

KANSAS FARMER

For the improvement



of the Farm and Home

Volume 51, Number 25.

TOPEKA, KANSAS. JUNE 21, 1913.

Established 1863. \$1 a Year

ONE little acre wisely tilled is worth a hundred that are filled with weeds. A little line of tile that's laid along the lowland mile will save its cost each passing year. A little fertilizer near to spread upon the patient soil is worth a week of blind hard, toil.

Be kind unto old Mother Earth, and she will smile with joy and mirth. Plow deep into the fertile mould and she will smile the smile of gold. Give back a portion of her yield, and there's a treasure in each field. Be up-to-date; be wise, intense; grope not in shadows dark and dense.

The outgrown creeds of yesterday, put gently on the shelf away. The new and modern times demand the heart, the soul, the mind, the hand. Not by brute force or brawn alone shall nations thrive and crops be grown. The man who fills his bins with grain must have a trained and working brain.

—“Brad”



“A Little Line of Tile that's Laid Along the Lowland Mile Will Save Its Cost Each Passing Year”

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Kerosene, Gasoline, Distillate 15-25 H. P.

The power of 15 horses concentrated in a single machine.

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Inquiries and Suggestions Solicited

Get Instruction Book.

Did you get an instruction book with your automobile? If not, you should by all means get one. Instruction books as prepared these days are real text books for the car owner. A thorough study of the book prepared by each manufacturer for the operation of his machine, will make your road to permanent automobile satisfaction as smooth as can be. You need the book to enable you to take the best care of your machine and you need it especially in times of trouble. It is our judgment that with each automobile an instruction book is packed in the tool case. We think that some garages having automobile agencies purposely remove these books. This may be done in order to help the garage business and if the book is removed for such purpose it is the best reason in the world why you should get the book. The manufacturer of your machine will supply it.

How to Use the Brakes.

Use the brakes as sparingly as possible. The braking action on most cars is extremely powerful. If the brakes are in good working order it is easy to stop a car speeding along at the rate of 20 to 25 miles an hour within 35 or 40 feet, but so to do means the sliding of the rear wheels and this is most destructive to the casings. Use the brake by applying the pressure so gradually that the casings are not made to slide. We have seen the rubber completely ground off casings by improper use of the brake. The careful driver will shut off his power before he reaches the stopping point and will permit the car to stop with a gradual application of the brake. When stopping, release the clutch. This will have an immediate slowing down effect because it removes the power from the wheels. Then a gentle application of the clutch peddle will stop the car at the desired spot without injury to the casings. The motorist is not fully qualified to give his car the best care until he masters the control of the gears and the brakes; then he may drive safely anywhere.

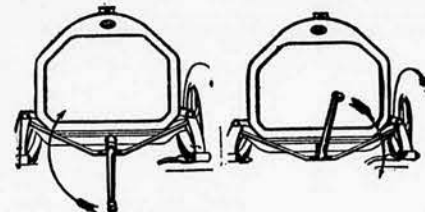
Use of Clutch.

The clutch, regardless of the kind, should be engaged gradually. There are clutches for which the claim is made that they can be engaged suddenly, permitting the car to start gradually and without damage to either clutch or car. We believe, however, that the sudden letting in of any clutch will ultimately damage both car and clutch. Sudden engagement will injure the clutch, rack the car or stall the motor, and neither is desirable. Just a little practice enables the driver to engage the clutch gently and smoothly.

The clutch should be disengaged in passing over a short stretch of broken stones or cloddy roads, thereby allowing the car to coast over the bad spot. This will prove tire economy.

Safe Method of Motor Cranking.

The electrically started car has to a very great measure overcome the danger to the person of the operator in cranking. Nevertheless there are many motors which will for years be started by the crank and it is altogether probable that motors to be so started will always be made. There is no danger



in cranking if the proper precaution is taken, and one of these precautions is never to bear down on the crank. You may have been doing this safely for years but by so doing you always incur the risk of a kick-back.

The above illustrations from Overland instruction book show the right way of cranking the motor and the wrong way. If the spark is fully retarded you cannot be kicked by pulling up on the crank. There is a simple knack in cranking which you will soon get on to. If the motor is stiff and heavy get the fly wheel to rocking to and fro until with a last powerful upward pull the piston will be carried over its compression by the momentum of the

fly wheel and the motor will start. It will require a few motions of the arm, possibly, by the use of this upward pull method, but just so soon as a complete suction stroke is obtained and a sufficient amount of gas is taken in from the carburetor the motor will start at a lively pace. Easy starting is augmented by good, live dry cells and good wiring connections.

A safe way of starting the motor and a method used by a motorist of our acquaintance, is that of leaving the switch turned off and by turning the motor over with the crank a time or two to obtain a good charge of gas. Then the crank is placed in the strap, the operator goes to his seat, turns on the switch and "tickles" in the switch button. He says that nine out of ten times his motor will start by this operation and there is absolutely no danger of being injured in the cranking.

Golden Belt Day.

A Golden Belt road day, a day on which this entire route from Kansas City to the Colorado line shall be worked and dragged is now being arranged by C. M. Harger, Abilene, president of the Golden Belt Highway Association. It is planned to set aside one day during which the good roads men of each county traversed by the Golden Belt road shall get out and work the highway, and put it into good condition. It is planned to have the road dragged and put into good shape before the Indiana Manufacturers' Association passes over it on its automobile trip to the coast. This body will pass through Kansas about July 1, and it is the intention of the Golden Belt men to make this road the best strip over which the tourists pass on their long journey.

Money For Kansas Roads.

According to figures recently compiled, nearly 5½ million dollars will be available in Kansas in 1913 for road improvement. This money will come from all sources, including the new state auto tax. If spent judiciously there should be a marked improvement made in the general condition of the public highways.

The 105 counties in Kansas for 1913 have a road fund of \$4,716,247. This sum does not include the new automobile registration fund, nor does it include poll taxes collected in the various municipalities. The new law taxing automobiles is expected to collect \$200,000. The estimates of the poll tax to be collected, based on the amount collected in 1912, is \$526,000. This will give the state of Kansas \$5,416,247 for road improvement in 1913.

Fifty-two Kansas counties have complied with the law requiring the designation of county and state roads. The statute is explicit upon this subject, and delay in the designation means the postponement of the beginning of work for the improvement of such highways.

Now that provision has been made for the collection of large sums of money for the improvement of roads, people generally oppose indiscriminate road work, and it is their desire that the county commissioners designate the roads in order that permanent improvement may be made.

The new automobile tax law provides that the funds be returned to the county in which the car is owned, and that the funds be used only in the maintenance of existing roads. Until the county commissioners designate the roads, this money cannot be expended for road improvement. Failure to comply with this statute will prohibit 49 counties in this state from using the fund to be paid by the automobilists under the new law effective July 1.

It is the opinion of those closely in touch with this subject that the statute of 1911 is a mandatory and that failure to designate roads, through oversight or negligence, can be remedied by friendly co-operation through the office of the attorney general.

Big Sale on Auction Block.

The safety and success of selling land at auction is shown in the case of John Erickson, a prosperous Russell County farmer who recently sold a section of land there for \$38,000 and is here making arrangements to sell a quarter section in Barton County by auction. He believes auctioneering of land pays. He intends to sell his many holdings in Kansas this way.

A Wagon Built Like A Bridge



Weather Has Little Effect On It

HERE is a wagon that will not dry out and become loose, or rot and break. It never has cracked hubs, split felloes or loose tires. It has no bolts and nuts to work loose and rattle off, and nothing to come apart. It is not affected by dry or wet weather, nor by heat or cold.

Troubles, so common to the ordinary wagon, are overcome entirely.

This wagon is made of steel I-beams, channels and angles—the strongest shapes known in steel construction work. It is put together with large steel rivets, inserted hot under great pressure. They do not become loose even after years of service.

This wagon, the only one of the kind, is the

Davenport Roller Bearing Steel Wagon

Its axles are steel I-beams, the ends of which are rolled into shape for the spindles. No material is cut away. All of the original strength remains.

The gear parts and bolsters are scientifically built and braced so that the load is distributed evenly over the entire wagon. No one part does more than its share of the work. This wagon has steel wheels made with a tension. The weight of the load is carried by all of the spokes—each one doing its share regardless of whether it happens to be located at the top, bottom or sides of the wheel.

Davenport Steel Wheels run on straight spindles, and the tires bear flat on the ground. Strongest wheels known for wagons.

Roller Bearings—Reduced Draft

Best of all are the Roller Bearings. It is because Davenport Wagons have roller bearings that you can do work with two horses and a Davenport that would ordinarily take three horses.

The Roller Bearing



Parts in Their Order

These roller bearings are practically everlasting. They cannot get out of order and show no appreciable wear even after long service.

Oil Without Removing the Wheels

The Davenport Wagon has another handy and time-saving feature. You don't have to take the wheels off and get yourself covered with grease to oil them.

Just push back the lid of the oil cup in the wheel, squirt in a little oil and let go of the lid. It closes itself.

It takes but a few minutes to oil a Davenport Wagon. You don't use a jack, waste time or soil your hands.



Send for this Book

"When the Going Is Hard" is a little booklet that contains a lot of interesting things about the Davenport Roller-Bearing Steel Wagon. Among others, it tells how neck-weight is taken off the horses, why Davenport Wheels do not fill with mud, how the bearings are made dust-proof, etc. It also fully explains and illustrates the use of roller bearings on wagons.

