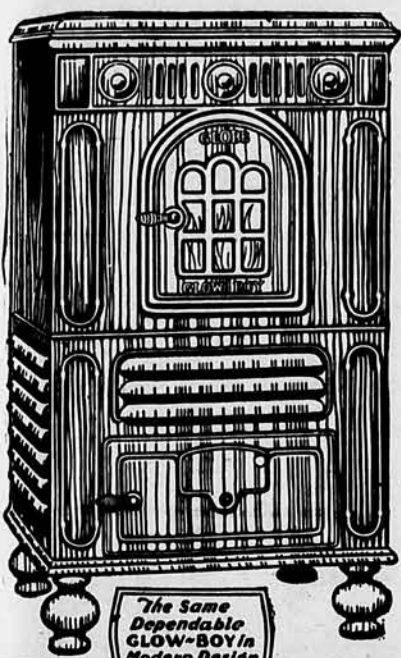
This bird mocks not only the song and cries of other birds, but the barking of dogs, the cackling of hens, and even the creaking of a wheelbarrow. It can whistle a tune but does not attempt to imitate the human voice.

The Mockingbird is found in all parts of the United States, being only a summer visitor in the North. It makes its nest of dried twigs and withered grasses, usually near a house. It is about as large as the thrush, dark ashy-brown above and brownish-white beneath, with nearly black wings and tail. Perhaps if you take your crayons or paints you can give this bird its coat of feathers. Be sure to leave a little circle of yellow around the pupil of the eye, which is black. The bill is dark gray and so are the legs and claws. The under side of the tail is almost white, while the breast is a very light gray.

Margaret Whittemore.



The Hoovers—Buddy Isn't the Only Greenhorn in Aggieville!



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Rural Health

Dr. C.H. Lerrigo.

Why Not Give the Specialist an Opportunity for a Real Examination?

SOMETIMES I wonder at the optimism with which people go to doctors, especially to doctors who are new. They confidently expect that this new doctor has some prescription which can be bought for a dollar or two, and is capable of miraculous cure. Thank goodness, it does happen now and then. I'm not trying to discourage going to doctors. I only seek to point out that you expect to get your results too easily.

Here, for example, is a woman with a stomach ulcer. She thinks there should be some medicine to cure it. She is even willing to change her diet somewhat, and perhaps she will agree to take extra rest. Ulcers have been cured by such treatment, and she expects a cure for herself. She does not get cured so she writes to me for a prescription by mail. Surely that is optimism. Not wishing to fool anyone I do not send a prescription tho I know dozens of them. Instead I write advice somewhat as follows:

"Any ulcer of the stomach is a serious illness. It did not come overnight, but likely resulted from months or years of indigestion. It will not be cured by a simple prescription, but needs real treatment. First you must have an accurate diagnosis, for there are many varieties of stomach ulcers. Your home doctor is not likely to be equipped for this work. You must get him to refer you to a specialist (never pick your own) and you must go expecting to stay several days. X-Ray pictures will be taken of the stomach. Its contents will be pumped and analyzed. It will be observed for its position, whether greatly enlarged or prolapsed, for its power of action, whether it moves the food right along, and for its capacity. The specialist probably will prescribe both a diet and medicine that will suit your individual case. It may differ entirely from that prescribed in the dozen preceding cases. He also will prescribe what if any work you may do, what company you may see, and may even order you into his sanitarium for prolonged rest."

"But I can't do all that!" you exclaim. "It takes so much time and money!" And that is exactly the trouble with trying to cure chronic ailments. Patients want them treated on the "dollar down and dollar a week forever" plan. Seldom are they willing to give to such serious diseases the serious consideration required. How much is it worth to you to get rid of that obstinate chronic ailment? Hundreds of dollars! Very well, go after it as if you meant it.

Tested Every Half Year

After a day's work, which requires gripping such as driving nails or husking corn, I will wake up in the morning with my hand or hands numb and aching, fingers feel thick and like sticks. If I get up or drop my hands outside the bed I get immediate relief.

R. J.

This is a nervous affection rather than a matter of circulation. It is not necessarily serious. Your blood pressure should be tested every half year and your general living should be kept free of nerve strain or any excesses. I doubt if any medical treatment will serve you.

Use Glacial Acetic Acid

I have a wart on the end of my thumb and it is awful sore. It is a seed wart and close to the nail. Could you please tell me what to do?

Mrs. J. M.

The best and safest home treatment is the application of glacial acetic acid which you can buy of any druggist. It must be applied cautiously, a mere drop several times a day until effect.

Appeal to School Board

What do you think about a high school teacher giving headache tablets to pupils? Is it right and is it wise? Might it not be that the teacher does more harm than good in that way? And she does not even phone the mother first.

B. B. B.

Not only is it unwise for a teacher to give medicine to her pupils under such circumstances, but it also is illegal.

Headache tablets are an abomination, and quickly lead to confirmed drug habits. Such work by a teacher might be made the subject of legal action by the parents, but the better plan is first to have a conference with the teacher and then appeal to the school board if necessary.

Write to the University

Please tell me if it is harder for a boy who is ambitious to be a doctor to get started nowadays than it was in the time of 30 years ago.

K. B.

It is, in one sense of the word. A medical education is more costly and more exacting than of old. The course of study is so hard that there is not much chance for a boy to work his way, altho some fellows who are tremendous workers are still doing it. A bright boy who is determined to get a medical education can do it, and there are not half as many young doctors being graduated each year as there were 20 years ago. Write to the Registrar, State University, at Lawrence, for full particulars.

Let's Cut Livestock Costs

(Continued from Page 7)

whereas a full-feed ration of 2 parts grain and 1 part legume hay by weight makes a satisfactory fattening ration. For fattening young hogs it takes about 50 per cent more corn when they are fattened on corn alone than when they are fattened on corn balanced by some feed rich in protein, such as soybean meal or tankage. Such a difference indicates clearly how a decided loss in feeding hogs can be turned into a substantial profit.

Fortunately it is not necessary, for practical purposes, to know the exact analysis of each feed as it is raised and fed on the farm. In general, the grains such as corn are rich in carbohydrates, especially starch; the cereal products, such as bran, are fairly rich in protein; the packing-house products, such as tankage and the cake or meal left from extracting oil from cottonseed, flaxseed and soybeans, are very rich in protein; the straws, stovers, and coarse hays are high in crude fiber; the legume hays are fairly rich in proteins and the more important minerals; the oil-bearing seeds are rich in oil; the green feeds, grasses, lespedezas, roots and silage are very high in water and are well supplied with vitamins.

With a few exceptions, each of the feeds of these general classes contains some appreciable if not adequate quantity of each of the necessary nutrients. Consequently, in the feeding of livestock generally there should be no unthriftiness from malnutrition if they are fed liberally with a variety of feeds well supplied with the necessary nutrients. It is important that they receive in addition an abundant supply of the most plentiful and the cheapest factors in nutrition—good water, fresh air and the direct rays of the sun.

A New Wheat Variety

BY HARRY C. BAIRD
Dighton, Kansas

A new variety of wheat, No. 1679, has been developed by the Kansas State Agricultural College. A Turkey type of wheat was artificially crossed with Marquis, a stiff-strawed, beardless spring wheat of high milling qualities. This new variety resembles Kanred in having beards and winter habits of growth, and has inherited resistance to lodging and improved milling qualities from its Marquis parent.

This year it was the highest yielding wheat in 47 tests conducted in Kansas, yielding 3 bushels an acre more than Turkey, Kanred or Black-hull.

In six tests in Northwestern Kansas, this new variety produced 2 bushels more than Turkey, the next high yielding variety.

CHANGE

your
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FRANCE

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Protective Service

Membership in the Protective Service is confined to Kansas Farmer subscribers receiving mail on a Kansas rural route. Free service is given to members consisting of adjustment of claims and advice on legal, marketing, insurance and investment questions, and protection against swindlers and thieves. If anything is stolen from your farm while you are a subscriber and the Protective Service sign is posted on your farm, the Protective Service will pay a reward for the capture and conviction of the thief.

Ignorance Supports Financial Frauds. Education Safeguards Public's Savings

IGNORANCE of financial matters and the gambling instinct of the American people constitute the motives for buying fraudulent stocks or dealing with fraudulent promoters. The real solution of this condition, which yearly results in the loss of more than a billion dollars in savings, is the education of the public. This is the conclusion drawn from statements on the subject made by 33 expert fraud fighters—the Blue Sky Commissioners of as many states—in connection with an investigation by the National Better Business Bureau. However, it should be remembered that there is always need for sound legislation and able law administration to punish those who perpetrate frauds.

Victims of fraud come from both the educated and uneducated classes, the report clearly shows. It is not

tion of the public thru the co-operation of reliable, honest business men and the state departments who are given the responsibility of administering the laws governing investments, as well as all other business organization, in so co-operating and molding public thought that they will have no desire to invest their money in these fraudulent and dishonest schemes.

In one case an associate professor of drama at a large university who had made some previous conservative investments was solicited by a stranger to buy theatre stock. Convinced that the business was bound to grow the professor invested \$2,000 in a proposition that was financially unsound and was losing business. The unsoundness of this stock could have been discovered easily by a simple investigation.

In another instance an intelligent farmer of limited education with several thousand dollars in Liberty Bonds was induced to invest \$1,250 in the same proposition. The appeal in this case was the false claim that the company would soon list its stock on the Chicago Exchange and that the opening price would be about twice the then selling price of the stock.

The third case was that of a day laborer 84 years old and his wife 83, who had \$4,000 in a savings account. They were induced to exchange their total savings for 7 per cent first mortgage bonds issued by a long established German newspaper. The bond salesman spoke excellent German, but did not tell the aged couple that a professional promoter well known to all blue sky commissions in the Northwest had bought an interest in the paper, that the circulation had steadily fallen off, that the purpose of the 7 per cent mortgage bond issue was to finance several other ventures which the promoter was pushing, that the financial condition of the paper was bad, and that the whole offering was based on an appeal to the sympathies of aged subscribers.

Five clergymen in the fourth case, all with previous investment experience, were solicited to purchase shares in a new subdivision near a large city. The salesmen represented that it was to be a denominational community and that generous acreage had been allotted free of charge for church, school and playground purposes. The clergymen invested and learned later that the title of the property was in dispute and the religious appeal was nothing more or less than a well-planned selling scheme to unload the promoter's obligations at a profit. Not one person connected with the promotion was of the faith to which the clergyman belonged.

These are four typical examples of how easy it is for people to lose money if they do not investigate before investing.

Agriculture Is Changing

(Continued from Page 24)

the application of both machinery and science to agricultural production.

The automobile and the tractor now play an important part in the development of agricultural production in the United States and in many other countries. The automobile upon hard-surfaced roads is bringing remote areas closer to market, and the tractor makes it possible for a farmer to cultivate larger areas with a small amount of man labor. Both developments are contributing to the expansion of production in new and distant areas. Application of more machinery also is contributing to the shifting of popula-

Believe It or Not!

Mrs. E. Owens, a Cherokee county Protective Service member, reports that she found eight of her 16 ducks missing. From a rural telephone she called local telephone operator and asked if anyone had reported eight stray ducks. She told central, also, that if the ducks were stolen there was a Protective Service reward offered for the capture and conviction of the thief. Maybe someone was "listening in." Anyway, the ducks were returned to their pen the evening of the day they were stolen.

Are thieves afraid to have a reward hanging over their heads?

general education which is lacking as much as education on practical financial matters. The lack of knowledge on financial matters by the great majority of the American people is astounding, and gives the fraudulent promoter a clear advantage over uninformed people who take chances on promises and representations that would be recognized immediately as having the suspicious earmarks of fraud by persons with only a practical elementary knowledge of securities.

The commissioners' replies distinguish between fraudulent stock and the fraudulent sale of stock. A fraud is not always based on a worthless stock certificate. The offering may consist of stocks, bonds or real estate parcels of an entirely legal nature. The fraud consists of misrepresentation to the purchaser.

The best that fraud prevention bureaus and blue sky legislation can do is to weed out the fraudulent schemer and promoter to as great a degree as possible, thus removing to the same extent the ability to contact the public. Our best weapon is, of course, not only the strong blue sky legislation, but also uniform legislation of the same strength and character thruout the United States, coupled with a 100 per cent co-operation of recognized, efficient fraud preventing organizations and law enforcement bodies assisted by the press in a joint educational campaign.

The investing public's mind must be educated, if possible, to clearly investigate before investing and not afterwards. They must be educated to the fact that it is not the rule of sound financial institutions to give something for nothing. They must be educated away from that all consuming desire to take a gambler's chance. The solution to the problem is the educa-



Every Furrow Saves You Money

EVERY furrow you plow costs a little less money, takes a little less time—when you use Star Shares.

You save a big part of the time lost in sharpening shares, for Star Shares stay sharp longer. They pull easier through stubborn soil because they scour easy and are shaped right. Thus, they save gasoline if you use a tractor—save horseflesh, permitting a longer day's work in the field.

Over a half century of experience guarantees each Star plow share for its quality, fit and finish. Cut down the cost of plowing by putting Star Shares on every plow, lister or middlebuster you own. Your dealer can supply them.

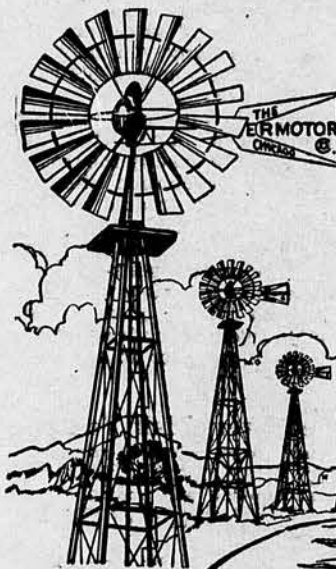
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PLOW SHARES

Wear Longer ~ Scour Easier



WATER... TO FLOAT A NAVY

If all of the water which has been pumped by AERMOTORS during the past forty years could be collected in one great body, it would make a sea on which the largest battle fleet could maneuver. Hundreds of thousands of homes, farms and ranches, all over the world, depend upon AERMOTORS for their supply of water. An AERMOTOR of suitable size, erected on a tower of suitable height, will furnish an abundance of water without bother or expense. . . . The AUTO-OILED AERMOTOR is a tried and perfected self-oiling windmill. It runs for a year with one oiling. There is a size for every need. The wheels range from 6 feet to 20 feet in diameter. They run in the slightest breeze. . . . Ask your dealer about the AUTO-OILED AERMOTOR or write

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Sore, Swollen Tendons demand quick care— ABSORBINE reduces Inflammation!

Absorbine alleviates inflamed, strained and swollen tendons, ligaments and muscles. It alleviates lameness by going to the seat of the trouble and drawing out painful inflammation. But while it always does its work effectively, Absorbine never removes hair or causes blisters. Further, your horse can be worked during treatment. Use Absorbine for treating bog spavin, thoroughpin, curbs, splints, capped hocks and bunches. It is a healing antiseptic so should be used full strength on cuts, galls, sores, chafes and all lacerations. For general rub-down make up Absorbine Wash. Absorbine, at \$2.50 a bottle, is stocked by most druggists or dealers. When ordering direct send price and bottle will be shipped you.

W. F. YOUNG, INC., 607 Lyman St., Springfield, Mass.

ABSORBINE

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tion from farms to cities and to a rapid growth of industrial cities.

Science has shown how to produce more and better products with the same effort. For example, statistics show a great increase in the production a cow in Switzerland, in Denmark and in the United States. This increase in production a cow, which is due to more scientific feeding and breeding, illustrates what is taking place with respect to many products in many countries.

Another significant development is a tendency to greater specialization in production. Use of machinery and of scientific knowledge encourages specialization. Improvement in transportation facilities and relatively cheap freight rates make it possible to specialize in production in distant areas most suitable for the product, and to market the product where there is the greatest demand.

Changes in markets and in demand for agricultural products are as significant as changes in production. The westernization of the Orient is increasing the Oriental demand for the products of other countries. Japan is becoming a manufacturing country, and the large coastal cities of China are importing large quantities of agricultural products from other parts of the world. Increase in demand from Oriental markets has offset, in part, the reduction in European market demands. During the five years preceding the war, only about 3 per cent of the agricultural exports of the United States went to Asia. In the last three years 11 per cent has been shipped to Asia.

There are some significant changes in the world's demand for agricultural products. Use of the automobile and the tractor is reducing the number of horses in the world, thereby reducing the demand for feed grains. Production of rayon has increased enormously as a substitute for or competitor with silk and wool. On the other hand, the demands for some commodities are increasing. It is apparent that the demand for wheat and sugar has increased rapidly in recent years. Although demand for wheat flour in the United States is now less than before the war,

the demand has increased in many countries. In Europe, wheat is taking the place of rye; in the Orient it is taking the place of rice and other grains as the bread grain of the people. The demand for tobacco, particularly of the cigaret type, has increased greatly. The enormous production and low prices of sugar have stimulated consumption in the United States and elsewhere. Another notable shift in demand is an increased use of vegetable oils as a substitute for, or in competition with, animal fats. There has been a tremendous growth in the use of vegetable oils both in the manufacture of soaps and as foodstuffs. These changes in demand must be taken into account in planning agricultural production.

Profits for Poultrymen

(Continued from Page 24)

persistency of production. Numbers recorded under the first two and the last headings indicate desirable birds, while numbers recorded under broodiness would indicate undesirable birds.

If colored, celluloid bands are used, one color, such as red, should be placed on the left leg of each bird to denote earliness of maturity; another color, such as white, should be placed on the right leg of each bird to denote intensity of production; a black band should be used every time a hen goes broody, and a blue band should be used to identify the persistent layers. At the end of the year the best layers would each have a red, white and a blue band. But the real value of the measure of an animal as a breeder is the kind of progeny it produces. What the poultry breeder desires above all else is a method of selecting male and female breeders that can be relied on with a considerable degree of assurance to bring about an increase in egg production. This is desired particularly in the case of males, since the offspring of each male are much more numerous than the offspring of any female, and the male constitutes one-half of the heritage given to all the offspring.

Kansas needs more alfalfa.

Fair Starts Next Monday at Topeka

NEXT Monday, bright and early, the Kansas Free Fair makes its bow in Topeka and lasts all week. Of course, this great exposition will measure up to its usual high standard. Few of us grasp the position of leadership occupied by the Kansas Free Fair among the many fairs throughout the United States. As the exposition which first opened its gates without charge to the thousands who came, the entire fair world predicted that such a policy could not be carried out. But succeeding years have demonstrated that it is possible to admit men, women and children free, thus giving them the many benefits which the thousands of exhibits offer. Hundreds of fairs have turned to the free gate, having witnessed the unusual success of the Kansas Free Fair at Topeka, which is widely known as the "mother of them all."

Prof. D. D. Mayne of St. Paul, of the Minnesota State School of Agriculture, made the following statement during a recent visit to Topeka: "The wonderful crowds you have at your Free Fair challenge the attention of every man directly interested in fairs throughout the country, and they are all looking forward to the time when they can discard the gate, as you have done, and invite the producer to come with his family and enjoy the fruits of his labor. A fair is the farmer's one chance to come into personal contact with the new and improved machinery which is constantly being made to relieve his burdens and stimulate production on the farm, and I am not so sure but what it would be a profitable investment to pay his expenses, rather than have him come and pay for the privilege of coming."

Every passing year the Kansas Free Fair endeavors to present a program that is well balanced—one that is educational, inspirational and entertaining. The 1929 exposition promises to be the greatest achievement in Free Fair history. With an entry list greater than ever before, with all machinery space practically contracted for, and with entertainment features which promise good, clean amusement to all who attend, success this year seems assured.

A well-formulated program of expansion to extend over a period of years is being worked out. A contract has been placed for the erection of a new 4-H Club building which will be completed in time for this year's fair. This new metal structure will relieve the congestion in the other pavilions and give 4-H Club members a building of their own. The Santa Fe Railroad has completed the construction of a new spur into the fairgrounds which practically doubles the trackage and assures livestock exhibitors of a quick inlet and outlet for their entries. The road system in the fairgrounds has been greatly improved, and the appearance of the entire grounds has been changed.

This year the automobile racing program has been enlarged upon. There will be two days of racing, Monday and Saturday, September 9 and 14. Fans will welcome this new plan. Horse racing will be held Tuesday, Wednesday, Thursday and Friday.

An elaborate night show "The Winter Garden Follies of 1929," will be presented daily, with a change of program in the middle of the week. Every night this performance will be followed by a spectacular fireworks display put on by the Thearle-Duffield Fireworks Company, which has furnished the displays at practically every world's fair in the last score of years. This well-rounded program should attract more than 400,000 visitors, and further promote the national reputation which the Kansas Free Fair now enjoys.



Temporary Fence—A time, Labor and Money Saver.

TEMPORARY fences are widely used to increase profits. They cut labor costs by letting the stock do much of the harvesting. They turn into money much forage so often allowed to go to waste. Enable you to rotate stock and hogs over different fields and maintain fertility. Live stock as well as hogs salvage much grain left in the field.

For instance, dividing either permanent or temporary pastures, hogging off part of your corn, turning in on legume crops—all these practices are profitable and all can be followed through using a few stretches of temporary fence here and there on the farm.

Temporary fences can be quickly erected on Red Top Steel Posts. With a Red Top One-Man Driver they drive easily through the hardest of soil. And you can make your fence post dollars do double duty. Take out a few next time you are in town. Use them for seasonable temporary fences. Later on withdraw them and use for new fencing jobs or for repairs and replacements.

Whether you are erecting temporary or permanent fences Red Top is the post to use. Its record for long life in the fence line; the 200 to 300 of them that can be easily driven in a single day; its design that holds fencing securely in place as long as the fence lasts; its construction which insures longer life and more strength, are characteristics of Red Top that make it the most dependable and economical post for you to use.

The habit of keeping a few bundles of Red Tops handy on your farm—ready to make immediate fence repairs or to quickly throw up a temporary fence has been formed by many successful farmers who have found that it prevents loss and stops waste—their fences are always kept in repair with little effort and slight expense.

See Your Red Top Dealer Today

Take out a few bundles of Red Tops and follow this profitable practice yourself. No matter what your fencing problem may be, your Red Top dealer will be glad to help you—he can show you why it is better and more economical to build and repair fences now than to wait until next year.



38 So. Dearborn Street, Chicago, Ill.

Seeds of Ideas

Advertisements are selected seeds of ideas planted in the soil of your mind. If cultivated thoughtfully, these ideas will produce greater comforts and better methods of accomplishing your aims. These selected seeds of advertising can help you to live more fully at less cost.

The advertisements in this publication are a record of what the manufacturers are doing for you. They will give you many new ideas and will tell you what you want to buy. And they will help you to get the most for your money.

The advertisements are news. They are interesting. Form the habit of reading them carefully and regularly. It will pay you to keep informed of the daily progress of business.

For full value—buy standard products.
Manufacturers stand back of advertised goods.

DOUBLE WEEKLY INDEMNITY FOR HOSPITAL CASES

DEATH BY ACCIDENT \$1000	TOTAL DISABILITY \$1000 A WEEK
LOSS OF ONE EYE \$250	PARTIAL DISABILITY \$250 A WEEK
LOSS OF BOTH EYES \$1000	LOSS OF ONE HAND \$500
LOSS OF ONE FOOT \$300	LOSS OF BOTH HANDS \$1000
LOSS OF BOTH FEET \$1000	LOSS OF HAND AND FOOT \$1000

25¢ a day saves cost of accidents

Would YOU risk losing \$1,000 on the chance of saving 25¢? Certainly, NO! Yet, you are running the risk of heavy injury costs to save only 25¢ a day! Think you'll never be injured? LISTEN! I farmer in 8 is seriously hurt or is killed every year. You're in constant danger of injury. Farm work is hazardous. You may be struck down ANY DAY. Then... bills... bills... bills! Why risk it when only 25¢ a day protects up to \$1,000? Study the chart! There's real protection. Every claim paid promptly; pays every day you're laid up. Saved policy holders over \$300,000 last year, alone. No wonder so many thousands of farmers have Woodmen Accident policies. Absolutely the best farmer's accident policy ever written. Investigate! Get full details. See what policy holders say. Send the coupon today. Don't put it off. Fill it out right NOW!

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Please send me details of your accident insurance policies. (Age limits, 16 to 60)

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KEEP warm and look well in our genuine cowboy clothing. Big values in choice quality Leather and Sheep Lined Coats, Lumber Jacks, Wool Shirts, Boots and Gloves, Stetson Hats, Fancy Rodeo Shirts, Saddles, Bits and Spurs.

EVERYTHING for the cowboy is shown in our handsome fall catalog. Let us send you a copy free. Write in today.

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He Refused the Tractor Unless—

A farmer in the Middle West ordered a well-known tractor. He refused delivery, however, unless it was equipped with a Pickering Governor. For he knew, as thousands of other power farmers know, that a Pickering Governor assures steady, even speed on all jobs.

- that it increase power 20 to 25%.
- saves 3 to 5 gallons of fuel a day.
- and adds years of life to the tractor, because it does away with destructive engine racing.

Pickering Governors are built for McCormick-Deering, Huber "Super Four," Rumely "Oil Pull," Minneapolis, Twin City, Hart-Parr, Fordson, and all others.

Clip coupon for free pamphlet. It tells about the "Pickering" for your tractor. Describes special features such as the "Speed Changer," a simple device for increasing or decreasing speed while the motor is running.

The Pickering Governor Co., Portland, Conn.
Send me FREE copy of your pamphlet 81K.