You can get this book free by asking for it as Booklet No. B-13

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KANSAS FARMER

With which is combined FARMER'S ADVOCATE, established 1877.

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OUR GUARANTEE

KANSAS FARMER aims to publish only the advertisements of reliable persons or firms, and we guarantee our subscribers against loss due to fraudulent misrepresentation in any advertisement appearing in this issue, provided, that mention was made of KANSAS FARMER when ordering. We do not, however, undertake to settle minor claims or disputes between a subscriber and advertiser, or be responsible in case of bankruptcy of advertiser after advertisement appears. Claims must be made within thirty days.



THE MIDDLE MAN.

In all of the discussions on the part of the consumer as to the cost of living, as well as discussions by the farmer as to why he does not receive a larger proportion of the last selling price of his products, the so-called middle man has come in for a large share of criticism. There is a disposition from one end of the country to the other to knock on the middle man. It seems to us that this is a disposition entirely uncalled for and one which is highly inconsistent.

We do believe that there are too many middle men. That is to say, that in many towns there are four or five general stores whereas two or three would be sufficient to serve the locality. This same general principle applies in practically all towns and in practically all lines of business. Therefore, we say that there are too many middle men, but while deploring this fact we must not deceive ourselves into the belief that we can get along without the middle man. That is to say, that we can get along without the general merchant or the local grain buyer and in his absence that we can buy our groceries direct from the wholesaler or can ship our grain direct to the miller; or ship our poultry and eggs direct to some man who will sell direct to the consumer. To bring about a condition such as would remove all middlemen would result in disaster to the country. It is safe to say, however, that such condition will never be brought about because it cannot be. The laws of trading and merchandising will prevent this.

It must be kept in mind that we must have the small town. We must have the market of the small town. The more thrifty and prosperous that town is and can be made by virtue of the larger volume of business of the surrounding country transacted through that town, the better off is the country. It is the local general merchant, the local banker, the local elevator, the local stock buyer, etc., who make up the small town and who add value to every acre of land, to every bushel of grain and to every hoof of stock within market distance of such town, who pays a considerable proportion of the taxes, and except for these our country would be in a miserable plight.

Should you drop into a land office in Topeka, looking for a farm, and the dealer should show you on his list a farm ten miles from Ellsworth the description of which proved interesting, you would at once inquire, "What is the population of Ellsworth? How many banks does it have? Does it have a church? How many elevators? Does it have a live stock buyer? Does it have one or more railroads?" etc., etc. The list of questions asked by you would all hinge around the nearness of the farm to the market and those conditions of the town which would meet the demand of the service you would expect to impose upon such town.

We cannot get away from the small town. We cannot get away from the so-called middle men who make up the small town. However, we should be able to arrive at some sort of plan by which the small town and the surrounding community will not be burdened by a larger number of middle men than is necessary to expedite the business of the farms of the surrounding country. We should not have more than are needed to serve with the highest degree of efficiency, and at a minimum of expense, the farmers in a community.

Just how the number of store in a town are to be controlled is not apparent to us. However, the state charter board has in the last few years undertaken to regulate the number of banks to be established in the various towns and the principle of such control is believed by us to be sound. A multiplicity of banks in a small town—or for that matter, in any town—cannot help but increase the cost of the banking business done in such town. The time may come when other businesses can be handled along the same line. The multiplicity of middlemen is the evil. The position occu-

pied by the middle man and the necessity of that position cannot be dispensed with.

FOR PURE FEEDS.

An important meeting of the Interstate Feed Dealers' Association was held at Kansas City on May 27. Feeders have long complained that they had no protection against unscrupulous dealers and manufacturers of feeding stuffs. In turn the legitimate feed dealers are at the mercy of irresponsible adulterators of feeds. The object of the above association and the thought around which the discussion at this meeting centered, was that of placing the manufacture of feeding stuffs under such restrictions as will result in pure feeds.

Aside from talks made by a considerable number of leading dealers, addresses were given by L. A. Fitz of the Kansas Agricultural College and W. H. Pew of the Iowa Agricultural College, setting forth the specific adulterations of feeding stuffs and suggesting effective legislative measures for the control of the manufacture of those feeds susceptible to adulteration.

An important point brought out in connection with the meeting was that of the increasing use of cottonseed among dairymen and beef feeders and that while such feeds are widely used they are not used to such extent as their merit and cheapness justifies. Those feeders who use cottonseed meal know that a pound of digestible protein can be bought in cottonseed meal at a much lower price than it can be bought in the form of any other feed. Just how to get this fact, together with the economic advantages of the use of cottonseed, before the feeder, was the important subject of discussion.

THINK ABOUT FAIR.

The premium list of the Kansas State Fair Association, Topeka, the annual exposition of which will be held September 8 to 12, inclusive, is being circulated. If you want a copy or entry books or other information, write H. L. Cook, Topeka, secretary of the association. The same liberal premiums are offered in all departments as in years past. The mission of the association is to encourage better agriculture, horticulture, stock raising and manufacturing. The growth of this fair is a good indication of its fulfillment of its mission.

The grounds of the Kansas State Fair Association are located eight blocks south of the State House—almost within the heart of the City of Topeka. The grounds are reached by no less than a half dozen brick paved streets and by two lines of double track street railway. The grounds are profusely lighted by electricity and are open to the public on each day of the fair, from eight o'clock a. m., until eleven o'clock p. m.

When you come to Topeka to visit the fair you should be prepared to spend no less than a day looking about the city, taking in the State House, the Santa Fe offices, city parks, city fire department, Washburn College, and other places too numerous to mention.

NEW BOARD AND K. S. A. C.

The Board of Administration of the educational institutions of Kansas should have credit for any wisdom shown by its actions. KANSAS FARMER found occasion to criticize this board on account of its action with regard to the Kansas Agricultural College. It now gives KANSAS FARMER pleasure to state that the news press announces on behalf of the board that the printing office at the agricultural college will be continued, that the Industrialist—the official publication of the institution and which publication carries to the newspapers throughout Kansas and other states the valuable work of the college—will also be continued.

The Department of Industrial Journalism, which a few weeks ago seemed certain of discontinuance, will be permitted to exist for the present at least, as is evidenced by the fact that the annual announcement of this department will

be permitted to appear in the catalog for next year. So far, on these matters, the Board of Administration deserves the approbation and approval of the friends and patrons of the agricultural college.

If the Board of Administration has been misquoted by the press in these matters, such misquotation has been unfortunate. The board, on account of its action, has been severely criticised through the press of the state. It is gratifying to know that, as stated by President Hackney, "a misconception seems to have arisen as to the purpose of the board." We take this, our first opportunity, to set before KANSAS FARMER readers the official action of such board in these instances.

The people of Colby and the farmers of Thomas County are to be congratulated upon the determined and successful effort made by them to prevent the drifting of their soil by blowing, as reported in KANSAS FARMER last week. This method is to be commended to the townspeople and the farmers of all western counties. To accomplish things of this character it is necessary to arouse enthusiasm to the extent of getting the co-operation of all those interested in the project. The move must begin somewhere. Usually such moves begin in the towns. Almost without exception the farmers co-operate in these moves. This is as it should be. The man in town will take the time to effect organizations and to direct and help carry on the work. When the plans are made if the same be worthy we have never yet known the project in which the farmer did not co-operate. The people of Thomas County have also recently come to realize the possibilities for and need of good roads. That county, as in the case of many other western counties, has had good roads because the soil and climatic conditions are such as to make it impossible to have any other kind. "But," writes W. D. Ferguson of Colby, "there is a need of some bridges and culverts and we are going to have them. The commissioners have made arrangements with all the township trustees whereby the county installs all the bridges and culverts necessary along certain roads and the townships are to grade these roads. When these roads are all graded up to certain rigid specifications the county will take over the roads and thus relieve the townships of caring for them after they are once built. The total cost of making these roads will be about \$100 a mile which includes the necessary bridges and culverts."

The degree of LL. D. was conferred upon President H. J. Waters by the New Hampshire Agricultural College at Durham, N. H., a week ago. All Kansans will join KANSAS FARMER in extending congratulations to President Waters.

Farming under ordinary farm conditions is not a get-rich-quick business. The farmer does not handle as much money as men in some other lines of business, but more money sticks to his fingers than in many other lines and it is the amount of money saved that makes the man prosperous.

Not long since we observed a statement to the effect that the cowpea would put in the soil as much humus and nitrogen in ninety days as would a crop of red clover in fifteen to eighteen months. If this statement is correct, and we are inclined to the belief that it is approximately so, certain sections of Kansas are again more favored than we thought. We know that the western two-thirds of Kansas will not grow red clover—the great soil builder of the east and with which seven of every ten Kansas farmers are more or less familiar. Their lands will produce cowpeas and even though not abundantly, the possibilities for supplying the land with nitrogen and decayed vegetable matter are apparent and easily accomplished.

K. S. A. C. COMMENCEMENT.

Commencement at the Agricultural College has more than usual interest this year in view of the fact that with the graduation of the present class, containing over 200 members, the college rounds out a half century of education along industrial lines. Fifty years ago this institution started on its career of educational effort founded on the fundamental proposition that the state should furnish the opportunity for higher training in the performance of the every-day duties of life to its citizens. It was a new idea in education and those in charge of the work in those early days had no precedents to guide them in their efforts to direct the work so as to fulfill the purpose for which such schools were organized.