Name _____
Address _____
Tractor _____

A Story of the Pump's Growth

From the Wells of the Egyptians to the Faucets in Modern Kansas Farm Homes

BY BERT S. GITTINS

TO PUMP a pail of fresh, clear water from the well platform or the kitchen sink is a most commonplace and ordinary thing to us. Neither do we marvel any longer at the luxury of running water in our homes and around the farm buildings—water ready to burst forth at the mere turn of a faucet. Yet there have been times in the history of man when his longing for water was equal and synonymous to his longing for life itself. For countless years in many countries, water meant—and means—survival and life; lack of water meant suffering and death.

There is still in existence at Cairo, Egypt, a remarkable well 24 by 18 feet in size and 297 feet deep, from which the early Egyptians obtained water before the invention of the pump. A winding passage encircles this huge pit thruout its entire depth, down which oxen or burros were led or ridden to haul the water out. The entire structure, which historians believe was dug by builders of the pyramids, is carved thru solid rock. Such was the longing of ancient man for water and the obstacles and difficulties he had to overcome to reach it.

A Hunt for Water

It is said that Pompey and Caesar often preserved their troops from destruction by having carefully provided for a water supply, and that Pompey's superior knowledge in obtaining water enabled him more than once to overthrow his enemies.

History tells us that great numbers of folks perished from thirst during the Crusades into Palestine because the Turks had filled up the wells of the vicinity. To be appointed to a party of Crusaders whose duty it was to forage for water was a great distinction at that time, and many of the commanders adopted water buckets in their coat of arms to symbolize their activities in Palestine.

Drawing water from the wells and streams in ancient times was a slow and laborious process. The evolution of pumping machinery was far from rapid, and many crude devices of various types preceded the pump which we know today.

One of the first mechanical contrivances for lifting water was the sweep or swape, which probably made its appearance about 1,500 B. C. The sweep was essentially a long piece of wood balanced like a see-saw over a forked pole. To one end of the sweep was attached a bucket suspended by a rope or thong. At the other end a weight was fastened to counterbalance the pail of water. Sometimes a railing was attached to the sweep, so that a man could walk back and forth upon it, first plunging the empty bucket down into the water, and then walking to the other end so that his weight might lift the end from which the bucket was suspended.

More Dreadful Than Beasts

These sweeps are said to have lined the banks of the Nile in the days of the Pharaohs when they were worked unceasingly, day and night, by relays of sweating, toiling men. Water for man and beast and for their meager crop was more precious than gold or silver. Drouth was more dreadful and fearful than the wild jungle beasts or savage enemy tribes.

The sweep, sometimes called "picotah," is still used in some of the Oriental countries.

Following the sweep came the windlass and bucket which was said to be used first among the Chinese and later among the earliest Greeks and Romans. Later, series of buckets were attached to endless chains and operated by hand power to lift water from the wells of practically every country in Europe. Variations of this system are not uncommon today in many parts of the Old World. The native of the Nile country still hitches his camel to some such crude contrivance and drives him 'round and 'round to hoist a trickling stream of water for his thirsty crops.

The man himself is little better off than his sleepy beast—both are slaves of circumstance.

Another device used by the Romans consisted of a revolving screw made of leather or lead which turned inside a wooden or iron pipe. The Roman screw, which is said to be the invention of the noted mathematician, Archimedes, and by others to be the product of another genius of that time (242 B. C.), would elevate water at an angle of 45 degrees.

The invention and development of the piston, or reciprocating, pump did not take place over centuries. Historians say that the expansive energy of compressed air, hot air and steam probably was used by the ancients many centuries before the Christian era. However, even so eminent a scientist as Galileo was unable in 1641 to tell a Florentine pump maker why water will not rise more than 33 feet in a closed tube under the action of a "suction" pump.

Today, every high school student has the opportunity of learning what the great Galileo did not know—that the weight of the atmosphere above a given area is sufficient to raise a column of water of the same area to a height of approximately 33 feet when the air is exhausted above the column. Due to friction and similar losses, 22 to 25 feet usually is the maximum lift recommended for shallow well pumps, however.

Experiments previous to 1650 in Prussia, France and Italy led to the invention of the air pump. Further improvements from that time until the present day have resulted in pumps of many kinds and types, designed for countless uses. Besides its important job of supplying us with water for our homes, for livestock and for irrigated crops, the pump has come to be widely used in every phase of industry. Without the direct or indirect aid of the pump, the wheels of industry would turn much less often than they are turning with its help.

American People Lead

The importance of fresh, pure water cannot be over-emphasized. Pure, uncontaminated water is the best insurance policy against sickness and disease. Pure water in the home means health, cleanliness and happiness. For livestock it means greater gains, more milk and more eggs. Gardens can be revived from the effects of heat and drouth. Lawns can be made green again. Desert areas are made to bloom. How fortunate that water is so plentiful and cheap, or—where it is neither—that we have the means of pumping that which we have to cities, farmsteads and fields.

Today, the modern home water system brings running water into the farm home just as easily and conveniently as into the home of a city resident. The American people, more prosperous than others, are likewise the greatest users of water.

A deep well from which pure water can be obtained, properly located, and protected by a sanitary curb, is an excellent investment on any farm—an investment which yields returns in health, wealth and happiness. But such wells would hardly be possible without the pump.

Ten Cows for a Nickel

Five cents in the form of electricity will do a great many things. It has been figured out that a nickel's worth of electric current generated by a farm light plant will milk 10 cows, separate 1,400 pounds of milk, churn 20 pounds of butter, sharpen an axe or a scythe on the grindstone six times, pump two days' supply of water, run an electric sewing machine for 5 hours or do two large family washings.

According to the latest available information, nearly a million farms in the United States are electrified. While many of these farms have electric "high line" service, a large number are supplied by individual farm plants, particularly in communities where the "high lines" have not yet gone.

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To Kill Poultry Lice—Just Paint it on the Roosts!

No matter how big the flock or how lousy, only a small paint brush and a can of "Black Leaf 40" are needed to rid a flock of lice.

Does Away With Unpleasant Handling
Old laborious and disagreeable methods of dusting, dipping or greasing are eliminated. No longer necessary to disturb the birds.

Treat Whole Flock in a Few Minutes
Simply "paint" "Black Leaf 40" on top of roosts. When birds go to roost, fumes are slowly released, penetrating the feathers and killing the lice. "Black Leaf 40" is sold by poultry supply stores, \$1.35 size treats 100 feet of roost. Ask your dealer or write us.

Tobacco By-Products & Chemical Corp., Inc., Louisville, Ky.

"Black Leaf 40"
Kills Poultry Lice

Kansas Poultry Talk

by Raymond H. Gilkeson

The Consuming Market is Willing to Pay for Real Quality in Poultry and Eggs

IT IS possible to produce an excellent quality of eggs that will make your poultry project more profitable. Even the most expert poultrymen say that they can improve on the quality of their flocks from year to year, and a considerable amount of their time and effort is focused on breeding better birds from the standpoint of type, vitality and ability to consume feed and turn it into eggs that demand the top price. No doubt you will be attending some of the fairs this season, and naturally you will spend some time in the poultry department. There experts will be pointing out the marks of better birds. It is true that the prettiest bird isn't always the best layer, but here is an instance in which something more than just beauty counts with the judges.

F. D. McClaskey, an outstanding poultry authority now with a big Topeka organization that specializes in buying poultry products, mentioned some things the other day you will be glad to think about. "The producer and the poultry and egg dealer must satisfy the customer," he said. "The consumer will pay for quality. The producer should help improve market poultry and eggs by being willing to co-operate with the dealer who is putting forth his efforts to help producers market the best grades of poultry and eggs, which make the most money for the producers and are what the consuming market wants. In this day and age of changed conditions in the poultry industry, it is ridiculous for anyone to attempt to convince producers that quality does not count. Quality does count big and cleanliness goes with quality."

"Let's market more clean eggs. To do this, clean nests are essential, each nest should have an adequate supply of fresh nesting material and this should be changed often, especially in rainy or stormy weather. Other common causes of dirty eggs include dirty litter in the poultry house, dirty containers and lack of sufficient nests. Over-crowding in the nests often causes broken eggs and that certainly means dirty eggs. One nest should be provided for every five hens."

"A good nest should be about 14 inches square and the same depth, and it is easier to keep the nests clean and free from mites when wire hardware cloth or half screen is used for the bottom. Clean eggs should be placed in clean egg cases or other clean containers if they are to keep clean. Don't lower the value of your product by permitting the shells to become soiled thru contact with anything that is not clean. Baskets are better than pails in which to gather eggs."

We Keep the Hens Busy

A good flock of pure, standard bred poultry will yield good dividends under proper management. The time is here, with its high prices for feeds and labor making it unprofitable to keep anything but pure, standard-bred fowls. Most any of the birds will yield a nice income if properly housed and managed. I should say, then, in the selection of a breed, choose the variety in which one will take the most pride. Take into consideration one's environment and the purpose for which one is breeding. While larger breeds demand better prices on the market as meat value, the smaller breed is very prolific in egg production.

In caring for poultry, the following things should be given very careful consideration: Comfort and convenience in housing, feeding, sunshine, dry quarters, ventilation and sanitation guard against external and internal parasites. Use plenty of whitewash of lime in quarters. We plow the yards and runs frequently and lime. Hens that are well and well-bred are economical producers of eggs, but they insist on the right kind of raw materials for the building of eggs.

I make it a practice to be as regular in feeding my flock as I am in my own meals. The hens are kept busy, for we make them scratch for their feed, but

not enough so they won't want their mash in morning. I feed oats, or wheat or cracked corn in deep litter, giving the birds all they can clean up in 15 to 20 minutes. We also have found that unthreshed wheat supplies the hens with needed exercise, which is especially good for egg production. I keep plenty of good, clean drinking water before the flock at all times in convenient places. Always have an ample supply of oyster shells and plenty of grit. A mash is provided in a hopper of cornmeal, bran, shorts, tankage, or meat scraps and salt at night before the flock goes to roost. I feed all the whole yellow corn the flock will clean up.

One should provide a free range for the flock when possible, as it adds vigor, health and general tone to the flock. I believe one of the first causes this spring for poor hatches was flocks kept in too close, also to poor and weak breeding stock; good breeders contain stamina. A large range for flocks will help immensely, as they will pick up feed that will add a variety to their rations. They come off the roosts early and search industriously for their food. Their combs, eyes, legs and plumage will be bright, and they will be laying well. Chicks that are hatched from eggs produced by these birds have strong vitality. Green food is very important. This may be supplied with sprouted oats, beets, cabbage, turnips, or alfalfa leaves. One should guard against the use of spoiled or mouldy feeds. Plenty of shade should be provided in the summer.

We cull the entire year for non-layers and disqualified birds as well. We think of most importance in culling is the color of Lead, eyes and color of the beak and shanks. Start your chicks on good feeding plans. We find the all-mash plan—which is put out by the Kansas State Agricultural College—very good. Our net profits by managing our flocks in this way have been very good. Our flock, which is composed of White Leghorns, has averaged 190 eggs a hen for the last 4 years; 160 to 170 eggs is considered a good average for a flock by poultrymen, and will net a fair profit.

In 1926 we had a flock of 300 hens which averaged 192 eggs a hen, with \$1,246.94 profits. In 1927 our sales for the year from the flock of 297 hens averaged 197 eggs a hen, with \$1,529.35. In July of that year, when most hens are on a strike, we sold \$149 worth of eggs. This year, so far, we have sold from 250 hens, including hatching eggs, baby chicks and broilers, \$1,065.28 worth.

The chickens are provided with plenty of shade and unthreshed oats and green alfalfa leaves for feed and exercise.

There always is something new to learn in the poultry industry in which we are so vitally interested. Maintain normal health and body functions—and profitable growth and production are bound to result.

Mrs. R. E. Anderson.
Concordia, Kan.

We Buy Baby Chicks

My most successful method of starting baby chicks is to wait until they are about 72 hours old, then give them a drink of water with semi-solid buttermilk to the proportion of 1 to 30 parts water, then give them some commercial chick starter.

We do not hatch eggs from our flock and do not keep roosters. I think it costs about 50 cents to raise a pullet to laying age. I have been buying my pullets in the fall lately, for I find I can buy them as cheaply as I can raise them and eliminate the work and worry. We get them in laying condition as soon as possible and then sell them in May.

Troy, Kan.

One reason it is difficult for the average family to make permanent and satisfactory economic adjustments is the increasing necessity of some of our more expensive luxuries.



Top the Early Fall Markets

WITH YOUR

Home Grown Grain and Semi-Solid Buttermilk

Thousands of hog raisers have home grown grains such as wheat, oats, barley and corn that make the best possible feeds when supplemented with Semi-Solid Buttermilk.

Have your local feed grinder grind your home grown grains and mix it 1/2 wheat, 1/2 oats or barley, and 1/2 corn or 1/2 corn and 1/2 wheat; add enough Semi-Solid Buttermilk (diluted 1 to 30) to make it the consistency of a good heavy gruel and you will have a hog feed that will prove the best help in getting that early extra weight and fine smooth finish that makes market toppers. It gets hogs to market earlier in the season and gives you the advantage of the higher prices of the early fall months. Semi-Solid Buttermilk furnishes the necessary elements lacking in the grain ration. It supplies proteins, vitamins and lactic acid which makes it the best addition to any hog ration and ideal to feed with home grown grains.

When fed in the daily ration it practically eliminates runty pigs and shoats from the entire herd.

Feeds Semi-Solid to 6000 Hogs.

Frank Zimmerman, Springfield, Nebraska, hog feeder, is successfully feeding Semi-Solid Buttermilk to his entire herd. He keeps 6,000 hogs all the time and keeps down diseases and makes profits by

feeding the following: 70% ground oats, 20% ground barley, 10% ground corn and all the Semi-Solid Buttermilk they will drink, diluted 1 to 30. No tankage is used. Mr. Zimmerman does not experiment with his large herd. He has found the right method and sticks to it and is making a real success.

Saved 217 Necrotic Pigs

Charles Nicholson, Ohio, had 217 pigs in a terribly emaciated condition from Necrotic Enteritis. Several different remedies had been tried with no success. The pigs were three months old and weighed from 15 to 25 pounds. They were advised to feed Semi-Solid Buttermilk and immediate improvement was noted and at the end of two weeks there was a 100 per cent improvement. The pigs were ravenous and responded rapidly to the Semi-Solid treatment. The farm manager said: "This is the most common sense and most inexpensive feed to use."

Semi-Solid Buttermilk

Is the most economical protein supplement and the protein in Semi-Solid Buttermilk is 100% digestible.

Semi-Solid Buttermilk

Is the ONLY HOPE for NECROTIC PIGS

Dr. Brown, Indiana State Veterinarian, says: "Semi-Solid Buttermilk is the best remedy available for the treatment and cure of pigs affected with Necrotic Enteritis, as it stands to reason that the high Lactic Acid content of Semi-Solid Buttermilk is very beneficial as an intestinal antiseptic in destroying the organisms in the bowels and Semi-Solid being the most easily digested food obtainable, the broken down tissues are quickly repaired by the assimilation of this remarkable food."

Your dealer has the size package to suit your needs.

CONSOLIDATED PRODUCTS COMPANY

4750 Sheridan Road, Chicago

BELLE CITY Corn Picker-Husker

First in the field and Still Leading

Stop picking corn one ear at a time. Stop feeding a corn crew. The Belle City will pick and husk right into the wagon at about 3c a bushel and put extra dollars in your pocket. Works in any weather that a tractor can be put in the field. Gets down corn and works right up to the fence. A quality product guaranteed by an old reliable company, and at a price that makes it outstanding value. Heavy steel tubing frame....cut-steel gears....roller bearings....Alemite-Zerk lubrication.

WRITE today for full particulars. Prompt service through distributor or dealers. No interest on notes if paid when due.

BELLE CITY MFG. COMPANY
RACINE WISCONSIN

Largest Exclusive Manufacturer of Threshers and Corn Picker-Huskers in the World.

QUALITY PRODUCTS BELLE CITY BUILT SINCE 1882

FITS THESE TRACTORS

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A Complete Line

Tractor-mounted, tractor pulled, horse-drawn...one and two-row types.

An Acre An Hour — 3c a Bushel

WE BUY BABY CHICKS

My most successful method of starting baby chicks is to wait until they are about 72 hours old, then give them a drink of water with semi-solid buttermilk to the proportion of 1 to 30 parts water, then give them some commercial chick starter.

We do not hatch eggs from our flock and do not keep roosters. I think it costs about 50 cents to raise a pullet to laying age. I have been buying my pullets in the fall lately, for I find I can buy them as cheaply as I can raise them and eliminate the work and worry. We get them in laying condition as soon as possible and then sell them in May.

Charles H. Werner.
Troy, Kan.

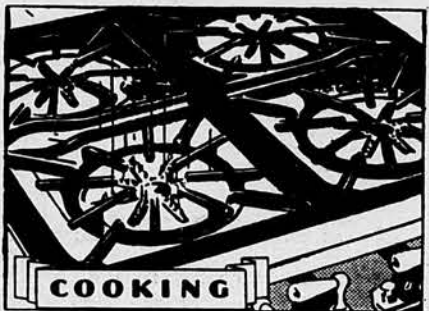
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fuels to pour. No sooty chimney. Not yellow, but soft, brilliant white light that is easy on your eyes.

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homes instant illumination—soft yet bright light—as well as an intensely hot burning, clean fuel for cooking.

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To Prevent Hog Cholera

BY U. G. HOUCK

No one is so vitally interested in the prevention of losses from hog cholera as the farmer who raises hogs for the market, for every hog that dies of cholera reduces his income. Naturally the farmer is interested in protecting the health of his herd, and the majority of farmers do so, as far as they know. However, there is a lack of uniformity in the methods employed by different hog growers, and many do not seem to have any fixed plan.

Some fail to attain success in maintaining the health of their animals, thru inexperience in hog raising. Many have inherited faulty notions concerning the nature of the hog, its habits, feed and care. These individuals do not accept advice readily. Others do not seem to comprehend that the word "sanitation" is applicable in any way to a hog. One of the most deplorable and prolific causes for losses from cholera is carelessness on the part of hog owners or failure to apply the knowledge which they have acquired thru reading, observation, and experience. The development of the immunization treatment against hog cholera by the Bureau of Animal Industry was a boon to the swine industry, but too many hog growers expect this treatment to save their hogs regardless of the condition of the animals when treated; they do not seem to realize that anti-hog-cholera serum and hog-cholera virus must be used under favorable conditions to be efficacious.

As a general rule, the farmer should do all that he reasonably can to maintain the health of his herd thru breeding, feeding and sanitary measures, and apply the immunization treatment as a reserve measure when danger of cholera threatens. Of course, it is realized that there are densely hog-populated sections of the country where hog cholera appears every year, which makes it necessary to apply the immunization treatment systematically.

A healthy hog is better able to resist disease or the reaction of the hog-cholera virus administered with serum than the hog whose vitality has been lowered thru faulty feeding, bad care, disease or parasitic infestation. During the last year, there was reported from different sections of the country an increased prevalence of mange, necrotic enteritis, hog flu, pneumonia, rickets and parasitic infestation. The complaints were usually associated with faults of environment, which could be corrected.

Most farmers of the North know that from the health standpoint, there are advantages in late farrowing. They know that clean, dry, properly ventilated and well-lighted sleeping quarters are conducive to health, and they appreciate the importance of an abundant, constant supply of clean drinking water and a balanced ration. Much valuable information has been accumulated on the importance of a balanced ration, but there is yet much to learn concerning the reaction of the hog's system to different feeds, especially the relation of this reaction to disease, and the immunization treatment against hog cholera.

Frequently, growing hogs are affected with preventable diseases which produce a sufficient decline in resistance to make the use of virus in the simultaneous treatment hazardous. It is worthy of note that necrotic enteritis has been reported in a large proportion of the herds where the results from immunization had not been satisfactory. Necrotic enteritis is regarded as a filth-born disease, as it is found most frequently among swine that are confined to insanitary quarters. The information we have on the subject suggests the importance of providing decent living conditions for hogs. Medicinal treatment for necrotic enteritis is unsatisfactory. A change of feed and the removal of the animals to clean, uncontaminated quarters, preferably a suitable pasture, is the most satisfactory way of treating this disease.

Hog flu is an infectious herd disease which appears most frequently among swine that have been exposed to cold, stormy weather in the late fall or early winter. The exposure may result from excluding the animals from shelter, allowing them to nest in manure piles, under the barn, or failure to control drafts in hog houses that otherwise are suitable for the purposes intended. These conditions are favorable also for producing pneumonia.

Necrotic enteritis, hog flu, and pneumonia are examples of diseases which frequently result from carelessness on the part of hog owners in not providing reasonably sanitary living conditions for their animals. These and other diseases have sometimes been mistaken for hog cholera. When the simultaneous treatment is administered to swine thus affected, losses from cholera may occur, as the conditions are not favorable for the establishment of immunity. The farmer's mistake is in allowing conditions to exist that are responsible for the appearance of diseases, among his hogs, which might be mistaken for hog cholera.

Heavy infestation with parasites, especially internal parasites, lowers the vitality of hogs and renders them less favorable subjects for immunization. Losses from hog cholera may result thru breaks in immunity in hogs treated by the simultaneous method, when their vitality is thus lowered. What is known as the McLean County System of swine sanitation has shown a practical way to reduce to a minimum the injurious effects of parasites.

A valuable help in the control of hog cholera is to maintain the health of hogs so that they are in fit condition to receive anti-hog-cholera serum and hog-cholera virus when it becomes necessary to immunize them.

It is important that hogs be immunized promptly when immunization seems advisable. One day's delay may result in the spread of infection, resulting in the ultimate loss of more than enough hogs to pay for treating the entire herd. Anti-hog-cholera serum is a preventive for hog cholera, not a cure, and it is of no value in the prevention or treatment of any other disease. Frequently losses are increased thru administering virus in connection with serum to pigs affected with diseases other than cholera. This suggests the advisability of employing a competent veterinarian immediately when disease appears in a herd, as he is qualified by education and experience to diagnose the diseases of swine and to prescribe proper treatment.

The farmer may help reduce losses from hog cholera by raising healthy herds, by avoiding the known modes of spreading hog cholera, by following professional advice, and by giving special attention to his herd for at least two weeks immediately following immunization. Farmers' Bulletin 834-F, Hog Cholera, contains information in regard to the nature of hog cholera, the ways by which it is spread, the immunization treatment, care of herds following immunization, and other helpful information.

Higher Prices for Horses

An increased demand and good prices for well-bred horses and mules, especially during the next few years, are forecast by J. O. Williams and S. R. Speelman, horse specialists of the Bureau of Animal Industry, United States Department of Agriculture. A report on the horse-breeding situation, just made public by these Government specialists, gives the basis for their opinions, and contains much practical information for breeders of light horses and work stock.

According to information received from 24 states having enrollment laws for stallions, jacks, or both, approximately 82 per cent of all stallions licensed in 1928 were purebred, while 60.5 per cent of the jacks enrolled were in the same class. These figures show a gain over former years, and are an encouraging feature of the report. There has been, however, a continued annual decrease in the total number of stallions and jacks licensed for public service in the 24 states. A reduction in the equine population of the country has also occurred; during the calendar year 1928, the decline amounted to about 1/2 million horses and 85,000 mules. The authors of the report estimate that colt production is now only half as great as is needed to maintain our horse population at its present level. Among other salient comments on the situation are the following:

Prices of horses have risen during the last two years, the rise being most pronounced in the "Corn Belt" and in states east of the Mississippi River. Draft horses with size and quality are in strong demand at good prices, and the demand for saddle horses is nation-wide. Saddle horses and polo mounts probably are bringing higher prices now than at any time in history. Producers of work stock, doubtful of a recurrence in the demand for horses and mules, have been hesitant in resuming breeding operations. This has resulted in a present shortage of good work animals, and the

Prices Cut!

This new reduced prices on National Fresh Water Systems are the lowest ever quoted. And the demand for "Nationals" is the highest in our history. It will be a pleasure for us to study your special water system requirements and show exactly how big the saving will be on the proper size for you. Four to twelve months to pay.

Five Big Features
1. Single system pumps from several sources. 2. No water storage tank. 3. 600 to 1200 gallons per hour. 4. Any lift up to 150 feet. 5. Put plant anywhere, regardless of distance from water supply.

Complete Line
National Water Systems now also available in many other types, priced as low as \$75.00.

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Subsidiary of
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inghouse Air Brake
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Healthy Hogs Bring Bigger Profits

The hog watering system is a primary point at which sanitation must be practiced if disease is to be eliminated.

E-Z CLEAN HOG WATERER

Does away with the bother of continual attention to filling and fear of dirt and disease. In winter the water is kept warm at all hours.

SIMPLE TO INSTALL

There is no troublesome assembling of parts. The E-Z Clean solves the most difficult and costly problem confronting hog raisers.

FURNISHES CONSTANT SUPPLY

You are assured plenty of water at all times without overflow leading to disease spreading mires and wallows.

SAVES TIME AND LABOR

There are few parts and these are designed for improved sanitation. The non-freezing feature saves time in winter.

FARM AGENTS WANTED

Investigate our attractive offer to farmer-agents. For greater details and specifications on the product write

E-Z Fountain Co., Wakefield, Kan.

NATIONAL Hollow TILE SILOS

Cheap to Install. Free from Trouble. Buy Now. Erect Early. Immediate Benefit. **NO** Showing in Showing Room. **NO** Freeing. Steel Reinforcement every course of Tile. Write today for prices. Good territory open for two agents.

NATIONAL TILE SILO CO.
R.A. Long Bldg., Kansas City, Mo.
Get Factory Prices on Hollow Building Tile

FREE MONEY SAVING PLANS

Corn Crib and Granaries
Use these free plans and you'll save enough in building to pay for a Kewanee Bucket Elevator. In the complete Kewanee line there's an elevator for every farm.



scarcity probably will be more acute within the next few years.