In the early days there was more or less prejudice against this new idea in education. This it was necessary to overcome. Many of those for whom the work was planned had no sympathy whatever with what was known as "book farming." Even some of the leaders in the work were somewhat skeptical as to the results of education along industrial lines. Gradually we have found the antipathy of early days has disappeared, and this week the college turns out a magnificent class of young people, the largest in its history, who go back to the homes and localities from which they came with higher purposes in life and the training necessary in order that they may be of assistance in carrying out their ideals.

This class contains over 40 young men who have taken the full course in agriculture. The great demand for teachers in agriculture in our secondary schools is claiming the services of fully half of these young men. Even at that, the call for teachers cannot be met, since most of these young men are anxious to get back to the farms and put into practice the training they have received during their college career. This present class in agriculture has as one of its members—and is proud of the fact—a young lady, Miss Ethel M. Vanderwilt, of Solomon, who has taken the full course, competing with the boys of the class in the judging of live stock and other events during the course and often winning high honors.

Statistics compiled the last year show that this Kansas institution has had enrolled during the past year one-fourteenth of all the students in agriculture in the United States above secondary grade. A similar canvass in which 62 schools of similar grade were involved shows that 25 per cent of all the students in these schools enrolled in home economic courses are found at the Kansas Agricultural College. Of the 70 girls graduating in home economics this year, over 60 per cent have already accepted positions as teachers of domestic science. Domestic science teachers' only last two or three years, it might be mentioned in passing, most of them later accepting life positions in homes of their own.

The exercises of commencement week opened with the baccalaureate sermon Sunday afternoon, preached by the Rt. Rev. William O. Shepard, Bishop of the Methodist Episcopal Church. The rest of the events of the week followed in order, closing with the faculty alumni reception in Nichols' Gymnasium Thursday evening. The commencement address at 10 A. M. Thursday, entitled "State Commissions and Public Service," was given by Prof. John Rodgers Commons of the University of Wisconsin. This timely subject was handled in a splendid manner by the speaker, and immediately after its close came the faculty alumni lunch, which constituted one of the most enjoyable occasions of the week.

Truly the Agricultural College in its 50 years of service has attained a high place among the institutions of the state. Too many of our citizens are yet unfamiliar with its workings. To intimately know the greatness of this institution it should be visited and most carefully studied.

POWER FARMING IN KANSAS

Tractor Increasing in Numbers and Variety of Work Done—Kansas Experiences



PORTION OF GAS TRACTORS SHOWN AT KANSAS STATE FAIR, TOKEKA, 1912.—THE TRACTOR COMMANDS ATTENTION AND RESPECT AT ALL AGRICULTURAL EXHIBITIONS.

WE can run the tractor day and night and get double the amount of work done in each 24 hours. Our engine is 30-horsepower. Just figure what 30 horses will cost, including their harness, also figure the cost of feeding and housing them 365 days in each year and how many you will lose each 12 months, also your veterinary bills. Our tractor is now standing in a shed and we almost forget we have it, but in the spring we will put in gasoline, grease it up and crank, and off we go with this power of 30 horses. The flies and hot weather do not effect it and we can use it for other jobs about the farm where horses cannot be used. Some farmers will think it takes an expert to run a tractor, but when we tell you we never had any experience with any kind of tractor or gasoline engine until we started using this one, they will feel differently. The company sent out an expert to start ours; he helped us several days in getting started and we have been running it ever since and intend to keep running it. Any farmer with common intelligence can easily learn to run a tractor—at least one like ours.—KITCHEN BROS., Rice County.

Less Than Two Gallons Fuel Per Acre.

For fuel I have used nothing but gasoline, and have never used more than 1½ gallons an acre for any plowing except on some alfalfa sod I plowed, and used less than two gallons on that. For seeding I run the engine on high speed and pull three drills and seed about 60 acres a day. In plowing I also pull a harrow behind plow.—HARRY CHAPEL, Ottawa County.

Skilled Engineer Not Essential.

I am well pleased with the gas tractor and automatic, self-lift, five-bottom, moldboard plow. They are a light-weight style but are plenty heavy for all kinds of plowing. I pulled one-half mile of hedge for myself. A mechanical engineer is not necessary—just a common farmer will soon learn all about a gas tractor. I borrowed a threshing machine and threshed some of my wheat and alfalfa. I would not be without the engine. I plowed over 350 acres. I will do my own harvesting with the engine this season, also my own threshing.—C. F. STADE, Reno County.

Perfect Threshing Power.

I used my gas engine tractor for threshing, running a 36-60 separator, last season, with good success. I did not have the least trouble in operating, for it is simple in construction and yet it has all the parts to make a good smooth-running engine, an important point which should not be overlooked by the beginner. It is very economical in the use of fuel for it uses the cheapest kerosene at all loads and yet it is very powerful in the belt and in the drawbar. It can be used with good success for plowing, using about eight bottom gangs. I have no gangs for mine yet, but expect to get one, for I can do my plowing quicker and better and deeper than with horses. I can also do the plowing at the right time.—HENRY WESELOH, Lincoln County.

The More Tractors the Better.

I am glad to learn that you are taking an interest in giving the farmer the best information regarding tractors. My

opinion is that the gas tractor is the greatest improvement in farm implements that Kansas farmers have ever had. With it they can plow day after day and night after night and the old horse never gets tired. The more new tractors that come to Kansas, the better for all of us.—RICE THOMAS, Clark County.

Carburetor Adjustment Necessary.

Nine-tenths of the tractor trouble is in not adjusting the carburetor as it should be. The agent told us that after they adjusted the carburetor for us to leave it alone. We found that they didn't understand conditions, as we have to adjust the carburetor several times a day, depending, of course, on what kind of work we are doing.—WHEELER BROS., Coffey County.

Gas Advantage Over Steam.

We have been using a 40-horsepower tractor about one year for threshing, filling silos, grinding and plowing. The engine is a vertical two-cylinder, equipped with two separate ignition systems for jump spark ignition, has throttling governor and oil-cooled by circulating pump. By sliding gear transmission it has an advantage of two speeds forward, one of 2.2 miles and high speed four miles per hour. The highest speed is very economical when traveling. We have used the engine mostly for threshing.

The throttling governor gas engine furnishes as steady even power to the separator as any steam engine, does not require any water hauling, nor is there any danger of fire, and for this reason a drive belt of 100 feet, or 50 feet double, is sufficient. The engine uses about 40 gallons of kerosene, two gallons of gasoline and about two gallons of lubricating oil a day when pulling a full load.

For plowing, the engine takes a six-bottom 14-inch engine gang along at a rate of 2.2 miles an hour at a depth of six inches. We generally plow eight or nine inches deep on stubble land and by laying the field out in lands and back-furrowing each strip till there is an unplowed strip clear around the field, which is finished last. This is done by raising the plows at the ends, leaving a

strip about 30 or 40 feet wide to turn on. For filling silos we use a 48-inch cutter with blower and self-feeder cutting from six to ten tons an hour.

For all such work on the farm the gas engine has the advantage over steam, as it does not require one to two hours' firing up and the power can be had whenever needed.—M. THAYER, Brown County.

Should Farm at Least 320 Acres.

The gas tractor is a demonstrated success, if the purchaser has some one who knows how to run and care for it and if he has enough heavy plowing to justify so considerable an investment.

The depreciation expense should not be overlooked. I consider it \$400 a year whether the engine does little or much. In my judgment a man should farm 640 acres if he has a tractor—at least if he has one as heavy as mine. I have 960 acres. I should not purchase a tractor to farm less than 320 acres. Farming between 320 and 640 acres, if my land was level or nearly so, I think I should purchase a lighter engine, say a 30-horsepower. A man who does not enjoy working with machinery and has no one about him who does, had better let a gas tractor alone. I fully believe in the tractor for farming under the above favorable conditions.—HERBERT J. MOTT, Scott County.

Contest for Farm Tractors.

The farm tractor contest to be held at Winnipeg, Manitoba, July 4 to 19 of this year, should be of interest to practically every farmer. The Winnipeg Motor Contest has done more toward the rapid development of the farm tractor industry in the past few years than any other one thing. Each succeeding contest has shown marked improvements both as to types of engines best adapted to farm work and to reliability.

These contests mean much to the manufacturer. It gives him an opportunity to observe and study the performance of his own and his competitors' machines working together under the same conditions. In this way, as in no other, he is brought to see both the strong and weak points of his product. This cannot help but benefit the farmer. The manufacturer learns how to build a

better machine, and the farmer profits by it when he purchases one to do his farm work.

The advantage of the use of engine power for plowing, harrowing, seeding, harvesting, and all forms of belt work, is becoming more and more universally appreciated, and farmers are being shown that the tractor is first, last and all the time a money-making proposition, if properly managed.

Graded Half Mile for \$7.50.

One traction engine, one road grader, and three men graded a half mile of road in one day. This was accomplished on a Riley County road at a cost of \$7.50. The engine, running on kerosene, consumed fuel at the rate of 20 gallons a day, which, at a cost of 7½ cents a gallon, cost \$1.50. Three men were necessary to do the work—one to run the engine and two on the grader.

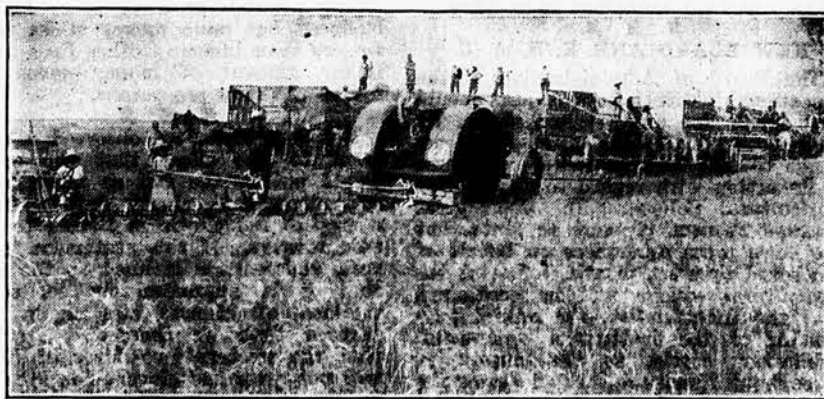
Use of Good Oil Pays.

The editor of KANSAS FARMER uses an automobile. We could not well get along without it. We find the upkeep less than maintaining a horse and buggy. The added advantages to our business are such that we could not well afford to get along without it when considered from a strictly business standpoint. The matter we set out to write about was that of oil—the difference in oil.

During 1911 we used common engine oil which cost about 40 cents per gallon. We used plenty of it. We were not particular about getting the same kind of oil every time we bought. In the early fall the engine showed the results of an accumulation of carbon, although every few weeks we used the kerosene treatment for carbon. By the way, we do not think much of such treatment. However, it does seem to loosen the engine pistons up a little and make them quicker on trigger. When we had the cylinders cleaned they were badly carbonized. It cost, if we remember correctly, \$15 to have the work done, including new piston rings and valve grinding.

After cleaning we begun the use of a high-grade automobile oil costing 75 cents a gallon in five-gallon lots. We used this oil constantly—not changing or mixing oils. The engine has behaved better than when we used the cheap oil. We have not been bothered with foul spark plugs, and have used half the oil. When we had the engine examined after having traveled 5,000 miles the cylinders were only slightly carbonized, and if the engine had not been down we would not have had the cylinders cleaned. So we conclude that it pays to use oil made for automobile engine cylinder lubrication. It stands to reason that oil made for a specific purpose should be better for that purpose than oil not so made. We are a firm believer in not mixing oils, too. Start with a good kind of oil and stick to it until the crank case is drained and then if you must change oil, stay with that kind. We find that oils have different bodies and different melting points and so do not emulsify, do not mix in a way conducive to good lubrication.

If a knife has become rusted soak it in kerosene, then stick it into the earth several times and the rust will disappear.



HARVEST SCENE ON BABBIT RANCH, FORD COUNTY.—PLOWING FOLLOWS ON HEELS OF HEADERS.—EARLY PLOWING GOES A LONG WAY TOWARD INSURING WHEAT CROP.

LIVE STOCK BALANCES FARM

Must Maintain Even Poise Between Stock and Crop Growing—W. E. Taylor



SWEET CLOVER, KAFIR, MILO AND THE SWEET SORGHUMS ARE THE DEPENDABLE CROPS OF WESTERN KANSAS.—GOOD CATTLE MUST EVER BE LOOKED TO AS FURNISHING THE ONLY MARKET FOR THESE CROPS.

THE present cry of high cost of living centers around just two things, namely, meat and dairy products.

Everyone knows that the price of meat and dairy products is abnormally high, and that these prices are slowly advancing. Products from the soil are not high, in fact the price of wheat, corn, oats, barley, potatoes, rye and some other food items, is below the average for the past five years. At the present prices of crops, because of the high value of land, the farmer is not receiving a fair interest on his investment and practically nothing for his labor. This is due to the fact that too many farmers are ignoring the necessity of maintaining an even poise or balance between stock raising and crop raising.

BALANCE FARM WITH LIVE STOCK.

The solution to the problem of the high cost of living is very plain. Raise more stock, make stock raising a feature equal in importance to crop raising, or, in other words, make the two features interdependent. Farmers have demonstrated that by using improved implements and adopting scientific methods, it is very easy to secure a large crop production.

We know, notwithstanding pessimistic utterances, that most of the farm lands of the United States have scarcely been scratched, and millions of acres, which can be tilled and are rich in fertility, have never been touched. Hence, the problem of supplying an abundance of the products of the soil for many generations should not cause worry.

If farmers will now realize the value of live stock, not only to make a market for their coarser products, but also the value of manure to maintain the fertility of the soil, they will effectually solve the problem of the high cost of living and at the same time increase their prosperity.

STOCK RAISING IS SCIENCE.

Stock raising, like tilling the soil, is a science. To make it a success, three features must be observed, namely, breed, care and feed. These three steps are interdependent and the farmer who neglects any one of them will be rewarded with a production which corresponds to the step that has been neglected.

Most farmers appreciate the value of breeds and care, and many are learning the science of feeding. Recent developments have, in a great measure, solved the problem of feeding.

SILAGE CAN NO LONGER BE IGNORED.

The silo has become a factor in stock feeding that cannot be ignored. It is to the stock feeder a goose that lays the golden egg. The silo is a safe insurance policy against disaster in feeding both winter and summer. It is to the farmer what the Mason jar is to the housewife.

Primarily, the silo is especially intended to preserve roughages such as corn, milo, kafir, or any of the sorghums. The silo not only preserves the grain, which amounts to approximately 62 or 63 per cent of the nutrient value of the plant, but it preserves, in a succulent form, the stalk, leaves, husks and tassel which represents from 37 to 38 per cent of the feeding value of the plant.

Where corn cannot be successfully grown, or the crop is lost because of adverse conditions, the other feeds mentioned can be relied upon. Kafir, cane

THE present cry of high cost of living centers around just two things, namely, meats and dairy products. If farmers will now realize the value of live stock, not only to make a market for their coarser products, but also the value of manure to maintain the fertility of the soil, they will effectually solve the problem of the high cost of living and at the same time increase their prosperity.—W. E. TAYLOR.

and milo are drouth resisting, and in fact are rarely ever complete failures.

The feeds referred to should be placed in the silo when in a succulent state, and if the silo is of the right construction and the canning is properly done, practically all of the nutrients are preserved.

Silage can be used during the winter or summer. If care is taken to keep it well protected with a mulch blanket it will not deteriorate for a number of years. By having a summer silo the farmer protects his stock against drouths, a contingency that should not be overlooked.

BALANCED RATIONS NECESSARY.

All live stock, in order to make a rapid growth or a profitable production, as is desired in the case of the dairy cow, must be given a properly balanced ration. They require carbohydrates and protein in the right proportions. Corn, milo, kafir and other sorghums are called carbohydrates. They furnish the fat, energy and heat, but do not promote growth.

Protein makes the growth. Neither protein or carbohydrates are profitable fed alone, but when fed in combination, in the right proportions, the results are splendid. Feeds containing protein are alfalfa, clover, soy beans, cowpeas and vetch. Some one of them can be grown wherever vegetation thrives, and in most sections all of them can be successfully grown. It is perfectly feasible to mix any of these nitrogenous or protein feeds with the corn or sorghums in the silo, thereby making a balanced ration, or the protein feeds can be preserved in the form of hay and fed with the siloed crop. Whichever way is adopted the results will be equally gratifying.

From an economical standpoint, the silo is certainly attractive. As an il-

lustration of the advantage of the silo compared with the old way of feeding, I present the following, which is strictly in keeping with many other like experiments:

180 DAYS TO FATTEN A STEER.

80 bushels corn at 50c ... \$40.00
1½ tons hay at \$12.00 18.00

\$58.00

To produce corn requires .2 acres

To produce hay requires .1 acre

Total 3 acres

SILAGE FEED.

180 days 50 lbs. daily, or

4½ tons at \$6 ton \$27.00

One ton hay 12.00

\$39.00

In favor of silo \$19.00

Corn and hay requires 3 acres; silage and hay requires 1½ acres; saving 1½ acres that will produce \$36 worth of corn which added to the \$19 saves a total of \$55 on one steer.

While in the above a charge is made of \$6 per ton for silage, corn can be grown for \$2.50 per ton and can be placed in the silo at an additional cost of about 50 cents a ton.

SILAGE FOR OTHER STOCK.

Nothing is superior to silage and hay to fatten sheep and lambs. Horses are very fond of it and it is greatly relished by pigs and hogs.

WHEN TO CUT FOR SILAGE.

Corn should be siloed when the stalk and leaves are green and the kernels are beginning to dent or have passed the dough stage. If the fodder is dry or it is too ripe, it will be necessary to wet it thoroughly as it is placed in the silo, otherwise fermentation will not take place, neither should it be siloed when too green because of the danger of putri-

faction. As a silo is being filled, the material should be distributed and thoroughly packed by tramping.

The farmer must also remember that in filling his silo he should exercise the same good judgment and care that his wife does in canning her fruit or making sauer kraut. Haphazard methods will usually bring poor results.

NECESSITY OF STOCK RAISING.