High-class stallions and jacks are not only scarce but are also of high average age, and will soon need to be replaced by younger animals.

Prices of suitable replacement stock probably will be higher in the near future than at present.

Mares as well as stallions and jacks should be selected with great care so as to assure offspring that will develop into sound animals of the desired type.

The foregoing appraisal of the situation is supported by comments from state officials closely in touch with horse and mule breeding in the principal producing areas. The report contains a summary of stallion and jack enrollments by breeds for the calendar years 1926, 1927 and 1928, data on horse importations, and a list of state and national stallion registration board officials. The full report is available as a 12-page mimeographed pamphlet, which may be obtained by addressing the Bureau of Animal Industry, Department of Agriculture, Washington, D. C.

Those Ton Litters!

BY JOHN W. WUICHET

Before discussing the matter of feeding for ton litters, it may be well to consider the frequently raised question, "Do Ton Litters Pay?" We believe all of the men who have produced ton litters would answer that question in the affirmative, for the comment received from these men has been that their ton litters have been the most profitable hogs they ever produced.

It is generally admitted that the first principle of ton litter production, namely, the raising of large litters, is the greatest factor in the economical production of pork. However, the most frequent question is, does it pay to feed the pigs to capacity from weaning to market time under practically all conditions, or would it pay better to carry them along for a time on a limited feed?

Records show that the cost of producing 100 pounds of pork depends primarily on the number of pigs marketed a litter. Large litters mean decreased production costs. And pigs which are gaining the most rapidly make those gains with the least amount of feed, time and labor. The same principle is involved as in any other manufacturing process, and no manufacturer would think of operating his machines at any other speed than capacity. He might cut down the number of machines in operation, but he would always keep those up to capacity. Hogs are pork producing machines, and like other machines, they will be producing the most economically when gaining at capacity, unless some very unusual factors influence the situation.

In illustration, an Ohio experiment may be cited. Two lots of hogs were fed on alfalfa pasture. Both lots received exactly the same combination of feeds, but one lot was given a full feed or all they would consume, while the other lot received half as much. The hogs on full feed reached market weight 47 days sooner than those on limited feed reached the same weight. During the added 47 days, the hogs on limited feed consumed more feed than had been saved by the limited feeding up to that time. In other words, the half-fed hogs consumed a total of more grain as well as pasture and reached market 47 days later. By limited feeding, the hogs will most frequently strike a low point rather than a high point in the market, which is another factor of utmost importance. Time may be of no value to a hog, but it is of considerable value to the man who is feeding him.

Some feeders are inclined to feel that feeding for ton litters in market production may be all right, but that capacity feeding will not prove satisfactory for the production of breeding stock. The latter is not true if hogs of the growthy, stretchy type are used and the high kinds of feed are fed. Type of hog and kinds of feed rather than amounts will determine whether they will develop satisfactorily or otherwise. Some of the best breeding hogs ever produced were products of ton litters, and practically every pure-bred swine association in the country is co-operating in the development of plans for special registration for hogs which have made ton litter or very similar records.

The growing and fattening of hogs in the summer time without the use of some good pasture crop usually is an uneconomical practice. A saving of from 15 to 25 per cent of the total

amount of grain and supplements may be expected thru the use of forage. It may even be possible in some cases with an abundance of legume forage to obtain fairly satisfactory gains for a time on forage alone, but the greatest returns will be obtained when grain is fed in addition to the forage, at the rate of 3 to 4 pounds a day for every 100 pounds of live weight. When the grain feed is very much limited on pasture, naturally less grain will be used in making the early gains, but, as in the experiment cited, eventually a total of more grain may be required to finish the hogs and the time required will be longer.

Alfalfa probably is the best hog pasture that can be obtained. It will support more hogs an acre than any other forage, and it has a longer growing season. It is followed closely by Red clover, Sweet clover and Alsike. Sweet clover will not be very satisfactory the second year, nor if it is allowed to grow rank. Rape or rape and oats mixtures make good forage when legumes are not available. Bluegrass probably is the most extensively used, but is the least satisfactory of the common forages. It is the one most likely to be infested with parasites because of its permanency, and has little feeding value for hogs during the hot summer months. Rye may be used to furnish hog pasture in the late fall and early spring.

Generally, corn alone will not prove a satisfactory feed for full feeding pigs even when on a legume or rape pasture. Corn and tankage, corn and fishmeal or corn and a mixture of 2 parts tankage, 1 part linseed meal and 1 part alfalfa meal will produce more rapid gains and less feed will be required to produce 100 pounds of gain than corn alone or corn and middlings. If skim milk is available, it may be substituted for at least part of the tankage or other protein supplement, but best results will be obtained where the amount does not exceed 1 gallon to every 3 or 4 pounds of gain.

Hominy, barley, rye or combinations of these feeds may be substituted for all or part of the corn. Oats ground medium fine also may be used in the ration, but, unless hulled, they should not constitute more than 25 to 30 per cent of the total grain being fed. Unless the oats are hulled, it will be best to leave them out of the ration entirely for very small pigs. When the ration consists entirely, or nearly so, of grain and grain by-product feeds, a mineral mixture will be a valuable addition. A satisfactory one which will contain practically all the mineral elements necessary may be made of 2 parts finely ground limestone, 2 parts steamed bone meal and 1 part salt.

Whether the feeds are self or hand fed or whether fed dry or in the form of slop will not make any essential difference. Provide plenty of good feed and water in almost any manner which suits the individual feeder's preference, and if the pigs are normal and free from parasites, there should be no concern about unsatisfactory gains.

Boost Washington County

BY JOHN V. HEPLER

Washington county will exhibit a dairy project booth at the state fairs at Topeka and Hutchinson during the weeks of September 9 and 16. This booth will consist of a model milk house, showing all features necessary for the production of quality dairy products. The Washington County Co-operative Creamery Company of Lima has recently inaugurated a campaign for the production of a better quality of cream, and the results secured since this campaign started will feature the exhibit. The booth, which will be of practical size for the average farm, is modeled after the milk house which has been built and equipped on the farm of F. C. McNitt of Washington. At the state fair at Hutchinson only five counties in the state can exhibit in this division, and Washington county was fortunate in having its project plans accepted.

Improper arm signals are blamed for 20 per cent of accidents on California highways. This is an allusion only to the arm that shows on the outside.

The roar of Niagara was broadcast recently. This was a great boon to many Scotch newlyweds who looked at post-card pictures of the falls and listened.



More Eggs More Profit

More eggs in your basket and more profit in your pocket! That's what you get when you feed Gee Bee Egg Mash. Because it contains eleven beneficial egg-making ingredients, scientifically blended into a perfectly balanced feed. When properly fed with Gee Bee Scratch Grains, it supplies your hens with the correct kind of protein they need most in the fall. Especially when fed with Gee Bee Hen Feed does it produce profitable results.

Gee Bee Egg Mash is constantly being tested at the well-known Gee Bee Poultry Experimental Station under the management of Prof. L. S. Kleinschmidt, formerly in charge of the Poultry Dept. of Penn State College.

It comes to you already proved—ready to increase the fall egg production of your flock.

GEE BEE EGG MASH

Go to your local dealer for Gee Bee Egg Mash and other Gee Bee Feeds—there is one for every feeding purpose. Mail the coupon below for valuable free literature.

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FEED SERVICE DEPT., GRAIN BELT MILLS CO.
Desk B929, South St. Joseph, Mo.

Please mail me free literature telling about increasing the egg yield of my flock.

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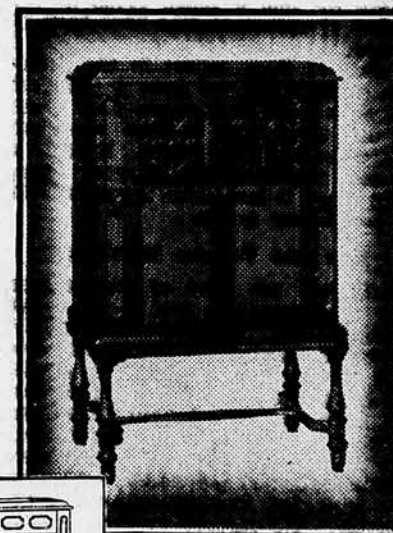
A Little Reading—

Will sometimes save a lot of money. Look on the Farmers' Market page for bargains in used machinery.

Get This 1930 Model Charter Oak "Hi-Boy" Parlor Furnace Newest Features!

Here's the latest type "radio cabinet" design parlor furnace with all the well known Charter Oak features. Just the heater for your home!

The Charter Oak Coal Saver gives automatic draft control, uniform heat, and minimum fuel consumption. The fire chamber design produces complete combustion and therefore, economical operation. Special fire pot and large air openings produce an extra heating capacity.



This new model also comes in a low style as shown at left. Coal saver is shown at lower left.

Air circulates over water pan and assures proper humidity.

Only finest materials used and entire exterior is a beautiful two-tone Walnut Enamel. You can't buy a better heater for your home. See this model at the complete display of Charter Oaks at your dealers. All sizes and prices.

Sold by dealers everywhere. Made by
CHARTER OAK STOVE & RANGE CO., ST. LOUIS, MO.



CHARTER OAK

Used by Four Generations in Millions of Homes

More Stock by Truck

Actual figures obtained from 300 truck men who haul livestock to 12 terminal markets, by the National Livestock Producers' Association, show the extent and present development of this method of transportation. The figures were obtained by personal interview with the truck driver or owner, who submitted information showing: (a) The kind and capacity of truck, (b) the period of operation, (c) the owner's intention regarding the purchase of a new truck, (d) his intentions to continue in business, (e) whether he made trucking a business or a sideline to farm operations, (f) the distance to market, (g) the rate of charges, and (h) whether or not the owner bought and sold on his own account.

An analysis of these returns offers much food for thought. The truck owner and operator first will discover here how far their experience is out of line with the average. The livestock farmer will get some indications regarding this new transportation convenience, while the man who is thinking of going into the transportation business with a truck may also get some suggestions regarding the business before he starts. It is hoped that the experience herewith compiled may prove valuable to others who are interested in studying and analyzing the effects of the influence of the truck and the extension of our road system on our business life.

Small Truck Most Popular

Returns to date show that 32 per cent of the trucks were of one make. Thirty-seven per cent of all reports were from men operating a 1-ton truck. The 1½-ton size is almost as popular with 29 per cent in that class, while the 2-ton size claims 20 per cent. There is a sharp break in the percentage of trucks reported in this survey with a capacity of over 2 tons. There were less than 6 per cent of the trucks in the 2½ ton class, or to be exact, 5.7 per cent, while 5.3 per cent operated 3-ton capacity trucks, while less than 3 per cent of the trucks reporting were larger than 3-ton capacity.

Replies to the question as to how long the truck owner had been hauling livestock indicates the newness of this business, as well as the possible turnover in the number of men entering the trucking field. As might be expected, the largest number of truckmen in the business of transporting livestock have operated less than one year. Just 38 per cent of the troupe come in this class. Twenty per cent have operated one year and 16 per cent two years. Operators range all the way from beginners to one veteran with 11 years' hauling experience back of him.

Here we find a sharp break in the number of operators who have been in business over two years. Less than 7 per cent of them report in the three-year class, while we have 5 per cent who have been in business four years and about the same number who have been operating five years. Exactly 4 per cent report in the six-year class, while there is less than 2 per cent in the seven-year group.

Few Are Veteran Truckers

Fifty-four per cent of the returns show that operators are in the truck transportation business exclusively. Thirty per cent farm and truck livestock part of the time—in other words, this group is undoubtedly farm owners who have trucks and haul their own livestock and perhaps buy and haul thru the country and truck to market. Approximately 17 per cent are farmers who haul for themselves almost exclusively. No figures or information was obtained to indicate whether the number of farmers owning and operating their own trucks was increasing.

It has been said that the distance traveled by trucks hauling livestock to market is extending at the rate of about 10 miles a year—in other words, the development of good roads and the improvement in trucks enables larger areas surrounding markets to come within the truck-in territory. This survey shows that the distance hauled varies from 10 to 170 miles, with an average of 50 miles. When analyzed by states, the figures will show still further interesting facts regarding the number of miles of improved highways.

Charges for hauling cattle, calves, hogs and sheep have not been analyzed

in connection with the distances from market, since the survey is still in progress; however, there is a striking uniformity in the rates charged for similar distances over a far-flung territory. A typical charge for a 50-mile haul is 60 cents a hundredweight for cattle, \$1 a head for calves, 40 cents a hundredweight for hogs and 50 cents a hundredweight for sheep. The reports show that a great many truckers charge on the basis of the number of head handled, some make the load the basis of charge. Calves are hauled anywhere from 20 to 75 miles at \$1 a head. Sheep charges seem to vary considerably more than either cattle, hogs or calves.

Shipping associations which have been broken up by the coming of the truck have invariably reported that the truck operators frequently became buyers, and by giving the livestock producer his money the day he sells, have interfered materially with the shipping association service. These figures show that 30 per cent of truck operators are also buyers of livestock.

Wind Insurance Needed

BY V. N. VALGREN

Windstorm insurance is of peculiar importance to farmers, whose buildings as a rule are of relatively light construction. Such insurance applies not only to buildings, however, but to household goods, equipment and livestock. Altho it is often called "tornado" or "cyclone" insurance, it covers loss from severe wind without distinction as to the kind of storm.

The most dangerous form of windstorm in the United States is the tornado. Such storms are most frequent, as well as most destructive, in the central part of the Mississippi Valley. Certain other areas suffer frequently from tornadoes, and no part of the country can claim complete exemption. In some of the South Atlantic states and those bordering on the Gulf of Mexico, another form of storm, called a hurricane, sometimes proves highly destructive. Local straight winds, usually tho not always accompanied by thunder showers, may at times reach such intensity as to endanger buildings and other property.

Against property loss from windstorm, insurance is practically the only available safeguard. In the case of the fire hazard the danger can to a large extent be reduced by proper care. This is much less true of the danger from windstorm. The resistance of a building may be increased by proper construction and maintenance, but the storm itself can be neither avoided nor modified by human action. Insurance against windstorm may be said therefore to be fully as essential as insurance against fire, notwithstanding that the annual fire losses materially exceed the losses from windstorm.

The cost of windstorm insurance

varies for different parts of the country from about one-half to less than one-fourth the cost of fire insurance. The joint-stock fire insurance companies, as well as the larger general fire insurance mutuals, write windstorm insurance either thru separate policies or thru so-called combined policies, which cover both fire and windstorm. Farmers' mutual windstorm insurance, however, is written more largely by specialized mutual companies which limit themselves to insurance against this one hazard.

About 50 mutual windstorm insurance companies in the United States carry a total of risks approximating 2 billion dollars. The more successful of these operate in close affiliation with the numerous farmers' mutual fire insurance companies. Examples of close co-operation between state-wide windstorm insurance mutuals and local farmers' fire insurance mutuals are found in Iowa, Indiana, Ohio, Missouri and North Dakota. In a number of other states, district windstorm mutuals are found which co-operate with the local fire insurance mutuals in their respective territories.

About 13 per cent of the farmers' mutual fire insurance companies also write combined protection covering windstorm as well as fire. This practice is to be commended in so far as the larger farmers' fire insurance mutuals are concerned. For the more local companies of this kind which limit themselves to a county or less, or at most a few counties, the practice of including windstorm in the hazards covered is not wise. From the point of view of the fire hazard, each group of farm buildings, and in some measure each building in the group, is a separate risk. A single tornado or other form of windstorm, on the other hand, may destroy a large number of farm buildings in its path.

The local fire insurance mutuals that now include windstorm in the hazards covered would greatly reduce the possibility of failure, or serious embarrassment, by reinsuring or otherwise disposing of all their windstorm risks. In states where farmers' mutual fire insurance has been developed to a substantial extent on the local mutual basis, and where no adequate facilities now exist for the insurance of farm property against windstorm, the members of these companies would do well to consider the example of Iowa, Missouri and other states by organizing a state-wide windstorm insurance company to be managed and operated in close co-operation with the local fire insurance mutuals. Under efficient management, this plan makes possible reliable protection against windstorm as well as fire losses, at a minimum of cost.

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Favors Co-operation

(Continued from Page 29)

tion. This information is transmitted by mail, telegraph, telephone and radio. The producer of livestock, grain, dairy products or fruits and vegetables can obtain by radio in his own home a concise summary of that day's market. The standardization and inspection service makes available certificates showing the grade and quality of farm products moving in the channels of trade.

Information regarding foreign crop and market conditions assists the co-operatives, and other shippers, in making plans to market their products abroad and warns them of probable foreign competition. Reports of stocks of commodities on hand, and analysis of supply and demand conditions aid the co-operatives in formulating their merchandising programs. The development and enlargement of all these services are expressions of the Government's policy toward agriculture and agricultural co-operation.

There is need not only for research and service work in co-operative marketing, but also for the dissemination of correct information regarding the co-operative form of business. Not only farmers, but public officials, business men, bankers, and the public generally need an understanding and appreciation of the significance and possibilities of this movement. The department in its educational program has worked with those who are educators and leaders in the co-operative movement. They have assisted in conducting state co-operative marketing schools designed particularly for officers and directors of co-operative associations, extension officials, county agents, vocational teachers, and others who stand in the relation of educators in their communities. Representatives of the department are in close working contact with county agents, extension marketing specialists and vocational teachers, in order to bring to them the results of research in co-operation, and the experience gained by contacts with the co-operative associations. These contacts have provided the county agents and teachers with first-hand material which has strengthened their work.

The extension services of the department and the states are serving the co-operatives with increasing success. The 3,000 county agents, with their close personal contacts with farmers and farmers' local organizations have had an unequalled opportunity to strengthen the foundations of the movement. A group of farmers in a local community wish to organize an association. They are in doubt as to the procedure to follow. In the majority of cases, they turn to the county agent. He, in turn, may consult the marketing specialist of his state, or representatives of the Department of Agriculture, and gives these farmers unsparingly of his time and the best information and assistance at his command. And then there are the services of teachers of vocational agriculture. They, too, are working in their communities to strengthen and up-build the co-operative movement. They are living evidence of the interest of the Government in the success of co-operation.

These are some of the many concrete examples of the attitude of the Government toward co-operative marketing. From their early beginnings, co-operative associations have traveled far. Two million farmers are members of 12,500 marketing and purchasing associations, doing an annual business of approximately 2½ billion dollars. Most, if not all, of the legal barriers have been removed. Much experience has been gained. Much leadership has been developed. For many problems, the answers have been found. With the formation of the Federal Farm Board, sympathetically but soundly administering its broad powers, and ample funds, the cause of co-operative organization of agriculture is ready for a general forward movement.

In the impending advance of co-operative marketing, the greatest need is leadership. After all that the Government has done or can do, there still remains the fundamental necessity of adequate, skilled, loyal leadership. Such leadership must be increasingly more unselfish and far visioned. The motive of co-operative marketing is not primarily profit for the co-operative organization, but profit for its con-

stituent farmers. Its leadership must realize that dollars left on the farm by reason of better market prices are just as valuable as dollars collected from the farm and paid back to the farm. The objective of co-operative marketing is not swollen cash balances or large surpluses in the co-operative treasury. Co-operation looks beyond these. It demands strong, well financed, close-knit organization to achieve its purposes, but its purposes are prosperous farm homes, affording to the members of the farm family an American standard of living, an American education and an equal opportunity in the race of life.

It is in some respects a great advantage on a new frontier. Agriculture is entitled to a position of equality in the economic structure of America. Thru its own farm organizations, and by its own efforts, agriculture can regain that place, and having gained it, hold it. In that cause, agriculture has the sympathy and the aid of the Government of the United States.

High Quality Milk

(Continued from Page 8)

get stale, it is advisable that the dairyman sterilize his utensils just before using them. When neither steam nor hot water is available, he can use a chemical sterilizer. When none of these is available, a thorough rinsing with plenty of pure water will materially reduce the bacteria in the utensils about 50 to 70 per cent.

Many milking machines have been discarded because the dairyman could not produce milk with as low bacterial count as he did by hand milking. There is no need, however, of discarding a milking machine on this account, for high-grade and even certified milk can be produced with a milking machine. The following method has been used in one dairy for several years where Grade A milk is produced regularly.

1. Immediately after milking, while the machine is still attached to the vacuum,

rinse the teat cups and the milk hose by drawing thru each unit at least 2 gallons of water, lukewarm or cold. It is important to do this immediately after milking, so that no milk will dry on the machine parts.

2. Prepare at least 1 gallon of washing-powder solution, hot if possible, using 2 heaping tablespoonfuls of powder to a gallon. Draw this solution thru each unit.

3. Brush out the tubes and especially the teat cups, and wash the outside of these parts.

4. Then place them in some disinfecting solution until the next milking. Be sure that no air bubbles are caught in the rubber tubes, and see that all parts are completely submerged.

5. Once a week take the machine apart and scrub every part inside and outside. After assembling, put in the disinfectant solution.

6. Flush out the air line occasionally, using a hot solution of washing powder and disinfectant. In case some milk is drawn into the air line during milking, wash it out immediately after milking.

The cooling of milk is done mainly for one reason—to hinder bacterial growth. Bacteria are like any other vegetation; they grow rapidly in a warm temperature and slowly in a cold temperature. To what temperature the milk should be cooled on the farm is shown by a test made at the Illinois Experiment Station. Samples of the same milk were placed at varying temperatures and at the end of 12 hours tests showed the following conditions:

At 40 degrees F. there was no increase of bacteria.
At 50 degrees F. the increase was very slight.
At 60 degrees F. each bacteria produced 15 new ones.
At 70 degrees F. each bacteria produced 700 new ones.
At 80 degrees F. each bacteria produced 3,000 new ones.

The above results mean that if milk of high quality is not promptly cooled to below 60 degrees F., it will not be of high quality at the end of 12 hours.

Among the different schemes used for cooling milk on the farm the most common practice is to put the cans of milk in a tank of cold water. One dairy expert suggests that the capacity of a tank be at least 3 times the volume of the milk to be cooled. After the cans of milk are placed in the tank, the well water is pumped in and then allowed to run to the stock watering tank.

Probably most dairymen cool their milk, but too many do not take full

advantage of the facilities they have to cool it quickly and well. Observing the following practices will give good results:

1. Cool the milk immediately after it is drawn. Allowing a can of milk to stand until all the chores are done before placing it in the cooling tank is a poor practice.
2. During the first hour of cooling, stir the milk 3 or 4 times to hasten the process. This operation usually is neglected.
3. After the milk is cooled with well water, place a few pieces of ice in the tank to help keep it below 60 degrees F.

The lack of proper cooling of milk causes very great financial losses to the dairy business. It is impossible to produce high-quality milk without proper cooling.

It is not difficult to find dairy farms with beautiful buildings and the latest types of equipment that are not producing high-grade milk, nor to find dairymen of education who, for one reason or another, are not doing so. Proper equipment and good education are valuable and helpful, but back of it all the dairyman himself is the most important factor. There are many dairymen who produce high-quality milk uniformly altho they have simple equipment. It is the will to do the necessary things well and at the proper time that counts. The essential factors that underlie the production of high-quality milk may be summarized as follows: (1) Clean barns, clean milk house, clean milker, and clean and healthy cows. (2) Proper washing and effective sterilization of all utensils. (3) Prompt cooling of the milk to 60 degrees F. or lower and keeping it at that temperature until delivered.

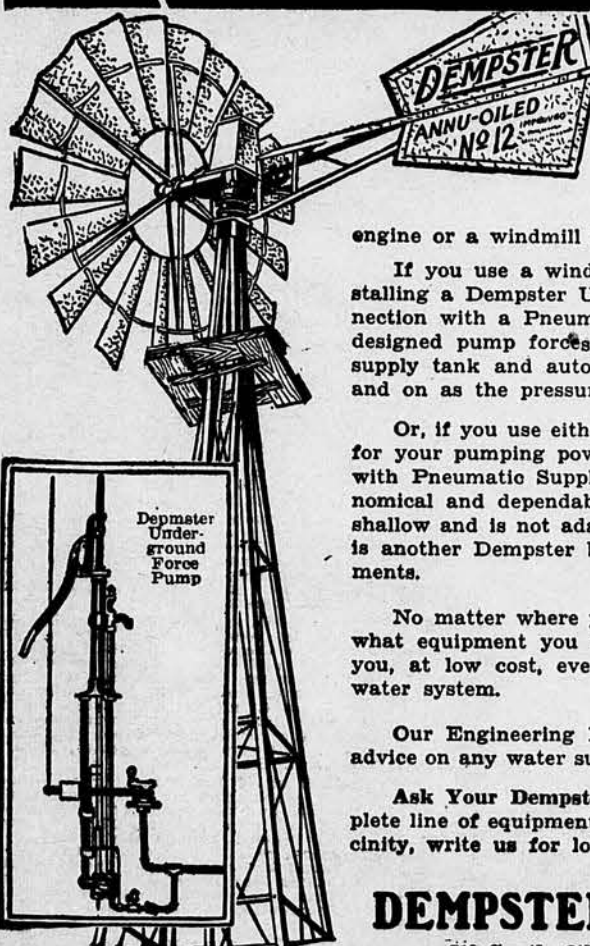
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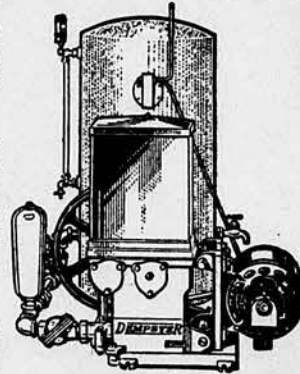
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Farm Crops and Markets

Early Seedbed Preparation for Wheat Was the Rule in Kansas This Year

IF THERE is anything in the idea that early plowing or listing for wheat will increase the yields, Kansas ought to produce a big crop next year. More July seedbed preparation was done this year than in any past season. And it was a mighty fortunate thing, too, considering the dry weather we have had in the last month. Silo filling and corn cutting have been the big jobs of the last week. Some rye has been seeded for early fall pasture.

Abundant evidence of a summer of exceptional industrial activity and trade in both the domestic and foreign fields is furnished by the results of the major divisions during the last month. New July production records have been made in the automobile and iron and steel industries. Building construction, which has shown little activity since the downward trend of early spring, made a marked improvement. Distribution of commodities, evidenced by freight car loadings, is continuing to improve. Some summer recession has been in evidence, but seldom to a very pronounced degree, and in many instances later than usual. Stocks of manufactured goods and raw materials on the whole have shown no accumulation. In some cases stocks have actually decreased and in others, where there was a possibility for an over accumulation, an attempt to adjust production was noticeable.

The output of 517,792 cars, trucks and buses established a new July record in the automobile industry. July production decreased seasonally 8.6 per cent from June, but compared with July, a year ago, there was an increase of 24.0 per cent. The production for the first seven months of this year, 3,929,186 units, is an increase of 43.2 per cent over the same period last year, and the largest for any similar seven months. The number of new car registrations for the calendar year to July 1 represents an increase of 41 per cent over 1928, and foreign sales in the first six months of this year increased 55 per cent when compared with the same period last year.

A Fine Livestock Outlook

The outlook for the livestock markets is good. Producers have made money this summer, and it seems that the present favorable period will be continued for some time. In speaking of this, the National Live Stock Producer says: "The market situation has not changed greatly from early July. Conditions in general appear reasonably favorable for the summer and early fall. Seasonal advances in prices of best fat cattle and also hogs have gotten under way very nicely and the general outlook for these is favorable. Lamb supplies, on the other hand, have shown a seasonal increase with a slightly lower level of prices than a year ago."

"Despite increased supplies of all cattle as compared with a year ago, a reduction in the number of cattle slaughtered under federal inspection during June, the increased supply of light weight fed cattle is holding the general level of fed cattle prices somewhat lower than a year ago. Heavy cattle, however, are scarce, and are selling at a premium. There has been the usual increase in the supply of grass cattle, which has resulted in a seasonal widening in the price range of all cattle, with a seasonal downward tendency in the case of the lower grades."

"The general outlook for the next two months would indicate a supply of grassfat cattle and light weight fed cattle a little larger than last year, with a continued relatively small supply of the lower grades of slaughter cattle and also stocker and feeder cattle. Under these conditions about normal seasonal variations in prices would be expected, which would mean a continuation of a slight easing off in the present price level of most grass cattle and a rather uniform seasonal advance in the better grades of fed cattle, especially those carrying weight and having considerable quality and finish."

Buy Feeder Cattle Early

"Last year at this time and a little later supplies were curtailed somewhat as the result of the late movement of grass cattle from southwestern pastures, and prices were further supported by the rather strong demand for feeding cattle, resulting in top prices for slaughter cattle coming in September. In view of the present relatively small supply of well finished heavy cattle and the fact that many light weight cattle are coming to market this summer, a further seasonal advance in the better grades of fed cattle would be expected in the fall, with peak prices probably in October or early November."

"The movement of grass cattle from southwestern pastures is generally expected to be about normal or possibly a little earlier than the late movement last year, and most of such cattle probably will go to slaughterers rather than to feeders. Feeding demand for cattle was unusually strong early last summer, but cattle fed for the winter market in most cases proved unprofitable, and in view of the probability of a fairly substantial seasonal advance in fed cattle prices this summer, or fall, a strong demand for stocker and feeder cattle is generally expected. While heavy cattle may continue to sell at a premium during the next few months, calves and light weight cattle probably will be less speculative and offer better chances for profitable returns from feeding."

"With the increasing power of consumers good, and with relatively high prices for pork products and some improvement in hide prices, the general outlook for the cattle market is rather favorable. Further decreases in range cattle are expected in the late fall, and with a rather strong feeder demand, the general level of feeder cattle prices would be expected to be somewhat higher than last year."

"Producers who are concerned with the long time outlook may be assured that small cattle supplies will continue for several years. The cattle cycle ordinarily extends over a period of 16 years, and apparently the low point of production has just been passed, and the low point in market supplies probably will be this year or next, depending somewhat on how rapidly restocking takes place. As the result of the large numbers of sheep in competing range areas, cattle expansion will be very limited."

"As the result of the current optimism in regard to the summer market and a somewhat more favorable feeding relation between corn and hog prices, there has been a tendency to feed hogs to rather heavy weights. Despite a reduction of 3 per cent in the number of hogs slaughtered during June as compared with the corresponding month last year, market supplies have increased somewhat, and conditions indicate a slaughter for the summer and early fall fully as large as last year. Storage stocks of pork at the beginning of July were reported to be 8 per cent less than a year ago, and stocks of lard were approximately 7 per cent less, indicating a somewhat more favorable position for hogs than in the early summer of 1928, provided weights are not increased too much."

"As the result of the general reduction in the demand for lard and other products from overly fat hogs, it would seem advisable that market hogs as they are finished, especially in view of the early summer advance in prices, and the present wide premium for light weight hogs."

"Conditions indicate somewhat larger supplies in August and September and reduced supplies in October and November as compared with a year ago. Last fall there was a tendency for hogs to come to market rather early, but this year the general relation between corn and hog prices is expected to be somewhat more favorable for feeding and may delay marketing into the winter. The general distribution of hog supplies during the remainder of this year is expected to be considerably more uniform than was the case last year. Last summer many hogs were marketed early and others were carried thru the summer on grass and finished out on new corn. Stocks of corn seem to be ample and producers seem to be inclined to finish hogs for the summer market."

"The size of the spring pig crop as estimated by the United States Department of Agriculture was 6 per cent less for the Corn Belt and 8 per cent less for the country as a whole than that of the spring of 1928. The survey, as explained by the department, generally has overestimated the amount of change in the spring pig crop in the Corn Belt. The reduction in the Corn Belt for this last spring probably was not over 4 per cent, which would mean a decrease in the supply of hogs during next winter and spring, this probably amounting to 4 or 5 per cent. The pig survey pointed to a fall pig crop about the same as last year, which would mean a market supply about the same as this summer."

"Hog prices at Chicago during July averaged \$1 higher than at the seasonal low level reached in late May and early June, and approximately \$1 higher than a year ago. Conditions are generally favorable for substantially higher prices during the late fall and winter than what prevailed in 1928, with probably a little less than the usual seasonal advance next spring. The outlook is favorable for relatively satisfactory prices well thru 1930, and even longer, provided producers do not increase their breeding for next spring's pig crop."

Early Lamb Feeding Favorable

"While conditions in general indicated a considerably larger lamb crop in the native and states, market supplies and slaughter of lambs during June were slightly less than during June last year. Supplies, however, have recently increased, and are expected to continue relatively large during early September, with the probability of some reduction in the supply of western lambs in September and October as the result of a smaller lamb crop in the North Rocky Mountain states. This should be a strengthening factor in the situation, especially in view of the probable strong demand for feeding lambs at that time."

"In view of the relatively unsatisfactory returns from feeding lambs for the October and early November market last year and the expected increased supply of natives and southern lambs during early September, early lamb feeding would seem most desirable this fall. Winter feeding proved profitable last year, but during the two preceding years it was unprofitable for Corn Belt feeders. In case of a relatively high lamb market in October and November, many Corn Belt feeders may be encouraged to feed for the winter lamb market which proved profitable last year. Lamb feeding has proved rather profitable in western areas for three seasons in succession, and in view of the scarcity of feeding cattle, the chances are that many lambs will be fed for the winter and spring market, which would mean a large market supply in February and March, a condition which resulted in very unsatisfactory prices in 1926."

"Lamb prices during the last several weeks averaged slightly lower than a year ago, with a downward tendency in the market."

"Chain meat markets will increase until practically every inefficient and unsanitary independent market is driven out of business; but they can never displace the well-managed shop. These are two conclusions reached in a study of the chain store as a

factor in the distribution of meat products which has just been published by E. L. Rhoades, Assistant Professor of Marketing at the University of Chicago, and formerly of the Extension Division of the Kansas State Agricultural College.

Chain stores are rapidly becoming more business-like buyers in the meat field, the report says, whereas formerly their buying agents made purchases on the basis of bargains, there is now a definite tendency toward purchasing continuously from the packers with whom they deal, and a realization that quality of product is the first essential.

Professor Rhoades estimates that chains now comprise from 10 to 15 per cent of all retail meat shops with meat departments run in connection with chain groceries crowding in rather rapidly and closely to make as many combination grocery-meat markets within a chain as possible. While this recent tendency has operated to reduce the comparative volume of sales of the meat departments, so that in many sections the average sales of chain meat units is approximately equal to the independent units, in Canada and the eastern seaboard, which has seen great development of the chain idea, the volume of sales by the chain departments averages two or three times as large as the average for independent markets, he believes.

The most of the chain markets, which number about 12,000, are in urban areas, especially in the better sections of cities and towns, rural districts, especially in the central states, are becoming a fruitful field for the extension of the chain markets.

Contrary to what is in some quarters popular belief, chains handle quality meats, buying little or no low grade products, he finds. It is a practice of most chains to purchase perishable meats in the localities that the chains serve; combined and large-scale purchases usually is thus restricted to the less perishable items. The practice has been to buy reasonably small percentages of fresh meat from several different sources in order to keep open as many sources of supply as possible. Such items as bacon can be purchased in carload lots, and as a result bacon is a highly competitive product in the chain store trade.

The personal elements in the relationship between the chains and the packers is becoming more important, he finds, mutual confidence and frankness often overshadowing price advantage.

Other conclusions include these: Chains own some of their own warehouses and probably will own more. There are too many branch and wholesale packing houses for economical service to chains. Chains do not expect to own many packing plants, it is generally believed, and the packers are experimenting with packer-owned chains. It is not likely that this movement will see a great growth. Neither are mergers of packing companies and chains to be expected, he suggests, except on a promotional basis.

Cold Storage Space Expands

Continued expansion of the nation's cold storage industry for eggs and poultry despite the development of methods which lengthen the producing season and shorten the period of under-production is predicted by Thomas W. Heitz, dairy and poultry products marketing specialist, Bureau of Agricultural Economics, United States Department of Agriculture, following a survey of the situation.

"The tendency to lengthen the producing season and to shorten the period of under-production," Mr. Heitz says, "would seem to indicate less need of holding the products in storage. Scientific management will mature pullets earlier and cause a much heavier fall and winter egg production, but it is doubtful if these same flocks will lay appreciably fewer eggs during the spring, which is the season in which eggs are stored. The winter egg and broiler will increase consumption per capita, but so long as the natural inclination of reproduction of the hen is in the spring of the year, and as long as chicks can be reared more economically in warm weather than in cold, the storage houses probably will be little affected by out-of-season production."

The rapid development of the cold storage industry to the point where the total storage capacity, including that in meat packing plants and private storages, now aggregates approximately 700 million cubic feet is attributed largely to the growth of cities and the increasing demand for products out of their natural season of production. More space is used for the storage of eggs in the public warehouses than for any other one commodity, except apples. Frozen poultry ranks fourth. The increasing population in consuming centers and the consequent increased demand for food during all seasons of the year are expected to bring about a proportionate increased demand for cold storage space. Although fresh-egg receipts at leading markets were larger during the winter of 1926-27 than ever in the history of the industry, it is pointed out that the storage holdings were also higher than in any preceding year.

Detailed results of the survey have been published by the United States Department of Agriculture in Circular 73-C, entitled "The Cold Storage of Eggs and Poultry," copies of which may be obtained from that department at Washington, D. C. Much of the publication deals with approved refrigeration methods, the construction of storages, the preparation of products for storage, and other technical phases of the industry to aid in placing the best quality of products on the market.

Anderson—We have had some local showers recently, which have been very helpful. Public sales have begun; it is likely that a good many sales will be held this coming fall. Crops are still making a good growth. Corn, 96c; kafir, \$1.60 a cwt.; shorts, \$1.85; cream, 39c; eggs, 26c.—Olga C. Slocum.

Barton—Farmers have been busy putting up hay. A great many cars of hay have been shipped from here recently. A good rain would be welcome, especially by the folks who are preparing land for wheat. Livestock and poultry are doing well, although the cows are falling somewhat in their milk.—W. H. Plumly.

Cheyenne—We have had unusually high temperatures recently and only a few showers, but the corn and other crops are still green and are making satisfactory growth. Pastures contain plenty of grass, and livestock is doing well. Land values are on the upgrade, but not many sales are reported. But little wheat is moving to market since the recent price drop. Eggs, 21c; butterfat, 42c; apples, home grown, \$1.50 to \$2.50.—F. M. Hurlock.

Cloud—Most of the threshing was done from the shock. The oats crop was quite satisfactory, but the yields of wheat were less than had been expected. The corn crop has been injured by the dry weather; a good general rain is needed by all crops, to supply stock water and to aid the folks who are preparing land for wheat. Livestock and poultry are doing well, although the cows are falling somewhat in their milk.—W. H. Plumly.

Douglas—We have had some local rains, but the ground is dry and hard in many localities. Pastures are short. Most of the rural schools opened this week. Tomatoes, 3c.—Mrs. G. L. Glenn.

(Continued on Page 45)

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Sunday School Lesson

by the Rev. N. A. McCune

DO YOU ever feel discouraged? Read the book of Nehemiah. Do you sometimes feel that after all it is not worth while to work so hard? Read Nehemiah. Do you ever think that it is impossible to get people to work together for community betterment? Read Nehemiah. Have you ever faced some community problem that appeared altogether too big to be attempted? You should have read Nehemiah. This little book is a tonic. It will tone up the system more effectively than any of the tonics that fill the patent medicine section in a drug store.

Just to get the flavor of the book, let us glance at some of the bold sayings of this doughty leader. When told that he could not build the wall, he replied, "The God of heaven, he will prosper us; therefore we, his servants, will arise and build." Plenty of decision in this man's breast! But when they got at the actual work, Nehemiah's enemies conspired to prevent the work from going forward, even if force had to be used. Nehemiah says, "Nevertheless we made our prayer unto our God, and set a watch day and night." Something is bound to happen, with a man like that! He describes how they worked, when they got going. "So we labored in the work; and half of them held the spears from the rising of the morning till the stars appeared. So neither I, nor my brethren, nor my servants, nor the men of the guard which followed me, none of us put off our clothes, saving that every one put them off for the washing." When his enemies try a little game on him, pretending to have a conference with him, he answers, "I am doing a great work, so that I cannot come down." When they threaten him, he flings back the reply, "Should such a man as I flee?"

This Nehemiah was a real man. You feel it, as you read the book.

I wonder whether we cannot get at the secret, or one of the secrets, of his strong character, in Chapter II. When the king noticed Nehemiah's downcast countenance, he asked him what he could do for him. And Nehemiah says, "So I prayed to the God of heaven." That is, in the second or two between the king's question and Nehemiah's reply, Nehemiah offered a sentence prayer that he might answer aright. He would not trust himself wholly, in a moment that was so big with possibilities. In that second of time, he must be sure of the Divine guidance. "So I prayed to the God of heaven." That is what our fathers used to call ejaculatory prayer; that is, brief prayer sent up to God any time, anywhere, for help and guidance. That such prayer does help will be testified to by many, many persons. It is the long distance telephone, that is at hand for instant use, all the time.

Many years ago a man wrote a book on the subject, "Great Night Scenes of the Bible." One of the notable night scenes was this one, where Nehemiah started out to study the ruined walls of Jerusalem. Mounted on a mule he starts on his tour of inspection. It is a secret tour. No one else knows of it, and he has not confided yet his plan for rebuilding the wrecked walls. He goes forth in the darkness and winds in and out among the masses of fallen masonry, the blackened openings where the gates have been burned; and then to a place where the debris is piled so high that the animal on which he rides refuses to go on; then along the Kedron water-course, thence back to the ravine of Hinnom whence he had started. He has been making mental photographs all the time, and now, with the pictures of the desolation in his mind, he lays his plans for rebuilding.

And even more picturesque is the sight of Nehemiah's men at work on the wall. Sanballat and others threaten anyone who attempts to rebuild. They do not want the city built, for that would mean that their power would cease. And so stout Nehemiah arms his workers. Orders are issued, almost military fashion, that if they hear the trumpet, they are to hasten to that spot. Union hours are not observed. The builders are at it by daybreak, and they toil until starlight.

It is wonderful what enthusiasm will do. Nothing could stop these people.

Of course, if you had shot them dead and buried them 10 feet down, the work would have stopped. But it would have required almost that much to stop them. They meant business. No wonder Nehemiah writes with pride of what he and his men had accomplished. "Everyone with his hands wrought in the work, and with the other held his weapon; and the builders, every one, had his sword girded by his side, and so builded. And I said unto the nobles, and to the rest of the peoples, Be not afraid of them; remember the Lord who is great and terrible, and fight for your brethren, your sons and your daughters, your wives and your houses."

The stirring lines of one of our American poets, Angela Morgan, come to mind:

Work!
Thank God for the might of it,
The ardor, the urge, the delight of it—
Work that springs from the heart's desire,
Setting the brain and soul on fire.
Oh, what is so good as the heat of it,
And what is so glad as the beat of it,
And what is so kind as the stern command,
Challenging brain and heart and hand?

Lesson for Sept. 8—Co-operation in Religious Work. Nehemiah 2:1 to 7:4.
Golden Text, Neh. 4:6.

We Came; We Conquered!

(Continued from Page 3)

of the trip. Parades thru the trains, ending with songs and speeches, together with yells and warwhoops on station platforms enlivened every day.

Among the tourists who spoke at dinners and banquets along the route were T. F. Doran of Topeka; A. Yale of Grinnell; Eugene Elkins of Wakefield; U. S. Alexander of Winfield, vice president of the Kansas Wheat Growers' Association; R. W. Hawkins of Marysville; and Dr. W. E. Grimes, head of the department of agricultural economics at the Kansas State Agricultural College.

Many young women on the tour were required to pose before batteries of press cameras for photographs as typical Kansas beauties.

Various co-operative marketing enterprises along the route were visited. Dr. W. E. Grimes, Prof. George Montgomery and Prof. R. M. Green, of the Kansas State Agricultural College and J. W. Cummins, editor of the Wheat Growers' Journal of Wichita, with U. S. Alexander, directed this phase of the tour.

The Jayhawker tour was sponsored by Kansas Farmer and the Chicago Great Western, Great Northern and Canadian National Railways. Floyd L. Hockenhuell was tour manager and was on the first train, while Roy R. Moore, advertising manager of Kansas Farmer, was in charge of the second train. All but 10 of the 105 counties in Kansas were represented by passengers on the tour.

So We Gained One Full Day

(Continued from Page 17)

had another night's sleep before it finally became Friday, June 22. It had been a long, long time since Wednesday evening.

I was glad it happened that way I was afraid we would not reach Honolulu by June 27, my wedding anniversary. And we would not have done so but for the repetition of that day, giving us one more full day of sailing time between May 28 and June 27, than we would otherwise have had.

I remembered from my Bible how Joshua had commanded the sun to stand still during a certain battle in which he was engaged so that he would have time to finish the fight and win. He may well boast, as he does, that the sun stood still and hastened not to go down about a whole day, giving him a day longer in which to work.

And now, in my case, I like to remember how a full day of sailing time was repeated that I might have time to reach Honolulu by my wedding day—and, at that, the longest day of the year, June 21.

Came another week and, finally, on the morning of the scheduled day we sighted the wooded peaks of the farthest island of Hawaii. We would dock before noon. My wife would be waiting at the pier in Honolulu.

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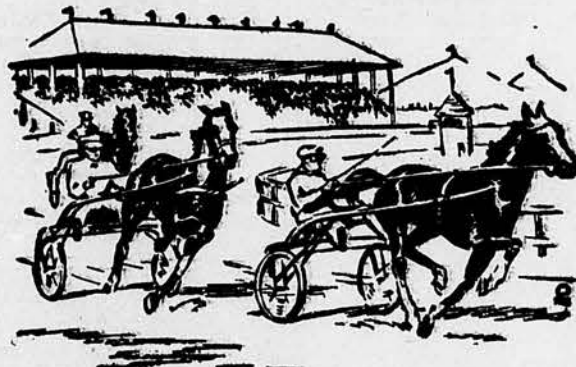
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Words	One time	Four times	Words	One time	Four times
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CHOICE CHESTER WHITE SPRING Boars. Henry Murr, Tonganoxie, Kan.

BERKSHIRES, WEANLINGS, \$17.50. SOWS \$40. Guaranteed. Fred Luttrell, Paris, Mo.

REGISTERED CHESTER WHITE BRED gilts, Sept. farrow. Spring boars. Ray Lowe, Newton, Kan.

CHESTER WHITE PIGS, AND SPRING boars. Immune, Pedigreed. H. W. Chest-nut, Chanute, Kan.

SPOTTED POLAND CHINA SPRING gilts. Wildwood breeding Pedigreed. Kenneth Wilson, Anness, Kan.

O. I. C. AND CHESTER WHITE PED-igreed pigs \$24 per pair, no kin. Write for circulars. Raymond Ruebush, Sciota, Ill.

SHEEP AND GOATS

150 SHROPSHIRE YOUNG EWES. BEN Miller, Newton, Kan.

THIRTY REGISTERED SHROPSHIRE yearling and lamb rams. W. T. Ham-mond, Fortis, Kan.

Those Top Dollars!

BY GILBERT GUSLER

Two chief faults in the character of farm products offered for sale are the high percentage of low grades or inferior qualities and the lack of uniformity. Weather and other influences over which the farmer has little or no control sometimes lower the quality of crops and livestock, but the trouble often arises thru the use of inferior seed or breeding animals, improper handling and storage of grain, and faulty preservation of products which are subject to rapid deterioration. The lack of uniformity is seen in the large percentage of mixed grades of wheat and other grains, unevenness in size,

color and condition of livestock, mixed colors and qualities of eggs, and the like.

The solution of the quality problem is partly an individual and partly a community matter. Large farmers may be able to sell quantity lots of uniform quality, but if individual production is small, so that the product of many farmers must be combined locally for shipment to large markets, then community co-operation to bring uniformity and high quality in the product offered to dealers is required. Lack of these characteristics adds to the dealer's cost of handling, increases his uncertainty as to the value of the product in the central markets and leads him to take a wider margin.

After the product is brought into being, the time at which it will be sold must be settled. Products such as eggs, milk and cream as well as certain highly perishable fruit and vegetable crops must go to market about as fast as they are ready. But the great staple crops and livestock can be held back or pushed forward to some extent as conditions dictate.

Since farm production is seasonal, prices of each commodity tend to be low during certain months and high during other months. The amount and regularity of these seasonal fluctuations vary considerably with different products. In all, abnormal conditions often throw the seasonal trends askew so that they are not highly dependable.

Hence, other conditions in each particular season must also be considered in trying to arrive at a conclusion as to the course prices are likely to take.

Prices tend to be high during certain portions of the year largely because it is more difficult to have the products ready for market at those times. Having spring pigs ready for market by September, when hog prices usually are higher, for example, requires early farrowing, increases the risk of loss of young pigs, compels the use of more old corn and prevents hogging down new corn during the fall. Those who sell during September need a higher price to cover their costs than those who market in December.

Besides the broader swings in prices

during the year, advantage should be taken as far as possible of the minor swings over shorter periods as a means of raising the average price received. When the approximate time of selling has been decided upon, the farmer should watch the daily market reports and the short-term influences and aim to get to market during a strong period instead of a time of temporary weakness.

No simple rule for deciding when to sell can be offered because no two market situations are ever just alike. One suggestion may be helpful. When prices for any product are high, the news usually runs bullish. This is the reason prices are high, but too often it is taken as a reason why they should go still higher. Hence, a good market is often missed thru waiting for a still better price.

The agencies supplying information that will help in answering the question of when to sell are the same as those aiding farmers to plan production. Monthly, weekly and daily reports issued by the United States Department of Agriculture, monthly reports from the agricultural colleges, market reports in farm papers, comments on conditions by radio, daily papers, and the like, all are useful.

The fourth way in which market returns may be improved, selling so as to obtain full commercial value for the product, involves preparing it so as to appeal to the discriminating buyer and then selling on grade, co-operative marketing in some cases, and selling direct rather than thru local dealers in other cases. Getting dealers to pay premiums they should for quality is a serious marketing problem. Part of the opposition to buying on grade comes from farmers themselves, particularly those whose products are below average. The local dealer may be paying them more than the real commercial value of their produce, offsetting the loss by underpaying those who bring high quality products to market.

The large farmer can send his produce direct to central markets where differences in quality are always paid for. But, small producers must join with others to bring about some plan of paying according to grade if the local dealer does not readily adopt it.

Finally, a few comments on the mode of acquiring market information. To keep track of the influences which keep prices constantly shifting and to make shrewd adjustments in production or marketing plans calls for study right along. Occasional and haphazard observations will not suffice. Besides watching current markets, a background of basic information about the market for each product in which the individual is interested should be obtained. He should know where the product goes, how it is used, where his competitors are located, and similar things. Thus, he will be better able to judge the effect from a given cause or set of conditions. Seneca said, "No one was ever wise by chance." No farmer can hope to be successful in his marketing operations unless he is willing to pay a price in the form of effort to broaden his information and sharpen his judgment.