The high price of meat and the increasing demand all over the world insures to the stock feeder a very attractive price for many years to come. The day is past when the packer can secure his supplies from the western herds. Those once free pastures are now tilled farms and the vast herds are gone; hence it behooves every farmer to raise enough live stock to consume the coarser products from his farm. By so doing he at all times secures an attractive market for his products and in addition is pursuing the only course which will maintain the fertility of his soil.

The following figures from the Board of Commerce are very alarming, and unless a halt is soon called meat and dairy products will be more than a luxury to our people.

During the past six years beef cattle have decreased in the United States 14,306,000 head. During the year 1912 they decreased 1,230,000 head, and because of the great shortage we purchased from foreign countries 350,000 head. Sheep decreased 880,000 head, dairy cows 202,000, and swine 4,232,000 head during the same year.

Pasture for Hogs.

Three years of investigation has enabled the Iowa Experiment Station to assert in a recently published bulletin that the use of pasture in pork production will enable the farmer to sell his corn crop for prices ranging as high as \$1.05 a bushel when hogs are quoted at only \$6 a hundred.

The test leaves no doubt of the value of green pastures in fitting pigs for market. Compared with pigs fed in dry lot, forage fed pigs increased profits more than five fold in many cases. Alfalfa grazed pigs in 1911 gave a profit of more than \$3 each, as compared with 61 cents for dry lot pigs. Different forages when grazed by pigs gave a profit ranging from \$30 to \$80 an acre, charging the corn used in the ration at 50 cents a bushel and selling the hogs at \$5. When the hogs were figured at \$6 the profits ranged as high as \$154, that being credited to an acre of rape forage.

Although one trial of rape showed such unusual profits, the experimentalists consider alfalfa to be the best forage crop for pigs. It may be counted on for the cheapest gains per pound, and it meets a good many other demands that rape does not satisfy. The various forage crops netted the following acre profits (counting hogs at \$5 and corn at 50 cents):

Alfalfa in 1911, \$65.99; red clover in 1909, \$32.34; in 1910, \$34.62; rape in 1909, \$27.50 and \$27.72; in 1910, \$37.51, and in 1911, \$80.37; sweet clover in 1910, \$42.07; 1911, \$23.46; a mixture of oats, clover and rape in 1909, \$32.30; a mixture of oats, field peas and rape in 1909, \$22.83; in 1911, \$39.52, \$53.45 and \$64.63; and blue grass and timothy in 1909, \$15.23.



TRACTION FLOWING IS FUN FOR THE WHOLE FAMILY, INCLUDING THE "MISSUS"

The Sign of a Good Dairy Farmer

WE USE THE
DE LAVAL
Cream Separator

There are more than a million such signs on the best farms the country over. They are almost invariably a badge of prosperity and practical progressiveness. They are a most impressive object lesson to the farmer who hasn't one. They point the sure way to better things in dairying.

Where there's a De Laval user without a De Laval User's Sign a new enameled sign will be gladly sent him free of all cost.

Where there's a dairy farmer—big or little—without a De Laval Separator the De Laval User's Sign—that badge of prosperity and progressiveness—will come to him with his separator.

Why not buy a De Laval Separator now? Try one anyway, through the local agent, and satisfy yourself. This will cost you nothing and may save you much. There never was a better time to make so important and self-paying an investment than right now—and the "sign of a good dairy farmer" goes with it.

THE DE LAVAL SEPARATOR COMPANY
NEW YORK CHICAGO SAN FRANCISCO SEATTLE



It does not pay to keep more cows than can be well fed and taken care of, any more than it does to farm more acres than can be well planted and cultivated.

The effort to get satisfactory results from a really poor cow is comparable with an endeavor to plow satisfactorily with a poor implement. Much time and effort is wasted in either case and which might be put to better use.

"Upland Laura" is a Brown Swiss cow which on 365 days' test produced 15,357 pounds of milk and butter fat equivalent to 723½ pounds of butter. This record was made under the supervision of Cornell University.

"Her Majesty—Queen Alfalfa," is what the Pacific Dairy Review calls this wonderful crop. The alfalfa plant is worthy of the cognomen, but many of us nevertheless fail to give it due appreciation.

Our correspondence indicates that throughout Kansas the pastures have been unusually good this season. With a mild winter preceding abundant pastures and with the highest spring and summer prices known for butter fat, the year 1913 has so far been auspicious for the dairyman.

For the good of the cows and the cream check, too many dairy herds are brought from the pasture in the evening by the dog. There is an occasional dog that will drive milk cows as they should be driven, but such dogs are rare indeed. The dog that runs and chases the cows has no place on a farm on which cows are milked.

There is no occasion or need for the professional creamery promoter. He sells a creamery for \$5,000 which actually costs about \$2,500, and thus one-half of the purchase price goes into his pocket. If the community needs a creamery and the farmers are going to build it, they can build without the aid of the promoter and save half the money they would otherwise spend.

The man who grows grain for market, harvests a crop once a year and gets his money once a year. The man who markets his roughage through the milk cow has a daily cash income. It seems to us that there is a tremendous advantage in the latter operation. However, the milking of a few cows does not interfere with the growing of grain for sale.

An Indiana dairyman who practices soiling grows cane and cowpeas mixed as a green feed for his cows. He uses one bushel of cowpeas and 30 pounds of cane seed an acre and drills each separately. With a normal growing season this crop, he says, will produce ten to twelve tons of good green feed an acre. The same dairyman says that he will this year place this same mixture in his silo.

Since the readers of KANSAS FARMER are buying so many dairy cows brought into Kansas from other states—many buying from men whose business it is to ship these cows in and sell, others going east and buying directly from the owners—they should be sure that the animals bought are free from tuberculosis. Purchasers should require a health certificate from a competent veterinarian and it should be known that the certificate is valid. Cows bought from reputable breeders will be tested by the breeders. In many eastern sections tuberculosis is prevalent among dairy cattle and the Kansas farmer should protect himself by exercising such precautions as are within his power against the purchase of infected animals.

A Pennsylvania farm dairyman writes in an exchange that he feeds his calves whole milk the first seven days, then for seven days they are given two quarts of milk to one quart of warm water, then one quart of milk to three quarts of water for seven days, and after they are four weeks old they get only warm water. Bran and the best hay is kept before them all the time. At the end

of four or five days the dairyman says his calves have learned to clean up a pint of bran. The exchange does not say how successfully this man grows his calves. If they are thrifty as a result of this treatment, the dairyman has arrived at a cheap way of growing calves. In Kansas if we substitute warm skim milk for the water, with this substitution the other part of the feeding scheme is all right.

Stringy Cream Inquiry Answered.

Our subscriber, P. McF., Dickinson County, writes: "I have a grade Holstein heifer apparently in perfect health and which has been fresh for eight months. The last two weeks the cream from her milk has been stringy. What can be done to get the cream in normal condition?"

It is impossible for the editor at this long distance to diagnose this case with any reasonable degree of certainty. Our subscriber might have been more specific in the description of the condition of the cream and so aided in our giving a more intelligent answer.

Not long since we knew of a dairyman who had trouble with the quality of cream taken from the milk produced by his herd. We do not know how the cream could be better described than to say that it was stringy. A careful investigation into this particular condition revealed the fact that the trouble did not lie with the cows or quality of the milk, but that some germ had somehow gotten into either the milking utensils or cream separator and which germ caused a development in the cream such as justified the term "stringy." The cream did not develop a bad taste or odor, but plainly showed that something was wrong. It would not churn into butter.

The trouble was removed by a thorough sterilization of the milking utensils, cream separator and cans into which the cream was run, and the trouble disappeared. Our subscriber, we believe, would be justified in satisfying himself as to whether or not the trouble is with utensils or methods of milking. The utensils should be washed thoroughly with scalding water, inside and out, and the cream held in a different location than it has heretofore, and the results observed. If, after attention along this line, the cream continues stringy, then he should look to the cow.

Blue, bitter and slippery or putrid milk—either condition of which affects the cream—is caused by the presence of germs which have gained entrance to the udder. This trouble can be treated by milking the udder clean and by injecting a solution of boric acid—about 10 grains to the ounce of boiled water. The solution can be injected by using a milking tube, a rubber tube and funnel. The solution should be used twice daily after milking. The apparatus referred to above can be obtained through veterinarians who may possess such apparatus, or our subscriber may buy from a manufacturer of veterinary supplies.

Our subscriber does not state whether or not the cow's udder is inflamed. The chances are that it is not, inasmuch as usually inflamed udders occur at or near the time of calving. However, inflammation may be set up by irritation of any kind—injuries, such as kicks or blows, or another animal stepping on the udder, the retention of the milk too long without being drawn, and also by germs entering the udder, thus getting back to the proposition second mentioned above. From inflamed udders the milk secretion is altered, often thick and stringy and sometimes only a watery fluid. If the inflammation is great the condition is easily detected. We presume that the inflammation does not exist to such extent as to make the cow uneasy or our subscriber would have so stated. The chances are that the condition existing is due to the invasion of bacteria, and if so can be treated as above. However, another solution may be used, namely that of carbolic acid—one part to 50 parts of boiled water, injected in the manner described. The water should be pure, the hands clean when the work is done, the milking tube and funnel and rubber tube should be thoroughly sterilized by boiling for at least 20 minutes before and after its use.