Our Soil-Building Crops

BY E. B. WELLS

Green manuring refers to the incorporation of green organic material in the soil. The purpose is to maintain or increase the organic matter supply of the soil which constitutes one of the most important factors in soil fertility.

Green manure crops may be divided into two general classes; legumes and non-legumes. In this sense any crop may serve as a green manure, but certain crops possess a greater value than others for this purpose, for they are able to obtain certain of their plant foods from sources not accessible to all crops. One class of plants can obtain the nitrogen necessary for their growth from the air as well as the soil, while the other, as far as we know, can obtain it only from the soil. These two groups of plants are classified as legumes or nitrogen gatherers and non-legumes or nitrogen consumers.

Nitrogen gatherers belong to the legume or clover family, most of which take their nitrogen from the air and do not reduce the content of soil nitrogen. These crops, when plowed down as green manures, add directly to the crop-producing power of the

soil. In order that the plant may obtain its nitrogen from the air the soil originally must contain, or must be inoculated with, a special type of bacteria, the presence of which is noted by the growth of nodules upon the roots thru which the nitrogen is obtained.

Most well-tilled soils contain the bacteria in abundance which inoculate the different kinds of nitrogen-gathering plants, especially if the soils are well-supplied with lime. Of the nitrogen-gathering green manure crops that are used in Kansas, Red clover, Sweet clover, alfalfa, cowpeas, soybeans and winter or hairy vetch are the most common.

The nitrogen-consuming or non-leguminous green manure crops are those which can obtain their nitrogen only from the soil. This type of plant may increase the organic matter supply in the soil to some extent, but it does so at the expense of the other plant food materials that already are present. Some of the most common green manure crops that draw upon the soil for their entire supply of plant food are: Rye, wheat, oats, barley, rape and turnips. The main use of these crops is to prevent the possible loss of nitrogen and other plant foods by leaching. It is true that they greatly improve the physical condition of the soil thru the addition of organic matter. Their use should not be recommended generally, except on those soils which are not adapted to the production of legumes or nitrogen-gathering plants.

Helps for Farm Folks

Not all helpful bulletins are published by governmental or disinterested agencies. Firms advertising in Kansas Farmer have prepared at great expense many booklets and brochures which are filled with information that any farmer will find helpful. They may be obtained without charge on request. For your benefit we are listing many informational services announced in this issue. All are contained in advertisements on the pages indicated. Please send your requests for any of the following booklets or brochures directly to the companies at the addresses contained in the advertisements:

	Adv. page
Power Farming.....	16
Why Some Pigs Grow Faster Than Others.....	19
Corn Picking Costs Cut in Half.....	19
Electric Power and Light.....	20
Grind the Feed You Grow.....	22
How to Control Smut in Wheat.....	23
Fifteen Avenue Styles on the Farm.....	31
Save Cost of Accidents.....	36
Cowboy Clothes for Winter.....	36
Governors for Power Machinery.....	36
Corn Pickers for Tractors.....	37
Perfect Fuel for the Kitchen.....	38
Constant Water Supply for Hogs.....	38
How to Increase Egg Yield.....	39
Economy in Feed Grinding.....	40
Farm Water Supply Systems.....	42
Cut Feeding Costs.....	42

Farm Crops and Markets

(Continued from Page 42)

Franklin—Corn has been injured considerably by the dry weather. Pastures are in fairly good condition. We were on the Northwest trip of the Jayhawkers, and we had a mighty good time. Corn is worth 90 cents a bushel, but not much is being moved to market. A good many picnics are being held.—Elias Bienenkewer.

Gove and Sheridan—We received a general rain a few days ago, and the soil is in fairly good condition for wheat seeding. Considerable numbers of cattle are being sent to market. Much of the county has been leased for oil and gas. The yields of corn, cane and kafir will be light.—John I. Aldrich.

Graham—We have had several good showers recently. Corn will make about half a crop. There is plenty of farm help. Wheat is averaging about 10 bushels an acre; some threshing from the stack still remains to be done. Corn, 90c; barley, 45c; wheat, \$1.02.—C. F. Welty.

Greenwood—A rain would be very helpful to the folks who are preparing land for wheat. Stock water is scarce. Haying is about finished. The corn crop will be light; forage crops are doing well. Eggs, 26c; cream, 39c; bran, \$1.80; shorts, \$2.10.—A. H. Brothers.

Harvey—The weather has been very hot and dry recently, which has injured the corn crop somewhat. Farmers have been busy filling silos. The wheat plowing is mostly all finished. Wheat, \$1.12; oats, 40c; corn, 92c; potatoes, \$1.80; peaches, \$1.50 to \$2.70; grapes, 4c; eggs, 27c; butter, 45c.—W. W. Prouty.

Jefferson—A good rain, of about 2 inches, which fell August 25, has been very helpful to the late corn. Considerable alfalfa is being sown this year. Pastures are short; cane will make only a fair crop. Considerable Red and Sweet clover was cut for seed this season. The apple and pear yields will be quite satisfactory.—J. J. Blevins.

Johnson—We had a 2½-inch rain here recently, which was very helpful to the pastures, kafir and to the folks who were preparing land for wheat. Some lime is being used on alfalfa ground. The cantaloupe crop was quite satisfactory. Bran, \$1.60; white shorts, \$1.80; eggs, 30c; corn, \$1.10; oats, 55c.—Mrs. Bertha Bell Whitelaw.

Marshall—We have had some light showers, but a good general rain is needed, especially by the folks who are preparing land for wheat, and to supply stock water. The corn crop will be light, as it has been injured greatly by the dry weather. Corn, \$1; wheat, 88c; eggs, 27c; cream, 41c.—J. D. Stosz.

Mitchell—We have had a few showers, but a general rain is needed. The ground is so

The Real Estate Market Place

RATES—50c an Agate Line
(undisplayed ads also accepted
at 10c a word)

There are five other Capper Publications which reach 1,446,847 Families. All widely used for Real Estate Advertising
Write For Rates and Information

KANSAS

IMP. 80 Acres near Kingman, \$5500.00. Half Cash. F. L. Robinson, Kingman, Kan.

FARMS for sale at bargain prices and on easy terms. Send for list. Humphrey Inv. Co., Independence, Kan.

EASTERN Kansas Farm Bargains. All sizes 20 acres up. Write us your wants. Buy land now. Mansfield Loan Co., Ottawa, Kan.

GREELY COUNTY LANDS: Write us for our bargain land list of 75 quarter sections. G. N. Kyser & Sons, Wakeeney, Kan.

CHOICE wheat and corn land for sale; one crop will pay for land. A golden opportunity for you. Phone 188, A. C. Bailey, Syracuse, Kansas.

121 A. first bottom 1 mi. Wakarusa, ½ mi. hard surface, all tillable, good house, farm, imp. \$10,000 for quick sale. Dr. Bostic, 608 Kan., Topeka, Kansas.

FOR Quick Sale—140 A. 3½ mi. high school. Smooth upland, fair improvements, \$40. Creek bottom, 120, well improved, \$50. T. B. Godsey, Emporia, Kansas.

FOR SALE—Well improved Dairy Farm; about 100 acres joining town with hard high school. Write or see owner. Phone 33, P. O. Box 33, Woodbine, Kan.

BUSHELS PER ACRE instead of cash per acre for Western Kansas farms; no mortgage; no interest; no payment when crops fail. Wilson Investment Co., Oakley, Kan.

152 A. STOCK and Grain Farm—on a State Road, 2½ mi. from town in Eastern Kansas. Fair improvements. Extra good bargain, \$6,200. Must sell by Sept. 20. J. E. Anderson, Waverly, Kansas.

LAND FOR SALE—480 Acres in Decatur Co., Kan. Good improvements; 300 acres under cultivation. 1½ mi. from Swedish Mission Church. No trades. Write Emma Myers, Danbury, Neb., or Clause Anderson, Oberlin, Kansas.

KANSAS, the bread basket of the world, is the world's leading producer of hard winter wheat. Kansas ranks high in corn. It leads all states in production of alfalfa. Dairying, poultry raising and livestock farming offer attractive opportunities because of cheap and abundant production of feeds and forage, and short and mild winters which require a minimum of feed and care. The U. S. Geological Survey classifies many thousands of acres of Southwestern Kansas lands as first grade. These lands are available at reasonable prices and easy terms. Write now for our free Kansas Folder. C. L. Seagraves, General Colonization Agent, Santa Fe Railway, 990 Railway Exchange, Chicago, Ill.

BIG LAND AUCTION

Sept. 9th, near Bird City, Kansas, 560 improved stock farm in fine location: On Sept. 10th, at Theater, St. Francis, Kansas, 1152 acre farm on Republican River, a real farm for cattle and hog raising, well improved, 2 miles from town. On Sept. 11, the O'Leary Estate of 800 acres on Hackberry Creek near St. Francis, Kansas, a splendid farm, improved and in high state of cultivation. These farms sell to the highest bidder without reserve. No better farms for livestock raising in Western Kansas. Wire for information and be there.

NATIONAL AUCTION CO., Agents, Creston, Ia.

MISSOURI

LAND SALE. \$5 down \$5 monthly buys 40 acres. Southern Missouri. Price \$200. Send for list. Box 22-A, Kirkwood, Mo.

POOR MAN'S CHANCE—\$5 down, \$5 monthly buys forty acres grain, fruit, poultry land, some timber, near town, price \$200. Other bargains. Box 425-O, Carthage, Mo.

hard that plowing is difficult. A considerable amount of road work is being done. Farmers have been busy cutting corn and filling silos.—Albert Robinson.

Montgomery—Recent scattered showers have improved the crop outlook considerably. Corn planted as late as July 1 may yet make a light crop. Good progress has been made with the wheat plowing. Haying is almost completed. The kafir prospect is fairly good. There is a fine demand for cattle and hogs at sales, but the sale of horses is slow. There is a considerable amount of discussion of the Farm Relief Bill among farmers, and it is not well understood, but the folks are hopeful that the board will get results. Eggs, 30c; heavy hens, 21c; broilers, 16c and 21c.—Walter Todd.

Ness—The weather has been hot and dry; corn and the feed crops are drying up rapidly. Farmers are preparing the fields for wheat. A good many farm sales are being held.—James McMill.

Republic—Recent showers have been of some benefit, especially in cooling the atmosphere. Plowing has been difficult, and the wheat acreage will be reduced somewhat unless ample rains come soon. A few sales are being held. Farmers have been busy cutting corn and prairie hay. The third crop of alfalfa was light.—Mrs. Chester Woodka.

Rice—A good general rain is needed. Crops of all kinds are suffering from a lack of moisture. Pastures are short. The county agent has suggested that everyone test his seed wheat this year. Wheat, \$1.04; cream, 41c; eggs, 26c; hens, 19c.—Mrs. E. J. Kil-lon.

Rush—The preparation of the wheat land for seeding is practically completed. Pastures are drying up. All spring crops need moisture badly. Corn has been injured considerably by dry weather. Wheat, \$1.03; eggs, 25c; butterfat, 41c.—William Crot-inger.

Smith—Corn was injured considerably by the dry weather, but still the yields will be fairly good on some fields. Farmers have been busy filling silos. Livestock is doing well. Cream, 40c; eggs, 27c.—Harry Saun-ders.

Sumner—Dry weather has done considerable damage to the growing crops. Farmers have been busy filling silos. There is a great deal of plowing for wheat yet to be done. Wheat, \$1.05; oats, 40c; corn, \$1; butterfat, 42c; eggs, 25c.—E. L. Stocking.

When and if the meek ever do inherit the earth they will not note any great difference because the unmeek will continue to boss them around.

COLORADO

BARGAINS—Eastern Colo. Brandon Valley. Shallow water, level land, imp. or Un-imp. Get list. R. T. Cline, Brandon, Colo.

SOUTHWEST COLORADO—contains irrigated and non-irrigated farms, National forest, Mesa Verde National Park, oil fields, gold mines, saw mills, trout streams. One of best farming, livestock and dairying sections in west. Free literature. Montezuma County Chamber of Commerce, Dolores, Colorado.

MISCELLANEOUS LAND

OWN A FARM in Minnesota, North Dakota, Montana, Idaho, Washington or Oregon. Crop payments or easy terms. Free literature. Mention state. H. W. Byerly, 81 Nor. Pac. Ry. St. Paul, Minn.

170 ACRES, horse, 10 cattle, 20 hogs, 100 poultry, farm tools, 18 acres corn, other crops; car road, near highway and bus line, 2 miles village, 8 to town; 100 acres tillable, 60 cultivation, productive lime soil for all crops; estimated 100,000 feet timber; fifty fruit trees; 3 room house, basement, 2 porches, spring water, necessary farm buildings; exceptional offer by aged owner \$2,500, \$1,000 cash, free September list.

UNITED FARM AGENCY
828-KF New York Life Bldg.,
Kansas City, Mo.

RENT OR PURCHASE IMPROVED FARM. Crop payments, low prices, Minnesota, North Dakota, Montana offer good opportunities. Purchase like renting, one-fourth of crop to pay principal and interest. A good farmer can pay out in a few years with cattle, sheep and hogs. Clover alfalfa grow luxuriantly. Feed crops very successful. Make a vacation trip and see the country. We can help you find a location. Write for free book, list and detailed information. Low excursion rates. E. C. Leedy, Dept. 500, Great Northern Railway, St. Paul, Minn. Free Zone of Plenty book tells about Washington, Idaho, Oregon.

SALE OR EXCHANGE

BARGAINS—E. Kan., W. Mo. farms, sale or exch. Sewell Land Co., Garnett, Kan.

SALE, RENT OR EXCHANGE: Improved eighty, Neodesha six miles. Owner, John Deer, Neodesha, Kan.

GROCERY AND MEATS in Co. Seat—Gen. Mdse. in new oil field. Both dandies. Want Western Kansas Land, 240 Washington County stock farm for rough improved blue stem pasture with some farm land. Send your propositions quick. Wranosky, Haddam, Kansas.

WANTED TO LIST REAL ESTATE

WANTED—Owner's best price on farm for sale. C. E. Mitchem, Harvard, Illinois.

WANTED—To hear from owner having farm for sale. H. E. Busby, Washington, Iowa.

WANT FARMS from owners priced right for cash. Describe fully. State date can deliver. E. Gross, N. Topeka, Kan.

SELL YOUR PROPERTY QUICKLY for cash, no matter where located, particularly free. Real Estate Salesman Co., 515 Brownell, Lincoln, Nebraska.

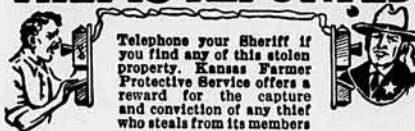
REAL ESTATE WANTED

BUY, SELL or trade your farm or business, thru a man who gets results. Wranosky, Haddam, Kan.

SMALL FARM WANTED

Located in Kansas, suitable for general farming, dairying and stock raising. If a bargain, write me full description and lowest cash price. John D. Baker, Mena, Ark.

THEFTS REPORTED



Telephone your Sheriff if you find any of this stolen property. Kansas Farmer Protective Service offers a reward for the capture and conviction of any thief who steals from its members.

Mrs. J. P. Aldrich, Hutchinson, Chickens. W. E. Anderson, Baxter Springs. Three-year old hound, cross eyed, scar on stomach. C. Kaufman, Liberty. Between 200 and 300 White Langshan and Rhode Island Red chickens, weighing between 1½ to 2½ pounds. The thief is believed to be driving an Essex coach, license number 66-834. His description is given as being about 37 years old, 5½ feet tall, weighing about 160 pounds, blue eyes, curly hair. Is traveling with wife and two children.

Seasr Gideon, Emmett. Two Overland radiators, two aluminum clutch wheels and other automobile parts.

J. C. Walter, Kensington. White, male, Shorthorn calf, 3 months old.

O. W. Reddins, Cherryville. One hundred White Leghorn hens.

Mrs. A. L. Phillips, Coffeyville. Thirty White Wyandotte hens and pullets.

M. F. Hutchison, Valley Falls. Ford roadster, A model, engine number 154760, license number 56-894. Slate color, spare tire. Mr. Hutchison, personally, offers a \$50 reward if the car is returned in good condition.

Have the Hens Quit?

BY L. F. PAYNE

Hens which quit laying now will not begin again until late winter. Send for Kansas Circular 147, "Culling Poultry," as it will help sort out the unprofitable hens. This circular has just been revised and enlarged. A new section on "Head characters and their relation to culling," has been added. Address the Kansas Experiment Station, Manhattan.

Harvard has lost two alligators. They should be easily identified by their pronunciation.



Our 1929 Poland China boars and gilts are the best we ever raised.

Chas. Holtwick's Black Poland Chinas

We are not going to hold a public sale but offer a very choice lot of big, well grown spring boars at farmers' prices and the gilts will be priced open. Papers furnished promptly with every pig. We guarantee every pig we sell.

Write for full particulars as to breeding and prices and we will undertake to please you with a boar or some gilts or both.

CHAS. HOLTWICK, VALENCIA, KANSAS.

Our advertisement is appearing every week in the Kansas Farmer.

The Sunflower Herd of Durocs

Farm joins town—No Public Sales



Our 1929 Sunflower Stilts boars and gilts are the best we have ever produced. Remember Sunflower Stilts is the son of the two times World's Champion. We have others by Monarch Col. Visit our herd if you can or write for further information and prices.

CHARLES STUCKMAN, Kirwin, Kansas.

Our advertisement will appear right along in future issues of the Kansas Farmer.



For Over a Quarter of a Century

Our ability as a breeder of better Durocs has resulted in Durocs that can be depended upon to reproduce themselves in the purchaser's hands in one litter or in a hundred.

Big Prospect N25963 is the sire of our best boar crop in years. Most of them are out of sows that are priceless. Big boned. Easy feeders. Good backs and hams. Cherry Red, attractive looking fellows. Immured. Registered. Shipped on approval.

W. R. Huston, Americus, Kan.

DUROC JERSEY HOGS

D. M. Thompson's Durocs

No public sale but we offer at private sale some dandy good February and March boars sire by King Scissors 3rd, who is a splendid son of Top Scissors (Gladfelders boar.)

These boars are out of mature sows representing Golden Eclipse, Col. Scissors, Col. Starlight, and Longview Leader.

Inspection of our herd is invited. We think we have some real boars for this fall trade. Write for descriptions and prices.

D. M. THOMPSON, Eskridge, Kan.

When Better Durocs Are Bred



We will breed them. 20 big husky boars our tops for sale. Sired by TOP SCISSORS and his great son SCISSORS BROADCASTER, whose dam was by the great Broadcaster. Constructive breeding our motto.

W. A. Gladfelter & Son, Emporia, Kan.

Ling's Profitable Durocs

100 Spring boars and gilts culled closely for the trade. Sired by STILTS LEADER and ORION STILTS. Boar and gilt sale on farm West of town SATURDAY, OCT. 19th. Write for catalog.

W. H. LING, Iola, Kansas.

DUROC JERSEY HOGS

SPECIAL 50 Spring Gilts

These gilts are ready to breed and are large and typy and all round good ones. Write at once if you want all or a few of them.

25 Big Type Boars

These are the actual tops of the 1929 pig crop of 148 raised. Boar buyers and those who buy gilts of me now are going to get their money's worth. Write for descriptions and prices.

Dr. C. H. Burdette, Centralia, Kan.

24 Big March Boars

The actual tops of our 1929 crop of 115. By these sires: Long Col. by High Col. Giant, an Iowa winner.

G. W. Great Col. by Great Col., the two times world champion.

Revolution by Revelation, a boar we developed. No public sales.

We will sell you a real boar worth the money. Write for descriptions and prices.

M. Stensaas & Sons, Concordia, Kan.

Our advertisement will appear every week in Kansas Farmer.

Bred Sows and Gilts

Registered, immured and shipped on approval. Write for prices and description.

STANTS BROTHERS, ABILENE, KANSAS

Anspaugh's Profitable Durocs

Size, type and vigor. 25 big farm range boars. Tops from 50 head best of blood lines. Priced right.

GEORGE ANSPAUGH, Ness City, Kansas

RED POLLED CATTLE

RED POLLED FEMALES

Sired by bull tracing 24 times to A. R. ancestors. Some out of A. R. dams. Splendid specimens with which to found herd. Wilkie Blair, Girard, Kan.

HORSES AND JACKS

STALLIONS

Two beautiful large, black, high bred general purpose stallions. A cross between registered and standard bred trotters; Blackhawk Morgan, Hambletonian Kentucky thoroughbred. Smooth mouth, but big money makers for ten years to come if handled right. \$1000.00 each net cash. H. G. Shore, owner, 926 Wabash Ave., Topeka, Kan., or see me with the August Clothing Co., 622 Kansas Ave.



KANSAS LIVESTOCK NEWS

J. R. JOHNSON
1015 Franklin Ave.
Wichita, Kansas

J. W. JOHNSON
% Kansas Farmer
Topeka, Kansas



Intelligent Selling Is an Important Angle to Success With Purebred Livestock

THE history of Shorthorn cattle in Kansas and their relation to a prosperous agriculture in this state would not be complete without some mention of the breeders of Southern Nebraska, and the part they have played in the building and improving of the herds in Northern Kansas. For more than 40 years, A. C. Shallenberger of Alma, Neb., has been engaged in that business. The fact that he has served his state twice as governor, and several times as Congressman, has not lessened his interest in good Shorthorns.

Clarence Johnson of Guide Rock, Neb., has bred registered Shorthorns for nearly 20 years, and, in his unassuming way, has carried the business forward even more than he knows. About 10 years ago he formed a partnership with William Auld. This arrangement brought more capital, and since that time the herd has taken rank among the best herds in America. Soon after the partnership was formed, Mr. Johnson bought 25 cows and the undefeated bull, Marshall Joffre. Eighteen of the cows were daughters of the great bull, Cumberland Gift. On this foundation there has been built one of the great herds of the country. The herd now numbers about 150 head. The policy of close culling has been adhered to right along.

In July there were sold from the farm 22 heifers at an average age of 1 year, for the top price of \$15.50 a hundred, that averaged nearly \$150 a head in Kansas City.

Representatives from this herd win in the strongest competition. Sultan Laird, one of the present herd bulls, was Grand Champion at Denver as a 2-year-old. This firm furnishes bulls to many Kansas breeders and farmers, and many of their tops go to the herds of the Far West. Last winter they sold 10 head in Utah at an average price of \$350.

Whether one is producing automobiles, wheat, or good cattle the problem of marketing is one of considerable consequence. The automobile business is so large and profitable that no one man or single group must bear the burden of manufacturing and at the same time, marketing the product.

But in the purebred cattle business there is no advertising agency, no expert ad writers. The business is not large and the profits do not justify large advertising appropriations. So the matter of producing good cattle and finding buyers willing to pay a fair price is quite a problem.

J. C. Banbury, Pratt, Kan., a breeder of Polled Shorthorns, probably has developed into the all-around breeder and salesman better than many men who have not given their business as much thought as it deserves. Mr. Banbury is a liberal, but not an extravagant advertiser.

During the last six months he has received more than 350 letters, telephone and personal visits. Banbury's last year's entire crop of calves has been disposed of, except two heifers, and now the 1929 heifers and bulls are being sold. Mr. Banbury says he sells to only a small percentage of those who inquire, but often the inquiry means a sale next year. The herd now numbers about 150.

J. D. Martin & Son, Lawrence, are well known to Kansas Farmer readers because of their advertising about every fall. They breed Angus cattle and their advertisement appears in this issue of Kansas Farmer.

F. J. Zlab, Spotted Poland China breeder, of Hubbell, Nebraska, has one of the outstanding herds of America. His stock wins at the best big shows. He offers big boars and gilts suitable for foundation stock.

P. A. Wempe, Seneca, breeder and exhibitor of Tamworth swine will be at the fair at Topeka next week and at the state fair at Hutchinson the week following. He has a string of Tams out this year that will be hard to beat.

W. H. Heiselman, Holton, has 71 Spotted Poland China spring boars and gilts. He is going to sell them, the best ones for breeding purposes, at private sale and the rest will go on the market. The top boars and

gilts of the 71 head will be priced right to move them right along. He is not going to hold a public sale and expects to price them worth the money. Some of the best blood lines of the breed are to be found right here in this herd. Look up his advertisement in this issue of the Kansas Farmer.

Brice Newkirk of Hartford, Kan., is building up one of the best herds of registered Jerseys to be found in the entire state. He is milking about 20 now, a large per cent of them first calf heifers. He will soon get his first calves from the Longview bull.

Elmer Pearl, Wakeeney, Kansas, (Trego county) always has a few mighty good Polands on his farm and at present he is offering some spring boars that are by his big boar and out of herd sows that are as good as you will find anywhere. He would sell a few open gilts.

F. B. Wempe, Frankfort, breeds Jersey cattle and Hampshire hogs and comes as near being in the livestock columns as any breeder in the state. He is a successful breeder and is making money in the purebred business. Look up his advertisement in this issue of Kansas Farmer.

For more than 20 years we have known Jim McCulloch as a purebred livestock auctioneer and have been associated with him on hundreds of sales where he was the auctioneer and we, the fieldmen for the Kansas Farmer. It is not so easy to write pretty things about one you have known as long as we have known Jim. Equipped with a splendid natural ability for auctioneering and with a few weeks in an auction school where he studied voice culture and some

POLAND CHINA HOGS

See Our Polands

At Topeka Next Week

We offer the top boars and gilts from our 1929 spring crop at private sale. Sired by our two herd boars.

The Aristocrat by the Stamp who was the sire of Gay Lad, the second highest priced boar in 1926. Ben Harr by The Proof who was the \$1000 son of Redeemer.

Come and see us or write. Farm joins Corning.

E. H. KEMPLAY, Corning, Kan.

Our card will appear regularly in future issues of the Kansas Farmer.

Not Public Sale but 30 October Yearlings

By Armistice Over and bred to Super. Knight. They will farrow in September and October and are an extra choice lot of young sows.

We offer at private sale a fine string of young boars by both of the above boars. Also open and bred gilts.

John D. Henry, Lecompton, Kan.

Watch for our advertisement in future issues of the Kansas Farmer.

PEARL BOARS Private Sale

Our 1929 spring boars at attractive prices to move them soon. Most popular blood lines and they are splendid individuals. Write for prices and further information. Address

ELMER PEARL, WAKEENEY, KAN.

SPOTTED POLAND CHINA HOGS

We offer at Private Sale our 1929 crop of

Spotted Polands 71 Boars and Gilts 71

They are by Inspiration Lad and Kansas Hawkeye and out of our herd sows, mostly by The Sunrise, junior champion, 1926. Farm four miles northeast of Holton. Come and see us.

W. H. HEISELMAN, Holton, Kan.

Zlab's Spotted Polands

20 boars. Big strong, high backed fellows. None better bred. Also as many gilts, the kind that make foundation herd sows. We have won more prizes at the big shows than any other herd in the Middle West. Satisfaction guaranteed. Farm only a few miles over in Nebraska.

F. J. ZLAB, HUBBELL, NEBRASKA

Instructions from men like Carey Jones and Col. Woods, he located in Clay Center something over 20 years ago and today he is considered one of the best auctioneers in the Central West at least. Fair play for the seller, who was of course his employer, and for the buyer alike, and his fairness in

Purebred Livestock AND General Farm Sales AUCTIONEER



Frank C. (Jack) Mills
Alden, Kansas



Will Myers
Auctioneer

20 years' experience selling pure bred livestock and real estate at auction. I am a farm owner and raise livestock and am familiar with every branch of my business which is auctioneering. For any information address,

WILL MYERS, BELOIT, KANSAS.
Reference, any bank in Mitchell county.

Arthur W. Thompson AUCTIONEER

2300 Harwood Street
Lincoln, Nebraska

The fact that I have conducted more sales of pure bred livestock in the past five years than any other auctioneer in America is proof that I satisfy both buyer and seller. Have record averages of swine, beef and dairy cattle to my credit.

matters of charges have all tended to popularize Mr. McCulloch as an auctioneer.

The catalogs are out announcing the Jersey cattle sale of S. G. Monsees. Sedalia, Mo. Mr. Monsees is leaving the farm to engage in school work and is selling a herd of Jersey cattle he has been years breeding and selecting. It will be an opportunity to buy breeding stock.

M. Stensaas & Sons, Concordia, breeders of Durocs are starting their advertisement in Kansas Farmer with this issue and if you are in the market for a boar you better look it up. They are featuring a variety of breeding and they grow out a good bunch of boars every year. They will not hold a public sale this fall or winter.

Dr. C. H. Burdette, Centralia, breeds Durocs on a pretty large scale. He has bred them for years and the stock yards at both Kansas City and St. Joseph, know what to expect when Dock Burdette is expected on the market with a load of hogs. He has raised purebreds all the time and always has breeding stock for sale. Right now he offers spring boars and gilts.

R. L. Taylor & Son, proprietors of Red Ranch Polled Shorthorns, write me that conditions are all right out in Smith county. The heifers and cows in this herd are largely the get of Villagers Sultan and Cumberland Sultan 3. Most of the cows in the Taylor herd are heavy milkers and require hand milking for quite a while after freshening. The present herd bull is Villagers Sultan.

Eskridge Blue Grass Chester White swine. 125 spring pigs and mighty good ones is the story from the Griffiths family, all interested in the best in Chester White hogs. They have a dandy lot of young boars and gilts, March farrow and a real bargain in a last October yearling boar that is very typy and he will be priced right because they don't need him. Look up their advertisement in this issue and write them.

R. E. Thomas of Andover, Kansas, near Wichita, is leaving the farm to engage in other business and will disperse his herd of purebred unrecorded Holsteins on Wednesday, Sept. 25. Mr. Thomas has grown this herd from three choice females retained when he sold out in 1924. They are a good, useful lot of heavy producing cattle, largely of Homestead breeding and about half of them will be in milk sale day.

Sept. 24 to 28 inclusive are the Mitchell county fair dates at Beloit this year. Last week at Belleville the four officers of the Mitchell county fair association were on hand boosting for their fair at Beloit and enjoying themselves taking in the big north central Kansas fair. Of the Mitchell county fair E. E. Booker is president, Dr. F. J. Ruffner, vice president, J. J. Kindscher, treasurer, and John Albert, secretary.

D. M. Thompson, Eskridge, offers in his advertisement in this issue of Kansas Farmer a few Duroc boars of last spring farrow that are well bred and very choice individuals. Mr. Thompson does not claim to have the largest herd in the country but does claim to take good care of what he has and grow out suitable boars for his trade. Look up his advertisement in this issue of Kansas Farmer.

E. H. Kemplay, Corning, raised 119 Poland China boars and gilts out of 140 farrowed and they are of the best of type and breeding and Mr. Kemplay is developing them along lines that you would approve of if you are looking to the future usefulness of your herd boar or your herd sows. Mr. Kemplay will not hold a public sale this fall or winter but will sell at private sale his boars and open gilts.

If you are interested in beef cattle you should look up the Riffel bred Polled Hereford steers in the baby beef classes at Topeka next week. A young son of Mr. and Mrs. Jess Riffel, Enterprise, and a young brother of Mrs. Riffel are exhibiting four or five head in the 4-H club classes at Topeka next week and these calves were bred by Mr. Riffel and fed and are being exhibited by the young men mentioned above.

I have just received a very interesting letter from my old friend, Col. Arthur W. Thompson, of Lincoln, Neb. Mr. Thompson has been engaged in the business of selling livestock now for about 20 years and enjoys the distinction of having conducted more sales of purebred livestock during the last five years than any other auctioneer in America. Col. Thompson is a gentleman of high ideals and has done much to place the auction business on a higher plane.

Two good registered Hereford herds are the Roy L. and the John E. Fahlsstrom herds four miles north of Concordia. These two breeders, brothers who own farms joining and whose advertisement appears in the issue of Kansas Farmer, like good Herefords and if you do, it will pay you to see both of their herds. Look up their advertisement in this issue of the Kansas Farmer. They have a lot of good young bulls for sale from a few months old up to yearlings and two year olds.

Chas. Holwick, Valencia, breeder of black Poland China hogs has probably come as near perfecting the type of Poland China that he at least believes is the correct and profitable type for the farmer, as any breeder in the country. Anyway he has a fine lot of spring boars and gilts for sale and invites you to come and see them. His advertisement appears in this issue of Kansas Farmer and you better get in touch with him if you are going to buy a boar this fall.

The largest herd of registered Berkshires in Kansas, I suspect, is the A. L. Pinet herd, over a hundred head, at Onaga, Kan. He has a lot of spring boars and gilts for sale and would sell a few bred gilts and about the last of this month he should have around 75 pigs that he will wean and ship in pairs and trios not related and that is sure the cheapest way to get started in the Berkshire hog business. Mr. Pinet is one of the well established Berkshire breeders in Kansas and has been advertising in Kansas Farmer off and on for a number of years.

If you are interested in Chester Whites or if you are just interested in good hogs, it will pay you to look up the Clyde Coonse show herd at the Free Fair at Topeka next week. Mr. Coonse lives on a nice farm near Horton up in Brown county and breeds the best in Chester White hogs. He is out with a string this fall that looks like the money in most of the shows if not all of them. But if you want a good spring boar be sure to see him at the fair and he will have some open gilts and later on some bred gilts to sell. He will not hold a sale this fall or winter.

The premium list of the Kansas National Livestock Show to be held in the Forum at Wichita Nov. 11-12-13-14, is now ready for distribution. The cash premiums for this year total \$45,000, besides the large collection of cups, and other special prizes. The purebred livestock prizes, alone, are in excess of \$25,000. Wm. R. Plote, general manager, says the outlook is by far the best it has ever been. Entries are coming



I have bought this space in Kansas Farmer this week to enable me to say howdy to my thousands of Kansas friends who have so loyally supported me in my public sales in the past and to thank you one and all for your splendid co-operation.

For more than 20 years I have conducted pure bred livestock sales in Kansas and adjoining states and to breeders I want to say I consider the future of the pure bred livestock business to be very bright.

I have been very successful this season in selling land at auction in Kansas and Colorado.

Please feel at liberty to write me at any time for any information I may be able to give you about selling either livestock or land at auction.

Terms for conducting public sales always reasonable.

Jas. T. McCullough, Auct., Clay Center, Kan.

AUCTIONEERS

Boyd Newcom Auctioneer

421 Beacon Bldg.

Wichita, Kansas

20 years selling for the best breeders of Kansas and other states. Thanks for past patronage.

GUERNSEY CATTLE

At Private Sale Guernseys

To reduce our herd we offer 30 long two year old heifers coming with their first calf that will freshen in September and October. Also some nice young cows to freshen soon.

Also three two year old bulls for sale that are nice individuals and out of dams with better than 700 pounds of fat. Also a nice six months old bull calf out of a great cow.

Address:

Woodlawn Farm
R. F. D. 9, Topeka, Kan.

Farm location: Go four miles east of Topeka on Highway 40 and watch for our sign, "Woodlawn Farm," on the right.

Guernsey Heifers For Sale

I am offering second lot of 40 high grade heifers bred to freshen this fall. Good size well marked and bred to reg. bulls. 10 reg. heifers, 4 reg. bulls. Federal accredited herd. **FRANK GARLOW, Concordia, Kan.**

CHESTER WHITE HOGS

Eskridge Blue Grass Herd



Our foundation stock traces to this great show and producing sow.

March and April boars and gilts well bred, well grown and we sure can please you. Weanlings, pairs and trios not related. Papers with each pig.

Richard Griffith, Eskridge, Kansas.

Our advertisement is appearing regularly in the Chester White section of Kansas Farmer.

See Our 1929 Show Herd Topeka and Hutchinson

Breeders of big type Clover Leaf Chester Whites. Clover Leaf breeding will produce 250 pound hogs at six months old.

For Sale: 40 big, well grown and typy boars and gilts for sale. See us at Topeka and Hutchinson.

CLYDE COONSE, Horton, Kan.

Rate for Display Livestock Advertising in Kansas Farmer

\$7.00 per single column inch each insertion.

Minimum charge per insertion in Livestock Display Advertising columns \$2.50.

Change of copy as desired.

LIVESTOCK DEPARTMENT
Kansas Farmer, Topeka, Kansas

Willdon Place Shorthorns

Sale at Kansas State Fair

JUDGING PAVILION

Hutchinson, Kan., Thursday, Sept. 19

17 BULLS, 23 BRED COWS, 7 CALVES including our great 3-yr-old stock bull

WILLTONGA MASTERKEY 1447441

Red bull, calved May 19, 1926. Bred at Baker Shorthorn Farms. A double grandson of Anoka Omega. No better proven sire will be sold this year.

SIRE

Masterkey 1058144

(F. C. Merry)

Anoka Omega 698327 Anoka Farms

Queen of Beauty 31st 242038 Bellows Bros.

DAM

Columbia 6th 1058148

(F. C. Merry)

Anoka Omega 698327 Anoka Farms

Columbia 4th 770807 Bellows Bros.

Our herds of 200 Registered Shorthorns, bred for beef and milk are located in Pawnee and Hodgeman counties and represent thirty years of constructive development in producing quality Shorthorns of the type the Kansas Farmer most desires. We believe our battery of herd bulls are breeding your kind of cattle.

Sni-A-bar Regent, by Supreme Archer (Bellows) dam Edellyn Lavender (Edellyn) WILLTONGA COMMANDER, by Supreme Commander (Bellows) dam Columbia 6th (Merry) WILLTONGA MASTERKEY, by Masterkey (Merry) dam Columbia 6th (Merry) WILLDON BALLYLIN, by Ballylin Rodney (Black) dam Augusta Jewel (Ditmore). Write for catalog mentioning Kansas Farmer.

WILLDON PLACE FARMS, BURDETT, KAN.

W. C. EDWARDS, Jr., Owner

HOWARD G. JONES AND W. B. JACKSON, Herdsmen.
Boyd Newcom, Wichita, Kan., Auctioneer. Jesse R. Johnson, Fieldman.

POLLED SHORTHORNS!

1. Are pure Shorthorns without horns.
2. Shorthorns are the greatest beef, milk and butter breed in the world.
3. Disposition unsurpassed by any breed.
4. One-tenth of the feed saved by dehorning with a hornless Shorthorn bull.
5. 20 years' experience with Polled Shorthorns.
6. Our guarantee as broad as any known.
7. One of the largest Polled Shorthorn herds in the United States.
8. We contract the first calf at 1/2 price paid for cow. Calf to be 7 mos. old, and in sale flesh.
9. Special sales on young herds of 3 or more.
10. Registering, Transferring, and Loading Free. When coming Phone at our expense.

"Some of the greatest blood lines of the breed."

J. C. BANBURY & SONS, PRATT, KANSAS



"ROYAL CLIPPER 2nd"

First at the State Fair.

"RED SCOTCHMAN"

First at the State Fair.

"RULER"

First at the State Fair 1927 heads the herd.

English and Clay Bred Milking Shorthorns

The blood of GLENSIDE DAIRY KING, Pine Valley Viscount and other great sires. OTIS CHIEF in service. He weighs 2300 and is the best type of beef and milk combination. Young red bulls for sale out of good production dams. Visitors welcome. Herd tuberculin tested. Farm 10 miles west of town. Prices half lower than eastern breeders, quality and breeding considered.

Leo F. Breeden & Co., Great Bend, Kansas

MILKING SHORTHORN CATTLE

Meadowvue Farms

Shorthorn Milking Cattle



For Sale: 10 registered heifers all sired by CYRUS GLEN a grandson on sires side of BRITISH PRINCE grand Champ. Eastern shows and LADY MARY N. 14,033 milk and 503 butter fat. His dam GLENSIDE CYRENA is by GLENSIDE CYRUS whose 6 daughters average 10,964 pounds milk. Dams of heifers are by Blackwood Hero, Chief Bell Boy and Oxford King. Also young bulls same breeding.

CALLAWAY & GLENN,
Fairbury, Nebraska.

HEREFORD CATTLE

Fahlstrom Farms

Prince Domino Herefords

Herd bulls in service: Prince Domino 134th—Prince Domino 9th and other sires of merit.

Young bulls for sale from four to 14 months old. Visitors always welcome at our farms.

Roy L. Fahlstrom

R. F. D. 2

Concordia, Kan.

John E. Fahlstrom

R. F. D. 3

Concordia, Kan.

Our farms join and we are four miles north of Concordia. Write or phone either of us.

from everywhere. Over \$5,000 in prizes go to the boys' and girls' clubs. Premium lists are free for the asking. Write Sec. Kansas National Livestock Show, Wichita, Kan.

Charles Stuckman, Kirwin, devotes all of his time to his Duroc herd and that is the class of breeders that usually succeed well with their breeding business and make money out of it. The Stuckman herd is not a large herd and never has been and I am not sure that Mr. Stuckman ever expects to hold public sales and does not expect to, but with each year there is a marked improvement in the quality of the Durocs he

produces. Sunflower Stills, the leading boar in service in his herd is one of the real boars of the west and he has a right to be as his sire was a two times world's champion. Mr. Stuckman is offering some real high class herd boar material and at prices that are not out of the way. Look up his advertisement in this issue of Kansas Farmer.

W. A. Gladfelter & Son, Duroc breeders of Emporia have in the young boar Sisors Broadcaster, one of the really outstanding boars of the year. They have been urged to show him but he is hardly in condition to compete with boars that have been fitted

during the year. He is very much like his sire, Top Sisors at the same age only a trifle smoother. His dam was sired by the prize winner, Broadcaster. The Gladfelters have their usual good lot of spring boars. They have picked out about 20 of the tops for the trade. 14 mature sows will farrow during the next four weeks.

Some breeders of pure bred livestock see nothing but the dollar and when the business is not profitable they get discouraged and quit. That is why so many are in and out all the time. One of the Duroc breeders who never wavers is W. R. Huston of Americus. To breed and care for good Durocs is natural for him. His ancestors were stockmen and he grew up in the business. Mr. Huston studies every detail of the business from his own and the standpoint of those to whom he sells. His advice is valuable and he has hundreds of friends scattered all over many states, following it.

A draft of mighty high class Shorthorns will be sold at auction from the W. C. Edwards herd on the state fair grounds, Hutchinson, Thursday, Sept. 19. The cattle will be on the grounds during the week and can be inspected by prospective buyers and others. The Edwards herd is one of the oldest and strongest herds in Central Kansas, and will be full of attractions, many outstanding herd bulls will be offered. Forty lots will be sold, 18 of which are bulls, many of them good enough to head any herd in the land. Catalog of this sale can be had by addressing the sellers at Burdett, Kansas.

In this issue will be found the advertisement of J. M. Wandler, Berryton, who will disperse his famous registered Holsteins at the farm, Wednesday, Oct. 2 which is the day following the big consignment sale of the northeast Kansas Holstein Breeders association at the fair grounds Tuesday, Oct. 1. It is about five miles southeast of the fair grounds to Mr. Wandler's farm where the sale will be held. There will be about 10 cows and heifers in milk and about the same number of yearling and two year old heifers and one bull ready for service. The sale will be advertised in the Kansas Farmer again Sept. 28.

I have a nice letter from E. H. Kemplay, Corning, with the information that his 11 spring pigs (Poland Chinas) are doing very nicely. The Kemplay farm joins Corning on the west and all of the feed fed to this good herd of Polands is raised on the farm. It has been the policy of Mr. Kemplay to use only the sons of the greatest boars of the breed and careful feeding and care he is able to develop from his wonderful herd of sows as good as can be found in the West. His advertisement appears in this issue of Kansas Farmer and he can sell you a boar or gilt that is sure to suit you.

Boyd Newcom of Wichita, the best known and successful auctioneer in the Southwest is home from his vacation looking fit and ready for the heavy booking ahead of him. During his three months' stay out in the Northwest, Mr. Newcom spent much time gathering information and visiting the big breeders of that section. One of the places of greatest interest was Carnation Farms at Seattle. At Big Timbers, Montana, he attended a big sheep growers convention, fish fry, and picnic held on the top of the mountains with thousands of sheep in sight. Mr. Newcom is a close observer and a student of livestock conditions and says the general outlook is mighty good.

Woodlawn Farm Guernseys are always worth looking at if you like good dairy cattle. The farm is four miles east of Topeka on Highway 40 and you will see the sign "Woodlawn Farm" on your right as you go out if you look closely. At present they are reducing their herd and offer 30 long two year old heifers bred to freshen in September and October and three mighty fine young bulls of serviceable ages and out of better than 700 pound dams. There is no phone at the farm at present and if fair visitors expect to visit the farm during fair week they should drop a line to Woodlawn Farm, Rural Route 9, what day they can visit the farm.

John D. Henry, Leocompton, breeder of big type Poland Chinas has decided not to hold public sale this fall. He will sell his boars and gilts at private sale and his advertisement is starting again in this issue of Kansas Farmer. If you never visited the Henry farm you should do so if you are interested in good Polands. It is worth while and you should see the big boar that heads the herd very likely the best boar in eastern Kansas right now. Anyway you can be the judge when you see him. He is offering a nice lot of October yearling sows bred to farrow in this month and in October and a fine lot of spring boars and open gilts.

I am always glad to get a letter from my good friend Geo. Anspaugh of Ness City. I don't know why it is but he is always in good spirits. It seems to rain often in his locality, the pasture is always good and he never finds any fault with the wheat yield. He never complains that worms have stunted his pigs or that he had trouble getting the sows bred. Sometimes I think I would like to have Mr. Anspaugh for a neighbor. I have just received one of these very interesting and optimistic letters. Among other things he says the 25 Duro spring boars he has for sale are the tops from his big spring crop and they have a good lot of spring gilts and may hold a bred sow sale. I have advised him to do so.

Will Myers, Beloit, farmer and livestock auctioneer, finds that this combination pays, both from the standpoint of an auctioneer and from a farmer. When a man has his money in a farm and farm equipment he is mighty liable to be posted on values and he knows the ups and downs of the stock business and farming. While it is true that Mr. Myers does not find time to do much work on the farm any more because of his increasing auction business, both livestock and real estate, he nevertheless is a farm owner and operates it and lives on it. The evidence that Col. Myers is a good auctioneer to employ is the fact that he has been in the business in Mitchell county for the past 20 years and his business has steadily increased every year since he started and now he is hardly able to supply dates because of the demand on him by those holding big farm sales, pure bred livestock sales and real estate sales which have been a big part of his auction business during the last two or three years. He enjoys a nice business over north central Kansas and he has made good in every instance for his employers.

An event that should be of interest to Jersey breeders of the state as well as those thinking of starting in the Jersey business is the sale to be held by the Comp Bros. of White City, Thursday, September 26. The Comp Bros., E. T. and J. Howard, have grown up in the Jersey business. Their father, J. A. Comp, began breeding Jerseys about twenty years ago and when he retired a few years ago the boys went ahead with the business. Now E. T. is going to disperse his herd and J. Howard is consigning some of his best cattle. The Comp senior herd bull, Oxford May Boy, bred by David E. Moulton, has proven to be one of

ANGUS CATTLE

Eulaine Aberdeen Angus Herd

Established in 1916.



best of
Ericas
and
Black
Caps

ENMAR 2nd in service, descended from Earl Marshall. All dams on sires side of pedigree trace to McHenry's Erica. 10 choice bulls in age from 10 to 18 months for sale. Inspection invited.

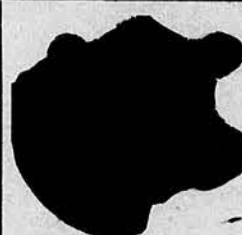
Fred E. Hartnell, Humboldt, Kan.

Sylvan Grove Angus Herd

Best of Ericas and Blackbirds. Herd established over 20 years. 125 selected individuals. None but the best sold for breeders. Stock from this herd top the best markets when fed out. Young bulls for sale. Inferior bulls reduce cattle profits. Inspection of herd invited.

MEYER BROS.

Sylvan Grove, Kan.



Martin's
Aberdeen
Angus

A nice lot of bred cows and two year old heifers for sale. Also young bulls of serviceable age. Come and see them. For directions to the farm inquire Lawrence National Bank, in Lawrence.

J. D. Martin & Son, Lawrence, Kan.



Aberdeen-
Angus
Cattle

Bred for Type and Uniformity our cattle have won the most firsts and sold higher than others due to the persistent and careful selection of good herd sires. Bulls capable of siring winners for sale.

JOHNSON WORKMAN,
Paradise (Russell Co.) Kansas

HAMPSHIRE HOGS

WHITEWAY HAMPSHIRE ON APPROVAL



An extra choice
lot of March boars
by prize sires and
dams. We can and
will please you with Hampshires.

F. B. WEMPE, Frankfort, Kansas

SHEEP AND GOATS

FOUR MILK GOATS

to let out on shares to some one having Reg. Toggenburg male. Also Reg. Guernsey bulls for sale. R. C. KRUEGER, HARTFORD, KANSAS

REG. SHROPSHIRE

Yearling rams for sale. 100 Registered Ewes bred to choice rams. Delivery Oct. 1st. GEO. D. MERRITT, HAVEN, KANSAS

The Shorthorn Breeders of Kansas

Shorthorns

Cedar Lawn Farm

Scotch Shorthorns, Divide Matchless in service. 100 head in herd. Stock for sale. Inspection invited.

S. B. AMCOATS, CLAY CENTER, KAN.

EWING STOCK FARMS

Home of Reg. Shorthorns and Percherons for over 30 years. Stock for sale at all times.

FRED H. EWING, GREAT BEND, KAN.

Straight Scotch Shorthorns

The utility type. Son of RODNEY in service. Inspection invited. Young bulls for sale.

C. L. WHITE, ARLINGTON, KAN.

Profitable Registered Shorthorns

Grandson of the undefeated Bapton Corporal in service. Young bulls and heifers for sale. Inspection invited.

FRANK E. LESLIE, STERLING, KAN.

Young Herd Bulls

A choice selection of 1928 Straight Scotch bulls for sale. Nice reds and roans. Expect to be at the fall shows.

Tomson Bros., Wakarusa and Dover, Kan.

Golden Fountain Farm

Offers Shorthorns of all ages. Quality and individuality.

HARRY T. FORBES, AUBURN, KAN.

Phone Dover Exchange

Herd Bull For Sale

Keeping his heifers and offer the over ten roan bull, Grand Marshall for sale. Just in his prime and priced right.

S. B. YOUNG, OSBORNE, KAN.

Maple Heights Farm

Utility Scotch Shorthorns. Best of individual merit. CROWNS HEIR by Marshalls Crown in service.

J. M. NIELSON, MARYSVILLE, KAN.

PINE HEIGHTS FARM

Two miles south of town. Home of select breeding in Shorthorns. Crowns Heir by Marshalls Crown, heads herd.

J. L. MODEN, WATERTOWN, KAN.

Olson Shorthorns

150 head in herd. Best of Scotch and Scotch Topped breeding. Ten young bulls and 10 heifers for sale.

Theo. Olson & Sons, Leonardville, Kan.

See Our Shorthorns

Farm adjoins town. Son of Imp Dramatist in service. Females carry the blood of Matchless Dale, Oakland Sultan and other good sires. Young bulls for sale.

OTTO BROS., RILEY, KAN.