Why He Prefers The BEATRICE Cream Separator

Farmer Onswon says:
Years of experience have taught me one indisputable fact: There is only one separator which combines high quality with moderate price—that is the BEATRICE.

Most every farmer is aware that the average high-grade separator of big capacity costs from \$100 to \$110. My BEATRICE, with 1000 pounds capacity, cost me \$75. Why pay more? There is no better machine.

Less than 2 minutes is all the time it takes to clean the machine with the patented device. It will leave the machine thoroughly clean and sanitary. Try it and see.

My BEATRICE beats any machine I ever had for easy running. Then, the close skimming. Why, I've let skimmed milk stand for a day and a half and you couldn't find a speck of cream on it. And—I haven't done so little repairing since I owned a separator. That's a point you want to consider.

The BEATRICE is a guarantee of separator satisfaction. That's what you want. Ask your dealer or write for booklet to the nearest address below. 600 lbs. capacity, \$55. 800 lbs. capacity, \$65. 1000 lbs. capacity, \$75.

THE CONTINENTAL CREAMERY COMPANY
Topeka, Kan. Oklahoma City, Okla.

APPLETON

Appleton-Goodhue Windmills will pump your water economically, work whenever the wind blows and keep at it for years. For a nominal sum we will insure for 5 years against cyclones, tornadoes, anything but neglect. Why experiment; buy a simple, sturdy, safe, self-oiling, self-governing Appleton Goodhue outfit.

FARM POWERS

When the wind don't blow you will need an Appleton Gasoline Engine and pump jack. You can belt on to the pump, when needed, or run your churn, hand sheller, etc. For heavy work, running the husker or silo filler you have your pick up to 18 H. P. Hopper cooled, speed changing device, single side rod; a perfect engine. Write us today.

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1½ TO 18 H.P. SKIDDED-PORTABLE.

SAVE 1/2 THE COST OF HARVESTING

Our Wonderful WINNER WONDER 4-horse-power engine attached to your binder does all cutting, elevating and binding of grain—only enough horses needed to pull binder—enables you to harvest regardless of the condition of weather or grain. Engine fully guaranteed and equipped with every modern improvement including special Ball Bearing Friction clutch, carburetor, etc. Speed easily changed without stopping engine.

Cuts Grain Any Place Binder Can Be Hauled

After harvest detach engine for general farm use—grinding feed, sawing wood, shelling corn, fanning grain, etc. Write immediately for special price and big illustrated catalog. Don't wait! WRITE TODAY.

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Forty and one years ago Montgomery Ward & Company started the first mail order business in the history of the world. It has had many imitators, but the strict standard of service and honesty—its foundation stone—has been the great distinguishing mark between this business and that of those who copied our methods. From a bare little barn the business has passed to building and building until it is now housed in the enormous structure shown herewith—the greatest of its kind and the largest concrete building in the world, comprising nineteen million cubic feet. The fifty acres in this building and the many other acres in its branches at Kansas City and Fort Worth, Texas, are filled with things *you* need. This immense structure, and the great buildings of its branches, are monuments to the wisdom of the millions who insisted on buying their household and farm necessities at the lowest possible cost—with all the middlemen's profits cut out. Without the confidence of millions of customers in forty and one years these buildings would not have been possible. To those who are not customers of Wards we send this message:

The Mirror of the immensity of these buildings will be found in the famous Ward book of bargains—1,000 pages—weighing over three and one-half pounds.

This great book—the real solution of the high cost of living—will be sent to all who ask for it—Free—upon request without any obligation whatever.

A post card will bring it. Why not sign and send now? Address Dept. Y-15,

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FT. WORTH, TEXAS.

The House That You Built

This is the house built by the folks
who wanted to buy the goods they used
at the lowest possible price.

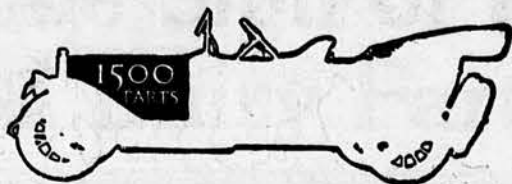
This is the home of the sure square-deal,
where profits are short and values *real*,

Where furniture, foods and clothing are sold,
as well as the needs of farm and fold.

This is the source—the home of supply—
where there's *never* a question of prices high.

This is the house that *you* built.

Your oil must reach all friction points



The friction-points in a steam engine are reached with lubricants through special mechanical appliances, and separate oil cups.

In the automobile motor, they are all reached through one lubricating system. Your car, therefore, requires:

An oil whose "body" or thickness is suited to your feed system—an oil that will properly reach to all of the friction points.

If you use an oil whose "body" is unsuited to your feed system, or whose lubricating quality will not properly stand hard service, you will get one or more of the following results:

- (1) Escape of the compression and explosion past the piston rings.
- (2) Unlubricated cylinder walls at the upper end of the piston stroke.
- (3) Imperfect lubrication of many of the bearings.
- (4) Excessive carbon deposit. (Due to the oil working too freely past the piston rings and burning in the combustion chamber.)
- (5) Excessive oil and fuel consumption.
- (6) Worn wrist pins.
- (7) Unnecessarily rapid deterioration in your motor.
- (8) Loose bearings.
- (9) Noisy operation.

The average motor has 1500 parts. In different motors, these parts differ both in measurement and construction. No one oil can possibly meet the requirements of all motors.

To establish a sound guide to correct lubrication we have therefore taken a step of the utmost importance to the automobile owner.

Each season we carefully analyze the motor of each make of car.

Based on this analysis, and on practical experience, we specify in a lubricating chart, printed in *part on the right*, the grade of Gargoyl Mobiloil we have found best suited to each of the various models.

If you use oil of less correct "body" or of lower lubricating quality than that specified for your car, incomplete or inefficient lubrication is certain to follow. Unnecessary friction, and serious damage must result.

We will mail on request a booklet containing our complete chart together with points on lubrication.

For the lubrication of water-cooled gas and oil engines and tractors use Gargoyl Mobiloil A in summer and Gargoyl Mobiloil Arctic in winter. For all air-cooled gas and oil engines, use Gargoyl Mobiloil B.



The various grades, refined and filtered to remove free carbon, are: Gargoyl Mobiloil "A", Gargoyl Mobiloil "B", Gargoyl Mobiloil "D", Gargoyl Mobiloil "E", Gargoyl Mobiloil "Arctic".

They are put up in 1 and 5 gallon sealed cans, in half-barrels and barrels. All are branded with the Gargoyl, which is our mark of manufacture. They can be secured from all reliable garages, automobile supply stores, hardware stores, and others who supply lubricants.

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 BOSTON: 49 Federal St.
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 Distributing warehouses in the principal cities of the world

WATER

City convenience brought right to your country home. Think what it would mean to have an abundance of water under pressure the year round ready just where needed at the turn of a faucet.

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READ KANSAS FARMER'S CLASSIFIED ADVERTISING PAGE FOR READY BARGAINS

THE FARM



Parasite Destroys Alfalfa Weevil.

Keep your eye open for the alfalfa weevil, which is headed this way from the West and which has done much damage to the alfalfa fields of Utah. The weevil was fully described and illustrated in KANSAS FARMER issue of March 22. Report presence of weevil to the Entomological Department of the Kansas Agricultural College. The Federal Department of Agriculture has discovered in Italy a parasite that destroys the weevil.

Salt for Pear Blight.

S. C. Y., Coffey County, Kansas, writes: "Having seen Mr. Wellhouse's answer to C. H. P., Leavenworth County, I hasten to suggest that salt seems to be an effective remedy for pear blight. It should be used in the form of a solution and poured on the soil underneath the trees. The trees get the benefit through the roots. The writer always pours salt brine from meats, pickles or fish on the soil beneath his pear trees, and the half dozen vigorous young trees at his home are thrifty and beginning to bear and have no sign of blight. This remedy is neither expensive nor difficult to use. Try it."

Encourage the Girl, Too.

A great deal is said nowadays about giving the farm boy something of his own instead of having him do all the disagreeable choring. It is still taken for granted that every girl is born with a love for cooking. Why should she like to cook when it is looking lettuce, shelling peas, peeling potatoes, and washing dishes, with never the credit for making a savory dish all by herself? Apply the same rules in interesting girls in housework as are coming into vogue for the boys. It may be more trouble to tell the girl than to do it yourself, but you owe it to her.—H. D., in Industrialist.

Sweet Clover Moved Afar.

One of the editor's friends recently made a visit to Washington and while there, called on the Federal Department of Agriculture, where he met "Jimmy" Westgate, a former Kansan who is employed by the department in sweet clover investigations. Our friend learned that the principles controlling the acclimatization of seeds as in the case of corn, wheat, etc., do not apply to sweet clover. Westgate said that sweet clover seed taken from Tennessee to Montana had the first year proven itself equal to the rigors of the Montana climate and that in his judgment it was not necessary to obtain sweet clover for seeding from fields grown near the place where the clover would be started. If Westgate's conclusion is correct, Kansas sweet clover growers will find seed much more easy to obtain than they have heretofore believed. This statement means that it will be possible to go into those sections where sweet clover is and has been for years grown abundantly, import that seed to Kansas and with good chances for a good stand and good production.

Soil and Fertilizer Analysis.

B. A. S., Labette County, Kansas, asks if the Kansas Agricultural College will make soil and fertilizer analyses.

The department of Chemistry does make a few soil analyses where there is an indication that benefit will result to the farmer from the knowledge gained by analysis of the soil. Not many of these are made, however; first, on account of the expense which is almost prohibitive, and second, because of the fact that in most instances very little information regarding soil deficiencies can be told by a soil analysis. A letter from the college says:

"When an analysis of the soil is obtained with other information that can be gathered only by examining the soil in the field, it has considerable value and nearly all of the work we are doing along this line is in connection with our soil survey. Chemical analysis of the soil coupled with the soil survey, is of immense value, but when taken alone has practically no value in enabling the farmer to determine the fertilizer needs of his soil."

The same department makes fertilizer analyses of all brands of fertilizers sold in the state. This information may be

obtained by any farmer desiring it. Any farmer of the state desiring analyses made, should correspond with J. T. Willard, dean of the Department of Chemistry, Manhattan, Kansas.

Summer Fallow Experience.

Subscriber J. M., Harvey County, writes: "I believe my experience in summer fallowing will prove of interest to KANSAS FARMER readers. I let 20 acres of corn ground lie last year. It had been plowed in the spring. I kept it clean through the summer and last fall sowed to wheat. It is the finest wheat field in the neighborhood. Chinch bugs and dry weather could not hurt it much. It will make at least 30 bushels to the acre, while most of my neighbors will not get more than five to ten bushels, and others will get nothing."

"I talked with a neighbor farmer one time about summer fallowing and he said it would not yet pay in Kansas to let corn ground rest a year once in a while. My experience is that it will pay big. I have practiced this for the last ten years and have never raised less than 30 to 35 bushels an acre, but one year grew 41 bushels. The effect of summer fallow is apparent for the second and third years."

"It seems, though, that farmers here want to stick to the old way—raising a wheat crop from a field every year even though it only yields five or ten bushels an acre. If a man keeps his eyes open he can plainly see that the crops are getting poorer as the years pass. Farmers generally are raising small corn crops compared with 15 or 25 years ago, but the most of them will take no steps to produce larger yields."

"I planted ten acres of cowpeas last year. I plowed part under and the rest I cut for hay. I planted the field on which the cowpeas grew to corn this year, but as the chinch bugs have eaten up the corn I will not be able to see the difference between corn following cowpeas and that following other farm crops."

"I have bought a silo this year. I wish I had bought and put it up last year."

Law on Hunting and Fishing.

Subscriber T. J. H., Harvey County, Kansas, writes: "I have to laugh to myself when I pick up some of the other farm papers and see how some folks brag on them. It seems to me they have not seen any other farm paper but that one. I have been taking KANSAS FARMER for a good many years, and I like it better than all others, and it is getting better all the time."

"I wish you would give me the law, briefly, on hunting and fishing. State if the tenant has the right to keep people off the farm if the owner says they can hunt and fish on the farm."

We interpret the law to mean that it is necessary for each person desiring to hunt in the state of Kansas, unless he be an individual, resident, owner of the land on which he desires to hunt, to obtain a license from the county clerk of any county of this state, under seal, upon the payment to such county clerk of a fee of one dollar. From the above statement it is necessary for a renter to obtain a license if he desires to hunt on ground other than that which he owns.

Answering the question as to whether the tenant or the owner has the right to grant to outsiders the privilege of hunting or fishing on a farm, it is our opinion that during the term of lease the tenant has the full right and the only right to grant permission to any person to hunt, fish or loiter upon such premises, unless the owner of such land in renting same has retained full hunting and fishing rights. If permission to hunt or fish is obtained from the person having authority on premises it must be in writing.

At first glance it might seem that the two paragraphs above were contradictory. But, under the law, every man must obtain a license to hunt on land which he does not own, and the tenant of a farm is the only man who can grant permission to fish or hunt on that farm.

Celery should never be omitted when serving poultry, and roast beef without potatoes browned under the meat never tastes the same.

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CHRIS HICKEY, Fairbury, Neb.

Plowing Under Green Manure Crops.
F. A. H., Rice County, asks: "At what stage of growth should crops be plowed under for manuring to get the best results?"

Manuring crops should be plowed under when green. At this time they decay most rapidly and the plant food contained in them is more quickly available for use by growing plants. The plowing under of the crop when green also causes a fermentation which is beneficial to the soil. Be it understood that these remarks apply to the plowing under of any vegetable matter, whether clover, cowpeas or weeds. The first named are the more valuable green manuring crops, but to miss an opportunity to plow under a heavy growth of green weeds is to miss a most excellent chance to accomplish beneficial results for the soil.

Charge for Cutting Silage.

Subscriber E. A. L., Kingman County, asks: "About how much is paid by farmers for the use of engine or engine and cutter together for filling silos?"

Last year at about this time KANSAS FARMER printed the experiences of a considerable number of subscribers who had hired both engines and cutters for filling silos. Two Shawnee County subscribers reported that they had hired a steam engine for \$7.50 a day, they furnishing the coal and the water and the engine owner furnishing the engineer. In each instance the water was delivered to the engine by hose from the windmill, so that it was not necessary to haul water.

At about the same time we reported that one of our subscribers had bought a 10 H. P. gasoline engine, mounted on a truck, and had also bought a cutter, and that he proposed to start the silo filling season with this outfit, charging 35 cents a ton.

We also reported the experience of a Pawhuska, Okla., subscriber who had hired an engine at \$5 a day. This subscriber owned his cutter, and put up 40 tons of silage daily. He expressed the belief that a charge of 30 cents a ton for furnishing engine and cutter would be about the right charge.

Tankage and Hog Cholera.

Subscriber L. A. T., Johnson County, asks if cholera will be brought on to the farm through the feeding of tankage.

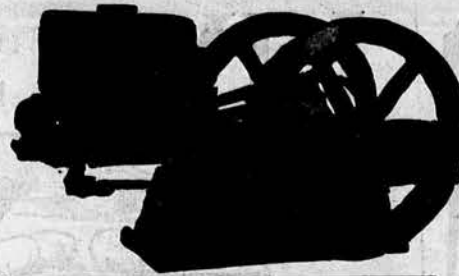
We are doubtful if cholera can be so transmitted. We draw our conclusion from the fact that in the production of tankage a tremendously high temperature is reached—so high in fact, that it would seem that all disease germs would be destroyed. A manufacturer of tankage laughs at the idea of cholera being transmitted by tankage. He admits, however, that the chances are in favor of cholera germs being present in the material from which tankage is made. It seems quite impossible to believe that the raw product from which tankage is made can be entirely free from the cholera germ. Tankage consists of the ground refuse meats, fats and intestines. To thoroughly dry these, it is apparent that a high temperature must be maintained for a long time and it would seem sufficient to destroy the germs of cholera. The wide and increasing use of tankage, particularly in hog feeding, would have by this time, it seems, demonstrated that tankage is rarely if ever responsible for cholera.

Plowing to Destroy Bugs.

Subscriber B. R., Lyon County, says the chinch bugs have taken his oats and asks if the bugs could be destroyed by plowing the field.

It is our opinion that the subscriber could not do better than to plow under these oats and the plowing can more effectively be done right away than later. The field should be plowed at such depth and so carefully as will permit completely turning under the growing oats. The furrow slice should be cut entirely off and turned over and a chain or weed hook should be used on the plow in order to help bury the growing crop completely. After the plowing is done the field should be harrowed with a heavy drag harrow and the teeth slanted so that the harrow will have as much packing effect as possible. This should be done, particularly if the weather should continue dry. If, after the plowing is done, a heavy rain should come and thoroughly pack the soil, harrowing might be unnecessary, although the job would be all the better done if the rain followed the harrowing. The point is to bury all the bugs and so pack the soil that they cannot survive and find their way out.

When boiling peas remember to have plenty of water for them to roll about in and do not cover them.



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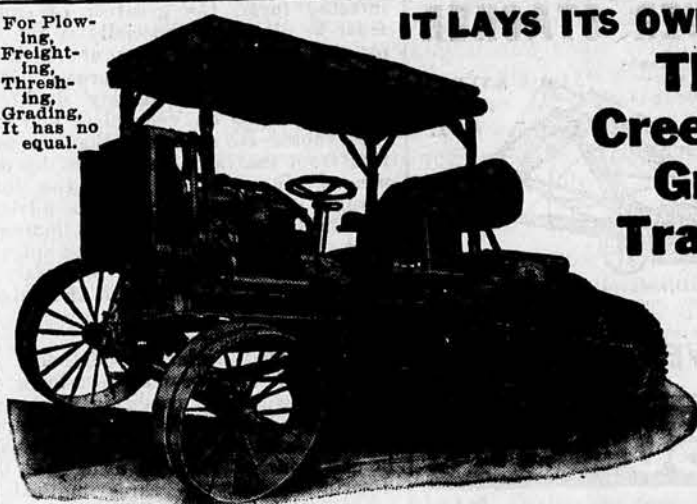
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TO EXCHANGE—Western Kansas land and other property. Submit propositions.
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1,000 ACRES OF WHEAT LAND WANTED. Not farther out than Trego County. Give good description in the first letter. Must be priced worth the money. Don't care for any improvements.
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FINE 160 A. FARM, lime stone soil, good house, barn, etc. Nicely located. Will produce wheat, corn, clover, alfalfa. Part cultivated, balance pasture, meadow. Close to Fredonia, Kan., in oil gas belt. Will take \$40 a. and is worth \$75. Address Owner, Lock Box 807, Fredonia, Kan.