Knox-Knoll-Shorthorns

One of the largest herds of all Scotch Shorthorns in Kansas. Bulls and females always for sale.

S. M. KNOX, HUMBOLDT, KAN.

Young Shorthorn Bulls

Correct type Scotch cattle. Low down and blocky. Much Cumberland blood. Son of Prentice in service. Visitors welcome.

WARREN W. WORKS, HUMBOLDT, KAN.

6 Shorthorn Bulls

for sale. Reds, roans and whites. Sired by our 2200 lb. low blocky bull. All Scotch females. See them.

C. H. Shaffer, Monmouth, (Crawford Co.), Kan.

Maxwalton Rodney

Heads our Shorthorns. Heavy beef quality and special attention given to milk production. Young bulls and heifers for sale.

THEO. JAGELS, HEPLER, KAN.

Valley View Shorthorns

Herd established 30 years. Clipper Grandee in service. Young bulls and females for sale.

ADAM H. ANDREW, GIRARD, KAN.

Shorthorn Bulls

For sale, tops offered for breeders. Others go in feeding lot. Oakdale Sultan and Rodney blood.

BERGESON BROS., Leonardville, Kan.

Prospect Park Farm

Has been the home of registered Shorthorns for over 40 years. Best of tried breeding. Stock for sale.

J. H. TAYLOR & SONS, CHAPMAN, KAN.

Club Work Important in Beef Cattle Industry

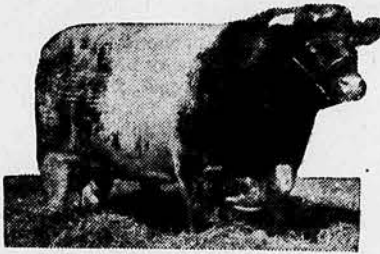
The boys' and girls' baby beef club work has become an important factor in the beef cattle industry. Last year in Kansas, 4-H club work was organized in 59 counties, with a total number of calves of 918. This represents 918 new interests for the livestock industry. This is a lasting interest; not temporary. The boy who has fed one of these calves will never be satisfied with grade cattle later on.

The breeders of Shorthorn cattle in Kansas are not satisfied until they give some of their best cattle for calf clubs.

Thru their state organization Kansas breeders are improving the quality of cattle and the interest in their

breed by offering awards for the best Shorthorn calf in each club. They also offer more substantial prizes for the best calf at the Kansas Free Fair, The Kansas State Fair, and the American Royal. The American Shorthorn Association is contributing fifteen thousand dollars prize money to calf clubs this year.

Shorthorns were never excelled in numbers in these clubs, by any other breed. Indeed, club leaders say that enough good Shorthorns cannot be secured. Breeders can easily monopolize this outlet if they will. The breed's natural adaptability to club work makes it the choice of all breeds.—C. E. Auel, Secy., K. S. A.



MARSHALL JOFFRE, Grand Champ, American Royal 1912

BLOOMERS REG. SHORTHORNS

Oldest herd in the Northwest. Best of Scotch breeding. Roan Avon in service.

Bulls and heifers for sale.

W. A. Bloomer, Bellaire, (Smith Co.), Kan.

Scotch Shorthorns

Choice young bulls for sale, out of selected dams and sired by Royal Emblem.

CHAS. P. HANGEN, Wellington, Kan.

Scottish Knight

Son of Scottish Gloster heads our herd cows of Fair Champion and Village Avon blood. Young bulls for sale.

Earle Clemmons, Waldo, (Osborne Co.), Ks.

Nebraska Shorthorns

Young Herd Bulls for Sale

out of Marshall Joffre bred dams and sired by Sultans Laird. Also females of all ages.

JOHNSON & AULD, GUIDE ROCK, NEB.

Milking Shorthorns

Clay and English Breeding

Herd built around the great sires Pine Valley Viscount and Otis Chieftain. Heavy production and beef conformation. Young bulls for sale.

Leo. F. Breeden & Co., Great Bend, Kan.

Retnug Farms

Cull calves up to 6 mos. \$75 to \$125, from cows with size, quality and milk production. Bates and Eng. foundation.

WARREN HUNTER, GENESIO, KAN.

Wyncrest Farm

Milking Shorthorns, good production beef and milk. Herd bull grandson of Kirkley-Ingtons King.

H. H. COTTON, ST. JOHN, KAN.

WINCHESTER'S DUAL PURPOSE

Shorthorns. Cows have County Cow Testing records up to 62 lbs. of fat per month.

Milk without sacrificing the type.

B. E. WINCHESTER, STAFFORD, KAN.

Lord Wild Eyes

red and pure Bates, heads our herd mating him with White Goods and Viscounts Dairymen. Cows and heifers.

C. R. DAY, PRETTY PRAIRIE, KAN.

Teluria Supreme

English bred bull heads our herd. Mating him with daughters of Otis Chieftain. Bull calves for sale.

D. J. SHULER, HUTCHINSON, KAN.

Flintstone Waterloo Gift

Our new herd bull is a son of Flintstone Gift. His sisters have 10,000 lb. records. Stock for sale.

JOHN A. YELEK, REXFORD, KAN.

Polled Shorthorns

Mardale 16th. by Mardale

Heads our Polled Shorthorn herd. Choice young bulls for sale sired by Sultan Commander. Wm. Kelley & Son, Lebanon, Kan.

Love & Co. Polls

51 females, best of breeding and type. Master Buttercup in service. Young Bulls.

W. A. LOVE & CO., Partridge, Kan.

Plainview Farm

Registered Polled Shorthorns. Headed by White Leader. Young bulls for sale.

W. G. DAVIS, Haggard, (Gray Co.) Kan.

HANSON'S POLLED SHORTHORNS

Choice breeding and selected type. Good young bulls, reds and roans for sale. Inspection invited.

E. H. HANSON, JAMESTOWN, KAN.

SHEARD'S POLLED SHORTHORNS

Selected females headed by bulls of merit. Meadow Sultan and Grassland Commander blood. Young bulls for sale.

D. S. SHEARD, ESBON, KAN.

Red Ranch Polled Shorthorns

Best of breeding and individuality. Herd established 12 years. Young bulls for sale.

R. L. Taylor & Son, Smith Center, Kan.

Wilsons' Polled Shorthorns

Mardale 16th in service. Bred and open heifers for sale.

T. M. WILSON & SON, Lebanon, Kan.

Start in Polled Shorthorns

Special prices of young herd. Bull and 3 heifers. Best of blood. Milk and beef comb.

J. C. BANBURY & SONS, Pratt, Kan.

MILLER'S POLLED SHORTHORNS

75 in herd. Sultan of Anoka blood thru True Sultan, Meadow Sultan and other bulls. Orange Blossom bull in service.

Clyde W. Miller, Mahaska, (Washington Co.) Kan.

Gallant Dale

Grand Champ. Iowa 1926 still heads our herd. Real herd bulls for sale. Also few females.

Ira M. Swihart & Son, Lovewell, Kan.

Pleasant View Farm

Polled Shorthorns of quality and breeding, headed by the Scotch bull Silver Springs Commander. 12 young bulls.

MCCRERY BROS., HIAWATHA, KAN.

Bird's Polled Shorthorns

Our herd bull is a son of Golden Dale and carries the blood of Lord Collynie. Choice young bulls for sale.

Harry C. Bird, Albert, (Barton Co.) Kan.

Shorthorns

Lambertson Shorthorn Farm

Choice bull calves for sale. Reds and roans. Best of Scotch and Scotch Topped breeding.

Lambertson & Lance, Fairview, Kan.

HOMER CREEK FARM

Shorthorns of breeding and quality. Scottish Alderman in service. Young bulls for sale.

Claude Lovett, Neal, (Greenwood Co.), Ks.

Alfalfa Leaf Shorthorns

Premier and Alfalfa Leaf Champ. In Service. Herd pure Scotch, stock for sale.

JOHN REGIER, WHITEWATER, KAN.

Good Scotch Shorthorns

Best of blood lines, own interest in the Brownale bull PREMIER. Young bulls for sale.

J. E. REGIER, WHITEWATER, KAN.

Four Mile Stock Farm

Scotch and Scotch Topped Shorthorns. A. L. Prentice in service. Choice Young bulls for sale.

Ed R. Markee, Potwin, (Butler Co.) Kan.

Rose Hill Farm

Solid red Scotch and Scotch Topped Shorthorns. Herd established 30 years. Son of Rodney in service. Young bulls for sale.

W. H. Molyneux & Son, Palmer, (Washington Co.) Kan.

Lucernia Stock Farm

Home of Reg. Shorthorns for 42 years. Inspection invited. Stock for sale.

Joe King & Son, Potwin, (Butler Co.), Ks.

Cedarlawn Stock Farm

Reg. Shorthorns. Ashbourne Supreme by Supreme Certificate in service. Young bulls for sale.

O. E. R. SCHULZ, ELLSWORTH, KAN.

Registered Shorthorn Cows

In calf to SUPREME DUKE. Good individuals for sale, priced right.

FRANK N. FUNK, MARION, KAN.

Beef and Milk Shorthorns

Our kind are profitable for milk as well as beef. Good breeding. Visit us any time.

L. H. ROLLINS & SON, HILL CITY, KAN.

Meadow Park Farm

Home of Reg. Shorthorns for 27 years. Grandson of Brownale Count in service.

Best females trace to Gainford champion. Stock for sale. F. J. Colwell, Glasgow, Kan.

Elmdale Stock Farm

Selected Reg. Shorthorns headed by a great son of Divide Matchless. The utility kind. Bulls and heifers for sale.

A. W. Segerhammar & Sons, Jamestown, Ks.

CONARD STOCK FARM

Registered Shorthorns number 150 headed by Divide Magnet. 20 bulls and 20 females for sale. Just the tops.

Elmer Conard, Timkin, (Rush Co.) Kan.

Anoka Gold Cup

A great son of Maxwellton Raglan and out of Imp. Julia's Lady heads our Reg. Shorthorns. Scotch cows. Young bulls.

R. L. BACH, LARNED, KAN.

ATKINSON SHORTHORNS

75 head in herd. Ashbourne Supreme the only son of Supremacy in service. All Scotch females. Young bulls for sale.

H. D. ATKINSON, ALMENA, KAN.

ASHBOURNE RENOWN

heads our registered Shorthorn herd. His sire was Silvercoat and his dam was by Gainford Renown. Glad to show our stock to interested parties. Vincent Field, Almena, Ks.

Mulberry Stock Farm

Reg. Shorthorns. 50 Breeding Cows headed by a Gainford bull of great merit. Good individuals and pedigrees. Bulls for sale.

HARRY M. ROBERTS, SELDEN, KAN.

Mathes Scotch Shorthorns

Diamond Joffre son of Marshall Joffre in service. Cows equally as well bred. Uniformly good type. Bulls for sale.

LLOYD MATHES, SMITH CENTER, KS.

the great sires of the breed and everything in the sale will either be bred to him or sired by him. His pedigree and record is too long to give here but anyone interested can write for catalog that gives it all. Included in the sale is the cow that was and is still the champion Jersey cow of Kansas as a three year old. 775 pounds of fat and 16,000 pounds of milk. Two of her daughters are also included; also her dam. A Gold Medal cow in the 305 day class. The offering includes 3 state champions and much of their get. This will be a good sale to attend.

Members of the northeast Kansas Holstein breeders' association are taking lots of pride in their first association sale offering which will be held in the free fair grounds livestock judging pavilion Oct. 1. The offering consists of 40 head, 30 being cows and heifers and 10 are young bulls, all of serviceable ages with one or two exceptions. Members of this association back of this sale have watched the consignments of other associations long enough to know that the only way to get choice cattle for an association sale is for the sale manager to go out and select the cattle he will take for the sale and that is exactly what Robt. Romig did. Members who expected to consign had said in meetings of the association that they would let the sale manager select the cattle he wanted when he came to their farms and that is exactly what they did when Robert called on them. The 40 head were selected from 16 herds representing around 400 or 500 registered cattle and it goes without saying that the 40 selections from these herds made by Mr. Romig are of a very high quality. For instance there will be two young bulls of serviceable ages whose dams have official records of better than

800 and 900 pounds of fat. It is a high class offering and backed by the northeast Kansas Holstein breeders' association who are determined that this sale will be all or more than is claimed for it.

Public Sales of Livestock

Shorthorn Cattle
Sept. 19—W. C. Edwards, Jr., Burdette, Kansas sale at Hutchinson, Kansas.
Oct. 16—A. C. Shallenberger, Alma, Nebraska.
Oct. 17—S. B. Amcoats, Clay Center, Kan. and Bluemont Farm, Manhattan, Kan. Sale at Clay Center.
Oct. 22—Purdy Bros., Harris, Mo.
Nov. 8—Allen County Shorthorn Association. S. M. Knox, Humboldt, Kan., Sale manager.
Nov. 13—Kansas National Sale, Wichita, Kan. John C. Burns, Manager.
Polled Shorthorn Cattle
Oct. 10—Jos. Baxter & Son, Clay Center, Ks.
Hereford Cattle
Oct. 18—W. T. Meyer, Sylvan Grove, Kan.
Holstein Cattle
Oct. 1—Northeast Kansas Holstein Breeders' Assn. Sale at Topeka. Robt. Romig, Sale Manager.
Oct. 2—J. M. Wandler, Berryton, Kan.
Oct. 10—Robt. Romig, Sale Manager.
Oct. 10—Dr. C. A. Branch, Marion, Kan.
Oct. 21—W. E. Reinking, Tescott, Kan. W. H. Mott, sale manager, Herington, Kan.
Oct. 22—M. H. McConnell, Downs, Kan. W. H. Mott, Sale Manager, Herington, Kan.
Nov. 5—Walter Clark, Garfield, Kan. W. H. Mott, sale manager, Herington, Kan.
Nov. 14—Wichita Show Sale, Wichita, Kan. W. H. Mott, sale manager, Herington, Kan.

Jersey Cattle
Sept. 18—S. G. Monsees, Sedalia, Mo.
Oct. 30—L. A. Poe, Hunnewell, Kan.
Ayrshire Cattle
Oct. 31—Oscar M. Norby, Pratt, Kan.
Duroc Hogs
Oct. 10—W. H. Hilbert, Corning, Kan.
Oct. 19—W. H. Ling, Iola, Kan.
Oct. 24—Laptad Stock Farm, Lawrence, Kan.
Poland China Hogs
Oct. 11—Arden Clawson, Lawrence, Kan.
Oct. 15—Otha G. Smith, Colony, Kan.

4,500 Pounds Now!

That the average milk production has increased from the 2,400 pounds a cow of 60 years ago to more than 4,500 pounds last year, and that there would be no milk "surplus" if the bulk of the national milk produced came from cow testing association herds were two points emphasized by Frank O. Lowden, president of The Holstein-Friesian Association and former governor of Illinois, to 5,000 visitors from all parts of the United States at the unveiling of the granite marker at Peterboro, N. Y., recently, in honor of Agoo No. 1, the first purebred cow, born in America, to be registered in any herd book, in

honor of Dowager, the first cow to have a complete year's milk record by weight, and in honor of Gerrit Smith Miller, the oldest living breeder of purebred Holsteins in America.

Agoo, altho possibly not the first purebred Holstein to be born in the United States, comes first in the Herd Book of the association as the names were arranged alphabetically, and was therefore the first to be registered. She was named by the Miller baby, which at first sight of the new born calf cried "Agoo." Dowager was imported from Holland in 1869 by Mr. Miller, and in 1871 completed a record of more than 12,500 pounds of milk by actual weight (the present record by Segis Pietertje Prospect is 37,381.4 pounds of milk or practically three times this amount.) "This," says President Lowden, "was the first annual production record ever made in the Holstein breed and, so far as we can learn, in any breed. She thus laid the foundation for all advanced registry work."

"The average production in our country when Dowager went on test

Highest Production Holsteins in Kan.

Every female that has freshened has official record or is now on test. DORA PEARL VEEMAN now on test has made 940 lbs. fat, and 1180 butter in eleven months. This is a state record. Her twin sister has two 29 lb. seven day records. 15 cows now on test have average of close to 450 lbs. fat in 8 months, 45 head in herd. All but one bred on the farm and everyone related to above cows. Young bulls for sale. Herd federal accredited.

H. A. DRESSLER, LEBO, (Coffey Co.), KANSAS



The seven average 30 lbs. fat and 600 lbs. milk in 30 days. They will average 950 lbs. butter this year

Announcing our first public sale

N.E.Kan.Asso.Holstein Breeders Sale

Sale in the livestock judging pavilion, Fair Grounds

Topeka, Kan., Tuesday, October 1

40 head, 30 cows and heifers heavy in milk or to freshen this fall, 10 bulls of serviceable ages, two out of 800 and 900 pound butterfat cows, 16 members of the association allowed the sale manager to select these cattle from their herds for this sale. Sale catalog ready to mail. Address,

ROBERT E. ROMIG, Sale Manager, TOPEKA, KANSAS
Auctioneers, Crews-Newcom

JERSEY CATTLE

Jersey Dispersion Sale Wednesday September 18

ACCREDITED HERD

The Monsees herd of registered Jerseys has long been regarded as one of the leading herds in the Central West. Careful breeding and selection coupled with register of merit testing has placed this herd in the forefront as one of Missouri's best herds. There will be sold 23 cows, with register of merit or cow testing association records, 7 bred heifers to be fresh this fall, 8 heifer calves and 2 proven bulls.

TYPE, PRODUCTION, and HEALTH
Catalogues Now Ready, Write,

R. T. Lee, Sales Mgr., Iowa City, Ia.
or S. G. Monsees, Owner, Sedalia, Mo.
O. W. Devine, Fieldman
H. S. Duncan, Auct. Creston, Ia.

Registered Jersey Dispersal



White City, Kan.
Thursday,
September 26

Entire offering of cows in milk, young bulls, bred and open heifers, sired by or bred to the great Island bred bull OXFORDS MAY BOY, his heifers selling bred to JOLLY MOLINA. Offering includes state fair champions, Gold and Silver Medal cows and their produce. An outstanding offering. Over half of the offering will be in milk or near freshening sale day. Oxford May Boy is included in the sale. Write for catalog and study it if interested in heavy production Jerseys.

E. T. and J. HOWARD COMP.,
White City, Kansas.
Col. Jas. T. McCulloch, auctioneer.
Jesse R. Johnson, fieldman.

Reg. Jersey Cows and Heifers

Several head for sale, also one yearling bull. Owl-Interest breeding.
J. E. Barnes & Son, Mound City, Kansas

For Sale—20 Head of Registered
Jersey Cows and Heifers
J. P. TODD, CASTLETON, KAN.

TAMWORTH HOGS

P. A. Wempe's 1929 Show Herd, "Golden Tamworths"

See our show herd at the leading fairs. We always have stock for sale. The world's profitable bacon hog. Address
P. A. WEMPE, SENECA, KANSAS

HOLSTEIN CATTLE



W. H. Mott Sales Manager Herington, Kansas.

Consult the sale date column in the Kansas Farmer and you will note I have a nice string of Holstein sales this fall.

Write me for sale catalogs.

If you want to buy see Mott.
If you want to sell see Mott.

Address as above.

Dispersal Sale Registered Holsteins

Sale at the farm, one mile north and a half east of Berryton, and about five miles southeast of the free fair grounds,
Berryton, Kan., Wednesday, Oct. 2

20 females, about 10 cows and heifers in milk and 10 yearling and two year old heifers. One young bull ready for service

J. M. WANDLER, Owner
Berryton, Kan.
C. M. Crews Auctioneer

POLLED HEREFORD CATTLE

RIFFEL'S POLLED HEREFORDS



Bulls in Service:
Worthmore,
Harmon,
Wilson
Ion-Lad

Bulls for sale from 6 to 20 months old. Bred cows and heifers.

JESS RIFFEL, Enterprise, Kansas

was 2,400 pounds a cow. Last year, it was more than 4,500 pounds. This increase of 90 per cent has been due almost entirely to breeders of purebred dairy cattle. Altho purebred dairy cattle are still but a small percentage of all of the dairy cattle of the United States, grade herds which have been developed thru the use of purebred sires, and which therefore would have been impossible without purebreds, are

producing the great bulk of the butter and cheese and milk of the United States. The scrub cow is on the road to oblivion. And since 60 per cent of all the purebred dairy cattle in the United States are Holsteins, the debt of the country to the dairy pioneers of the breed is very great indeed."

In considering the value of Advanced Registry, first established by The Holstein-Friesian Association, President Lowden pointed out that, in addition to showing the way to an increased production of butterfat and milk, it laid a valuable check on any over emphasis on type, and that type must include those characteristics that are most valuable at the milk pail.

Referring to the cow testing associations, Lowden says:

"About a third of the cows on the farms of America do not produce enough milk to pay for their feed, to say nothing of labor and other items of cost. The only practicable way in which a farmer can discover with certainty which of his cows are profitable and which are not is thru cow test associations. Whenever in any community a cow test association is organized the unprofitable cows begin to disappear. . . . Other industries highly organized have been able to accomplish this (adjusting production to consumption and price) more successfully than the farmer, with the result that the tendency in other lines is to stabilize prices. The farmer will some time accomplish this himself, as I believe, tho I realize the difficulties in the way.

"However, in the dairy field it can be accomplished more easily than with any other products of the farm of which I know, and this by employing the agency of the cow test association. If the bulk of the milk produced in America were produced by members of cow test associations, such a thing as overproduction would be almost impossible. For if for any reason the price of milk were unduly depressed, the least profitable cows would be eliminated until consumption had again overtaken production. In no other field is so efficient a device already in existence for regulating the supply to meet the demand."

May Control Oats Smut

The time may not be far distant when Kansas farmers will be able to easily and economically control smut in their oats crop, experiments conducted by the Kansas Agricultural Experiment Station this year indicate. A dozen tests run in nearly as many counties in various sections of the state showed that smut could be effectively stopped with organic mercury dust.

It has been possible heretofore to control smut of oats with various formaldehyde treatments, principally the formaldehyde mist treatment. However, pathologists have been looking for a dry dust treatment which would do away with the disadvantage of the old formaldehyde method.

The organic mercury compound is easier to apply to the seed oats and is more effective. A dozen tests were conducted on Kansas farms this last spring. An extremely smutty sample of seed oats was obtained and a portion of it given the organic dust treatment. Then the treated and untreated seed was planted side by side on these Kansas farms as a part of the co-operative experiments with farmers. The untreated seed produced oats that varied from 7.82 per cent to 25 per cent smutty by actual count of the smutted culms. The treated seed in every case produced oats so free from the smut as to be practically 100 per cent pure.

Similar mercury compounds have been used for three years in tests at the experiment station at Manhattan with equally encouraging results.

A New Milking System

A new system of milking cows which promises to reduce the cost and labor of milk production, facilitate the keeping of records, and produce a cleaner product, is being used at the United States Department of Agriculture dairy experiment farm at Beltsville, Md. The new method was originated by R. R. Graves, formerly of Kansas, who is in charge of dairy cattle feeding, breeding, and management investigations in the Bureau of Dairy Industry.

Briefly, the system consists of a me-

chanical milking unit of standard make; but instead of the usual portable receptacle for the milk, it is drawn into a stationary container located between two stalls and somewhat above the cows. The receptacle is of unbreakable glass and is suspended from a weighing mechanism. Its transparency makes the rate of milking visible to the operator at all times, both by the amount of milk in the receptacle and by the weight registered by the scale. When the milk ceases to flow into the receptacle, the operator records the weight of the milking and opens a valve which permits the milk to be drawn from the bottom of the container thru a sanitary pipe line to a large vacuum tank in the dairy house nearby.

Thus the milk reaches the dairy house without having come in contact with the air, human hands, or any other contaminating agency. No milk is spilled on the floor to attract flies; in fact, no milk is in sight except that in the vacuum-tight glass receptacle.

Sterilization of the mechanical equipment is accomplished quickly and easily by running cold water from the dairy house back thru the pipe line, the glass receptacle, and out of the teat cups into the gutter. This is followed by hot water and then steam.

A reduction in labor is effected with this system in a number of ways. The milk is drawn to the dairy house automatically and there is no handling of buckets or other milking utensils. Nor is it necessary to strip the cows to finish milking. The udder is massaged while the teat cups are still in place, and the transparency of the glass receptacle permits the operator to see when the cow is giving no more milk. One operator can handle three or four milking units, milking three or four cows at the same time.

At the department farm one man does all the milking with three units and has milked 29 cows three times a day and 25 cows twice a day in a total period of 5½ hours. The milking is done in a special barn equipped with the three milking units and stalls for six cows. The cows enter from the feeding barns on either side of the milking barn, pass into their proper stalls from the rear, stop to be milked, and when finished pass forward and out to return to the feeding barn. No time is wasted in tying or fastening the cows. They are detained by movable gates hanging in front of each stall. As soon as one cow has been milked, the teat cups are taken off, the milk is drawn from the glass receptacle in about 22 seconds, and the teat cups are placed on the cow in the adjoining stall and milking started again. From the rear of the stalls the operator raises the gates to let out the cow after milking is finished, and another steps in to take her place. It is interesting to note how readily the cows learn the procedure and return to their right barns.

The new system not only reduces the labor incident to milking but favors the production of a cleaner product, Mr. Graves says. The milk in the vacuum tank can be cooled as it enters the tank, or it can be pasteurized and then cooled in the same tank. It is possible, he says, to go a step farther and bottle the milk under vacuum, using the principles now commonly employed in canning fruits and vegetables. Milk thus handled would make the entire journey from cow to con-

BERKSHIRE HOGS



Cedar
Croft
Burks

Largest registered herd in Kansas.
March and April boars, open and bred gilts at private sale.

Weanlings, pairs and trios not related. Papers with each pig. Ready to ship last of September.

A. L. Pinet, Onaga, Ks.
Pottawatomie county.

Our advertisement is appearing regularly in future issues of Kansas Farmer

The Holstein-Friesian Breeders of Kansas!

Northeast Kansas

Chas. W. Dingman, Topeka
25 years breeding Holsteins. The first 1000 pound butter cow ever produced in the state was bred and developed by Mr. Dingman.

Shunga Valley Holsteins
Young bulls out dams with good official records for sale. Ranging in ages from calves to bulls of serviceable ages.
IRA ROMIG & SONS, Topeka, Kan.

CATTLE SHOWN AT TOPEKA Included in N.E. Kan. Sale Oct. 1. A grandson of Count College Cornucopia who is also a grandson of 2nd prize 3-year old Topeka, 1928 and a son of Union Pontiac Homestead, also a granddaughter of Duke Johanna Beets. Ralph O. Button, N. Topeka, Kan.

Meyer Dairy Farm Co.
See our 1928 show herd at Topeka and Hutchinson and leading county fairs. Young bulls ready for service out of dams with good official records. Address Meyer Dairy Farm Co., Baschior, Kan.

BARNETTUM FARM HOLSTEINS
18 years of constructive breeding. We are making some very creditable C. T. A. records and offer some very nice young bulls for sale.
J. M. BARNETT, DENISON, KAN.

Collins-Sewell Farms
Our herd averaged 392 pounds of fat for 1928. C. T. A. records. We have for sale 3 bulls of serviceable ages. One out of a 428 pound dam. Address COLLINS-SEWELL FARMS, Sabetha, Ka.

Best of K.P.O.P. Breeding
Bulls from 5 to 15 months old sired by a 1250 pound sire and out of National Improvement Association record dams. Write for extended pedigrees.
CLYDE SHADE, OTTAWA, KAN.

An Ormsby Bred Bull
Heads our herd. 10 of his 15 nearest dams averaged over 1000 pounds butter. 10 bulls, six to 10 months out of cows 25 to 30 lbs. 7 days and now on yearly test.
H. A. DRESSLER, LENO, KAN.

TWO BULLS OF SERVICEABLE AGES
K.P.O.P. breeding. Also bull calves. Dairy herd improvement and C. T. A. records. Farm joins Lawrence on the south.
Arden Clawson, Lawrence, Kan., R. D. 8

Oldest Herd in Kansas
Bulls of serviceable ages sired by a 41 pound bull and out of high producing cows. Farm near town.
J. P. MAST, SCRANTON, KAN.

4 Dandy Yearling Bulls
Sired by our seven times grand champion show and breeding bull. Their dams have good records. Write for prices.
DR. J. P. KASTER, Topeka, Kan., R. D. 7

Marithan Ormsby Phoebe Superior
is the dam of a May 30 fine bull calf whose sire was a son of King Phoebe out of a K. P. O. P. dam. Write for price.
O. N. WILSON, SILVER LAKE, KAN.

Capital View Stock Farms
Cows and heifers for sale freshening in September and October. All produced and developed on our farms near Topeka. Come and see us.
J. S. WHITE, 1527 Mulvane St., Topeka, Kan.

Cows Freshening in Sept.
Also bulls of serviceable ages and bull calves. Choice dams and plenty of backing.
VEY G. HOLSTON, Topeka, Kan., R. D. 2

Choice Reg. Cows Freshening
High producers and bull calves out of high record cows. Farm west of Topeka on 21st street.
H. B. COWLES, TOPEKA, KAN

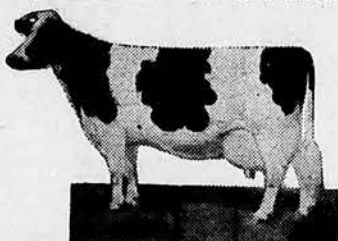
Nice Reg. Bull Calf
Good individual and out of a heavy producing dam. He is a grandson of Count College Cornucopia 5th. Priced reasonable.
H. S. BLAKE, Topeka, Kan.

Best Advertising Medium
Every Kansas Farmer interested in dairy cattle is a subscriber to Kansas Farmer. It is your best advertising medium.

Large Profits Dependent on Heavy Production

According to United States Department of Agriculture figures there is a vast difference in the returns in dollars above feed cost between the cow producing nearly 400 pounds of butterfat annually, and the cow producing nearly 550 pounds. This authority, based on over 100,000 records made in every section of the country, states that the cow that produces 397 pounds of fat annually makes a labor income of \$138.17, and the cow making 545 pounds annually makes a labor income of \$203.72. On a herd of 15 such animals the difference in labor income thus derived would be \$983.25 annually.

In deciding upon a breed of dairy cattle it will be well to bear these facts in



"True Type" Holstein-Friesian Cow

mind, and to realize that all of the 305 day and 365 day tests that have been supervised by our colleges on purebred Holstein Friesian cattle average 535.13 pounds of butterfat, which is far in excess of averages secured from other breeds. The Holstein-Friesian breed has five times as many thousand pound fat cows as any other breed of cattle.

When they consider these facts, farmers who are interested in milking a few good cows realize that they can make no mistake in selecting foundation animals of the black and white breed.—H. R. Lascelles, West Central States Representative. Holstein Friesian Association of America.

Central Kansas

39 AVERAGE 373 BUTTER FAT
in 12 months, 1927-1928 and 16 of them in heifer form. A high producing working herd of reg. Holsteins. Come and see us.
E. P. MILLER, JUNCTION CITY, KAN.

Sumner Hall Herd Holsteins
Young stock for sale. Farm joins town. Come and see us.
W. S. SHEARD, Junction City, Kan.

WATCH THIS SPACE
We will offer some nice cows and heifers soon with good C. T. A. records. Farm joins Talmage on the north.
J. A. ENGLE, TALMAGE, KAN.

MAPLEWOOD FARMS HOLSTEINS
100 reg. cattle. Type, quality and production always in evidence in this herd. Bulls of serviceable age, fresh cows and heifers for sale. W. H. MOTT, Herington, Kan.

Calantha Johanna Lad
a splendid grandson of this great sire heads our herd. Our farm is about 3 miles south of town. Visitors welcome. Nothing for sale now.
B. F. PIERCE, Herington, Kan.

Our Real Ormsby Bred Bull
is the sire of the young bulls ready for service. We are offering right now. We want to tell you about them. Address.
E. W. OBETTS, HERINGTON, KAN.

Some High Grade Cows
That freshened in August. Selling them to make room for pure bred. Also registered bull seven months old.
W. E. HAGGARD, HERINGTON, KAN.

Cows to Freshen This Fall
bred to Sir Aggie Pontiac Mead 2nd., our herd bull. Choice young bulls, some ready for service.
W. G. BIRCHER, Kanopolis, Kan.

HARRY MULHAGEN, BUSHTON, KAN.
Herd Established in 1910
Our herd is small but you will approve of it if you believe the best are the most profitable. Harry Mulhagen, Bushton, Kan.

Worthwhile Farm Herd
Average C. T. A. records for our herd 475 fat. Highest in the state. Bulls from calves to eight months old.
GEO. WORTH, LYONS, KAN.

HERD AVERAGED C. T. A. 389.6
Herd headed by K. P. O. P. sire whose five nearest dams averaged 1122 butter. Bulls of serviceable ages.
ERNEST REED, LYONS, KAN.

Southern Kansas

B. R. GOSNEY'S HOLSTEIN HERD
You never know until you go and see. Serviceable bulls out of high producing cows. Come and see us.
B. R. GOSNEY, MULVANE, KAN.

MARK ABILDGAARD, MULVANE
Two young bulls of serviceable ages out of high producing dams. Descriptions and prices gladly furnished. Address
MARK ABILDGAARD, MULVANE, KAN.

Lone Pine Herd
Choice young bulls out of cows with good C. T. A. records. Come and see us.
J. M. Youngmeyer, Wichita, Kan., R. D. 6

Year Old Bull For Sale
Dam has a good C. T. A. record and I will be pleased to tell you about him. Address
C. L. SOMERS, Wichita, Kan., R. D. 6

Cows and Heifers For Sale
A very profitable lot of reg. Holsteins. Correspondence invited and visitors welcome.
R. L. LYMAN, BURTON, KAN.

Choice 2-Year-Old Heifers
for sale that will freshen in October. Real value in serviceable young bulls.
G. REGIER & SON, Whitewater, Kan.

Bulls of Serviceable Ages
One nice individual out of a 33 pound dam. Several others, very choice. Photo and descriptions. Address
T. ROBERT McVAY, NICKERSON, KAN.

SEEBER BROS., GREAT BEND
A herd of working registered Holsteins. We expect our top cow to beat 600 pounds of fat in 1929.
SEEBER BROS., GREAT BEND, KAN.

Herd Average 320 Fat 1928
Dispersal sale Nov. 5. Reserving a few heifers for foundation. 50 head in the sale.
WALTER CLARK, GARFIELD, KAN.

Ash Valley Holstein Farm
Our reduction sale last fall averaged \$247; on first five \$300. Young bulls out of choice cows (C. T. A. records).
CLYDE GLAZE, LARNED, KAN.

C. A. Branch, Marion, Kan.
The Blue Label Dairy Farm
We sell 50 Holsteins, mostly fresh cows, Oct. 10. Write for catalog.
C. A. BRANCH, MARION, KAN.

Washington County

Strong Washington County Herd
We offer for sale 3 young bulls around 10 months old and out of high producing cows. Farm near Greenleaf. Come and see us. HENRY HATESOHL, Greenleaf, Kan.

Average Butter Fat 403 Pounds
for our herd in 1928. We offer a fine bull calf, 10 months old out of a 604 pound butter fat dam. Address
WM. BLANKEN, LINN, KAN.

1928 Butter Fat Average 413 Pounds
and better than 300 average for the last 3 years. 12 months old bull, a show calf and out of a 608.8 pound butter fat dam for sale. Address W. N. COMBS, LINN, KAN.

Meierkord Holstein Farm
A nice lot of young bulls ranging in ages from 6 to 12 months old. Farm 2 miles out from Linn.
H. J. MEIERKORD, LINN, KAN.

Strong Holstein Farm
75 reg. cattle. Carnation Inka Matador our junior herd sire. A fine lot of young bulls ready for service. Address
Strong Holstein Farm, Washington, Kan.

Rendale Holstein Farm
Average butter fat for our herd in 1928 was 401 pounds and in 1927 it was 373 pounds. We have stock for sale.
FRED STIGGE, WASHINGTON, KAN.

J. L. Young Estate Herd
First 400 pound butter fat herd in Washington county. We have surplus stock for sale. Write for prices and descriptions.
J. L. Young, Estate, Haddam, Kan.

400 and 500 C. T. A. Dams
A few nice bull calves out of cows with good C. T. A. records. Write for descriptions and prices.
WM. C. MUELLER, HANOVER, KAN.

Northwest Kansas

Never Fail Dairy Farm
Home of Segis Superior Pauline, the great foundation cow and daughters and granddaughters her equals, many of them. Other good females. Write us.
GEO. A. WOOLEY, OSBORNE, KAN.

Blackhawk Dairy Farm
The herd that produces 15,000 pounds of butter annually besides a nice retail milk business. Write for information about stock for sale.
J. F. LAMAN & SON, PORTIS, KAN.

Florens Farm Herd
60 head in our herd raised and developed on our farm. Our herd in 1928, 40 per cent 2 year old, averaged 419 fat on two milkings. Type and production. C. J. FURRY, FRANKLIN, NEB.

Mac Bess Holstein Farm
A strong Ormsby bred herd. A grandson of Belle Farm Battle 1039 pounds as a 2 year old heads our herd. Young bulls out of high producing cows.
CARL MCCORMICK, CEDAR, KAN.

Segis Walker Matador 4th
heads our herd. His sire, Segis Walker Matador has more than a dozen daughters that average 1000 butter. Bull calves for sale. Mahindale Holstein Farm, address Ross Mahin, Gaylord, Kan.

Clay County

Elmdale Farm Herd
Our herd averaged better than 500 pounds of butter fat for the year ending June 1, 1929. Farm 6 miles west of Clay Center on Highway 40. Stop and see our herd. Leslie Roenigk, Clay Center, Kan.

Shady Brook Stock Farm
Our herd, all heifers averaged 340 pounds of fat (C. T. A. records) for the year ending June 1, 1929. Have some young bulls for sale. O. W. Carson, Clay Center, Kan.

COWS, HEIFERS, YOUNG BULLS
for sale with good breeding and production back of them. We will be glad to tell you about them. Address
RAY M. CALDWELL, Broughton, Kan.

sumer without contact with the air until opened for use.

Tests of the bacterial content of the milk produced under this new system, made by the division of market milk investigations, have shown some remarkably low counts. Over a five months' period, the average bacterial content, as taken from the glass containers, was 3,460 a cubic centimeter, and from the vacuum tank 3,780 a cubic centimeter. On four days of this period the milk was pasteurized in the vacuum tank at 145 degrees for 30 minutes; the average bacterial count of the raw milk in the tank before pasteurization was 3,590 and after pasteurization and cooling it was 55 a cubic centimeter, indicating a very high efficiency for pasteurization under this

To Protect the Sprayer

Some types of farm machinery can be pulled into the implement shed when the season's work is finished and left until the following year without any damaging results, but this is not true of spraying equipment.

The different parts of a spray pump—cylinders, plungers, valves—are fitted with exact precision. Lack of care in system.

storing may result in rust, corrosion, freezing and injury to essential parts.

The first precaution which spraying equipment engineers and operators suggest is thorough flushing of the tank, pump and hose fittings. This dissolves and carries out spray material which collects during actual spraying.

After flushing, some operators fill the tank again, start the pump, and use clean water from the spray gun, at high pressure, to wash down the outside of the sprayer, which generally is caked with dirt and chemicals after a season of use.

It is imperative that all liquid be removed from tank, pump, and piping. All drain cocks should be removed and the pump operated for a minute or two in order to facilitate complete drainage. An added attention which sometimes prevents later inconvenience or bother is to oil all threads on drains before replacing.

Men who like to give their sprayer the best of care paint the tank inside and out every year. This can be done in the fall, and will protect the boards from drying out during the idle months. No other attention need be given the tank, unless the hoops have become loose and require tightening.

After making sure that the pump is thoroughly drained, one of two things is generally done. The drain plugs are replaced and the pump filled with crankcase oil, which is left there during storage to prevent rust; or oil is simply pumped thru. The latter treatment leaves an oil film over most of the inner parts. The plan followed will depend on whether any oil left in the pump will come in contact with rubber tubing susceptible to rotting. If the oil injures only packing and diaphragms, the added insurance against rust is worthwhile, since these parts usually are replaced every spring. It is best to follow instructions given in the manufacturer's manual because they will embody the most dependable advice for that particular sprayer. It is well to disconnect hose fittings and store them in the tank or other dry place. On suction ball valves, the ball should be raised to allow any moisture, which may be held, to run down.

Before calling the job done, all hose should be cleaned, rolled up, and stored in a dry place to prevent rotting and cracking. Spray rods and nozzles may be protected by pouring kerosene and then oil thru them. As a last step, all outer moving parts may be put into

shape for immediate use in an emergency by oiling or covering with hard oil.

Service men acquainted with spraying equipment attribute most sprayer trouble to lack of proper care, and they find that damage resulting from improper storage often causes trouble the second or third season, after the machine has given perfect service the first year of its use.

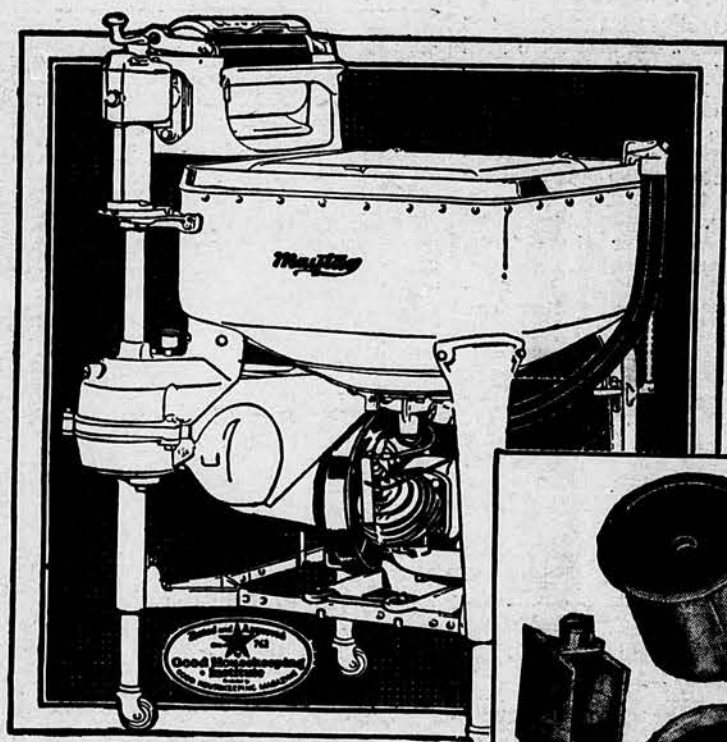
High Market in September

BY F. W. BELL

The hog raiser who finishes his pigs for the September and October market usually makes more money than the man who waits until November or December. Many feeders prefer waiting until the new corn crop is ready before finishing hogs. The feeder who follows such a practice may have to sell his fat hogs for a lower price. The difference in market price of fat hogs between the September and December market usually is from \$1 to \$1.50 a hundred pounds.

Pausing to reflect at the age of 90, John-dee doubtless feels that the first 100 million dollars is the hardest.

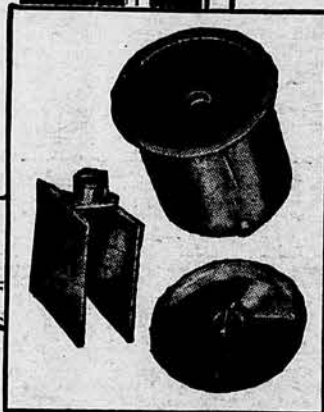
Undivided Responsibility



For homes with electricity, the Maytag is available with electric motor.

Let Your Maytag Churn the Butter

The Maytag churn attachment sets over the gyrator post and utilizes the same power that washes the clothes. Water in the washer tub keeps the cream at the proper churning temperature. Easily cleaned, durable and a time and labor saver.



Maytag Radio Programs

Asheville-WWNC, Charleston-WOBU, Cincinnati-WLW, Cleveland-WTAM, Des Moines-WHO, Detroit-WJR, Fargo-WDAY, Fort Worth-WBAP, Hopkinsville-WFIW, Kansas City-KMBC, La Crosse-WKBH, Los Angeles-KNX, Milwaukee-WTMJ, Minneapolis-WCCO, Norfolk-WJAG, Omaha-WOW, Philadelphia-WCAU, Pittsburgh-KDEA, Portland-KGW, Rock Island-WHBP, Calgary-CFCN, Montreal-CFCF, Regina-CHWC.

A Gasoline Powered Washer Built, Sold, Guaranteed and Serviced by One Organization

THE Maytag gasoline Multi-Motor is the only engine built by a washer company for washer operation. The Maytag organization alone is responsible for the perfect performance of both the washer and the engine.

Fifteen years' development has brought the Maytag Multi-Motor to a high state of perfection. There are only four moving parts. The carburetor is flood-proof. High-grade bronze bearings are used throughout. Bosch high-tension magneto and speed governor give it a smooth, steady flow of power.

A thrust of the foot lever starts it. By removing only four bolts, it is interchangeable with the electric motor.

There is only one Maytag... The washer with roomy, cast-aluminum tub, gyrafoam washing action, new-type roller water remover and precision-cut steel gears... the lifetime washer.

A Week's Washing Free

Write or 'phone the nearest dealer for a Maytag. Do a big washing with it. If it doesn't sell itself, don't keep it.

Deferred payments you'll never miss.

THE MAYTAG COMPANY, Newton, Iowa

Founded 1893

Maytag Sales Corp., 1005 McGee St., Kansas City, Mo.

Branches, Distributors or Representatives in London, Berlin, Hamburg, Geneva, Genoa, Oslo, Sydney, Melbourne, Adelaide, Wellington, Buenaventura, Buenos Aires and other principal cities.

Phone One of the Authorized Maytag Dealers Listed Below:

V-9-29K

Abilene Litch Service
Anthony Community Grocery Co.
Arkansas City
 Gambrell-Bryant Hdwe. Co.
Arma F. O. Loth
Atwood J. R. Kirchner Hdwe. Co.
Atchison Abbeuhl Maytag Co.
Augusta Economy Groc. Co.
Bazine Humburg Lumber Co.
Belleville Gregg Electric Co.
Beloit Concordia Maytag Co.
Bison Humburg Lumber Co.
Blue Rapids Brokenicky Plbg. Co.
Bonner Springs Owl Hdwe. Co.
Burlingame Dutton & Son
Burlington Winn Plumbing Co.
Caldwell Detrick Bros.
Caney Oliver & Peister
Centralia Mrs. Condit
Chanute Shamrock Battery Co.
Cherokee Nick Favero
Cimarron Smith's Grocery
Clay Center W. W. Smith & Sons
Coffeyville Liebert Bros. Elec. Co.
Colby Fitzgerald Hdwe. Co.
Colony Kelly Hdwe. Co.
Columbus
 J. S. McCaulley Furniture Co.
Concordia Concordia Maytag Co.
Conway Springs S-H Maytag Co.
Cottonwood Falls
 Simons Variety Store
Council Grove Pierce Elec. Co.
Dighton Dighton Lumber Co.
Dodge City Nevins Hdwe. Co.
Dorrance Weber Hdwe. & Fur. Co.
Dover Winters Merc. Co.
Downs Geo. P. Nixon & Co.
Eldorado
 Rorabaugh Dry Goods Co.
Elkhart Marshall Hdwe. Co.
Ellis Waldo & Waldo
Ellsworth Ellsworth Produce Co.
Emmett Kennedy Garage
Emporia Maytag Sales Co.
Eureka Maytag Shop
Everest Miller Hdwe. Co.

Fort Scott Fort Scott Maytag Co.
Frankfort Kipp-Emmons Maytag Co.
Fredonia Bargain Store
Garden City Burns & Goulding
Garnett Kansas Maytag Co.
Goodland Maytag Shop
Great Bend
 Fred Richardson Plb. Co.
Greeley Dave Cunningham
Greensburg City Meat Market
Grinnell Grinnell Electric Shop
Gypsum Akers Produce Co.
Hardtner Allen Bros.
Harper O K Light & Power Co.
Hays N. M. Schlyer
Herington Reich Impl. Co.
Herkimer Miller Impl. Co.
Herndon
 Herndon Light & Power Co.
Hiawatha Cole Maytag Co.
Hill City Murray Wallace
Hillsboro J. V. Friesen
Holsington Fred Childs
Holton Abbeuhl Maytag Co.
Home City Reinhardt Garage
Horton Carl Latenser Music Store

Hoxie Mallory Service Station
Hugoton Porter Hdwe. Co.
Hutchinson Hutchinson Maytag Co.
Independence Walcott Maytag Co.
Iola Coblenz Electric Co.
Junction City Waters Hdwe. Co.
Kansas City Swenson Maytag Co.
Kensington H. M. Thomas
Kingman O K Light & Power Co.
Kinsley Nevins Hdwe. Co.
Kiowa O K Light & Power Co.
La Crosse Humburg Lumber Co.
Larned A. A. Doerf Merc. Co.
Lawrence Linde Maytag Co.
Leavenworth Swenson Maytag Co.
Leonardville Chaffee Hdwe. Co.
Leon Thuma Merc. Co.
Leoti Western Hdwe. Co.
Liberal Farley Maytag Co.
Lincoln H. D. Graves
Lindsborg Train Bros.
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Manhattan
 Kipp-Emmons Maytag Washer Co.
Mankato R. Hanna & Son
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Marion J. V. Friesen
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 Kipp-Emmons Maytag Washer Co.
McPherson Cary Hdwe. & Imp. Co.
Medicine Lodge
 O K Light & Power Co.
Minneapolis Osburn Elec. Co.
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Mulberry Herman McPherron
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Osborne Woolley Impl. Co.
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Randolph Moline Hdwe. Co.
Richmond Kansas Maytag Co.
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St. Francis Manson Elec. Co.
St. Marys St. Marys Produce Co.
St. Paul Dowd Hdwe. Co.
Sabatha Minger Music Store
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 Kipp-Emmons Maytag Washer Co.
Satanta Jones Impl. Co.
Scammon Naylor Furniture Co.
Sedan S-H Maytag Co.
Seneca Waller Electric Co.
Smith Center
 Beatrice Creamery Co.
Stafford
 O. K. Light & Power Co.
Stockton Harley Bland
Summerfield Glick Produce Co.
Sylvan Grove W. W. Dehler
Timken Humburg Lumber Co.
Tonganoxie Tonganoxie Plbg. Co.
Topeka Linde Maytag Co.
Troy Jones Hdwe. Co.
Ulysses Gallaway Hdwe. Co.
Valley Falls Samson Lumber Co.
Wakeeney J. J. Keraus & Son
Wamego Hecker Fur. Co.
Washington Concordia Maytag Co.
Waterville Mrs. Reitzel
Wellington Rich Mercantile Co.
Westmoreland Mrs. N. H. King
Wichita
 Rorabaugh Dry Goods Co.
Wilson Weber Hdwe. & Furniture Co.
Winfield Rich Mercantile Co.
Yates Center Coblenz Elec. Co.

Maytag

Aluminum Washer

IF IT DOESN'T SELL ITSELF DON'T KEEP IT