RANCH—Would divide nicely for three farms. 823 acres, ¼ under cultivation, well improved; alfalfa and spring water in abundance; plenty of bottom and timber. None better in Central Kansas. The owner is not a farmer, and wants to sell. Would take in a stock of merchandise, small farm, or city income, and loan back on the ranch up to \$30,000. The rent will net 6% on \$60,000, and occupied by owner this ranch will produce net annual profits of \$15,000 to \$20,000. Is this the kind you want? Will you try to get it? Come, look it over, and tell us what you have.
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LIVE STOCK



Volume 79 of the "American Short-Horn Herd Book" has just come from the press. This volume contains 20,000 pedigrees, 9,000 of which are bulls numbered from 350001 to 359000, and 11,000 cows numbered from 104001 to 115000. This volume is now ready for general distribution, the price for non-members being \$2.00 at the office of the association, or \$2.30 postpaid. Volume 80 is in the hands of the printer and contains 20,000 pedigrees.

Immune Brood Sows.

J. A. B. Anderson County, writes to ask whether two brood sows which have passed through a scourage of cholera can be safely brought on his place. If these two sows have had the cholera and are thoroughly recovered from it, they will be immune for life. If they have recovered completely from the disease they might become very useful brood sows. In moving hogs from an infected farm, the greatest of caution must be observed, especially if the hogs on the home place have not been immunized against the disease. These sows should be thoroughly disinfected before bringing on your place and great care should be exercised that no infection from the farm be brought by other means. In order to avoid the future ravages of cholera, it would be advisable to establish a thoroughly immunized herd, immunizing the young pigs at weaning time. This can be safely accomplished at this time and at minimum cost.

Cholera Vaccination Methods.

One of our Montana subscribers who is starting a pig ranch in that state in referring to our article on vaccination of hogs for prevention of cholera in our issue of May 24 asks that brief descriptions of the three methods of inoculation be given. Perhaps others of our subscribers do not as yet perfectly understand these terms. In the "serum alone" method hogs are inoculated with serum which gives temporary immunity lasting from a few weeks to several months. When this temporary immunity passes, the hogs will again become susceptible to cholera. The simultaneous method consists of inoculating the hogs with the proper dose of virus or virulent blood at the same time the serum is given. This gives a permanent immunity. This method must never be used where there is any cholera infection in the herd. The results might be very disastrous if virus is used where even the slightest infection is present. The third or "double method" as it is called, consists in using serum alone first, and then after a period of about 10 days, injecting serum and virus, simultaneously.

Skim Milk For Pigs.

Our subscriber, R. J. A. Lyons County, Kansas, asks it is possible to feed small pigs so much skim milk as to cause them to break down in their hind legs. Skim milk has long been recognized by hog men as an ideal feed for young growing pigs. It is rich in bone and muscle making material and easily digestible. It is a one-sided diet, however, unless properly balanced with a sufficient amount of feeds of a carbonaceous nature. The present difficulty with these pigs, however, can hardly be attributed to the feeding of too much skim milk.

If they have been given all the skim milk they will consume with no additional feed, they have not been fed in such a manner as to give the best results from the profit standpoint. The composition of skim milk makes it especially valuable as a supplement to corn, and a great deal of experimental work has been conducted along this line by our various experiment stations. These results show that the largest profit comes from feeding the milk at the rate of about three pounds for each pound of grain fed. Where the relative amount of skim milk has been larger, the profit resulting has not been as great. Various methods have been proposed for determining the cash value of skim milk. Ex-Governor Hoard of Wisconsin, states that to find the value of a hundred pounds of skim milk fed in conjunction with grain, he multiplies the market price of live hogs in cents

per pound by 6. Gurler of Elgin, Illinois, figures that skim milk is worth per hundred pounds, one-half the market price of corn per bushel.

Skim Milk For Brood Sows.

Subscriber W. A. S., Johnson County, Kansas, asks if skim milk, fed either sweet or sour, is injurious to pregnant sows or to sows suckling pigs.

As a farm boy and a farmer the editor was for 30 years, we fed skim milk both sweet and sour, to pregnant sows and in all our experience we have never noted any ill results. We are free to say, however, that we do not believe we ever gave a sow all the skim milk she would drink. This, because there is no economy in feeding skim milk this way, and second, because we never had skim milk enough to go around at the rate of feeding any animal all it would drink. We do not think that the feeding of milk will in any way injure the sow after farrowing. We are confident that skim milk is a first class good feed for a sow suckling pigs. The greatest value comes from feeding skim milk in combination with other feeds since it will go a long way toward supplying the protein needed by the sow in milk production.

We are confident in the belief that skim milk will not injure your sow except possibly as a result of over-drinking, and the same injurious effect would come from over-eating any feed.

The milk can be fed successfully either sweet or sour. However, in our judgment the greatest value comes from feeding it sweet and as promptly as possible after it comes from the separator. The feeding of milk in abundance, one time sweet and another time sour, we think might result in some derangement in digestion. Consequently it is our opinion that to get the best results, at least from liberal feeding, the milk should be fed in as near the same condition all the time as possible; that is, either fed sweet all the time, or sour all the time. However, a variation in condition of the milk is, in the case of hogs, not so objectionable as in feeding calves.

Sheep For the Small Farm.

J. M. Harvey County, Kansas, writes as follows: "I have a 160-acre farm, forty acres of which is in wild grass pasture. Will it pay to run the whole farm to sheep and hogs, with silo and alfalfa? I have a flock of fifty sheep now. Some sheared ten pounds of wool. Some of the lambs are weighing up to one hundred pounds now."

A small flock of sheep should form part of the live stock equipment of many of the farms of Kansas. This much neglected branch of live stock farming will return a larger income in proportion to the investment in feed and labor than any other class of live stock commonly handled, excepting poultry. The question as to whether it will pay to run the whole farm to sheep and hogs is one that could hardly be answered positively at such long range. A small flock of sheep might be extremely profitable, while devoting the whole live stock interest of the farm to sheep and hogs might not be feasible. The early spring lamb is always in demand and at high prices at our central markets. As a rule the man with a small flock finds himself handicapped in securing this high class market because he does not have a sufficient number to make a carload shipment. A little co-operation between several farmers having small farm flocks will easily overcome this handicap.

The silo has become a most important factor in utilizing to the fullest extent the coarser feeds of the farm, but the advantage of using silage over the use of the same feeds in the dry form have not been so marked with sheep as with cattle.

Hogs have always been recognized as one of the money making lines of live stock farming. If properly handled they form one of the most profitable means of marketing the grains of the farm. A proper use of pasture is a very important factor in securing the best return in pork production.

Missouri is credited with having 203,569 colonies of bees.

Dip for Dollars

Dipping sheep and swine is a paying proposition. Every time your stock pass through a Dr. Hess Dip solution they increase in value. This is because Dr. Hess dip renders them less liable to disease and free of tantalizing vermin. It's the healthy hog that puts on the fat, hence

Dr. Hess Dip and Disinfectant

—because it makes for hog health—also makes for your profit. Dr. Hess Dip is approved by the Government as an official dip for sheep scab. It destroys all germ life and is therefore a sure preventive of contagious live stock diseases. A splendid disinfectant and deodorizer. Sold on a money-back guarantee if not satisfactory.

Write for dip booklet.

Dr. Hess & Clark, Ashland, Ohio



VACCINATE YOUR OWN HOGS

The use of serum as a cholera preventive is generally acknowledged and daily proven. Any man can administer the serum. Write today for full information, giving the number of head you own and average weights.

Do not wait till your herd is infected or till cholera is in your immediate neighborhood. With an expenditure of 20 or 30 cents you can immunize your pig against hog cholera for the rest of its life.

The Star Serum Co.,

709 Live Stock Exchange Building,
Kansas City, Mo.
Phones: Bell, Main 3109; Home, 5330 Main.

Why Forswear

Your Allegiance to "Uncle Sam" and take up your abode where the growing season is short and the climate is rigorous, when the very best land that the sun shines on is in the United States, and where, in many places, you can work outdoors almost all the year 'round?

If you think of moving from your present location, ask me where to obtain good land at reasonable prices. Say what state you prefer and I will send information to you free.

R. A. SMITH,

Colonization and Industrial Agent,
Union Pacific Railroad Co., Room
242 Union Pacific Building,
OMAHA, NEBRASKA.

Pump Grind Saw
Made for hard use.
Wood Mills are Best, Engines are Simple,
Feed Grinders, Saw Frames, Steel Tanks
Catalogues free.
Agents wanted.
Perkins Wind Mill & Engine Co., Est. 1860
140 Main St. Mishawaka, Ind.

\$10.00 Sweep Feed Grinder | **\$14.00 Galvanized Steel Wind Mill**
We manufacture all sizes and styles. It will pay you to investigate. Write for catalog and price list.
CURRIE WIND MILL CO.,
Seventh St., Topeka, Kansas

Hopper & Son, Manhattan, Kansas Builders of Concrete Silos

Write for list of silos we have built. Ask our customers about them.

When writing advertisers, please mention Kansas Farmer.

Age For Gilts to Farrow.

A Lyons County, Kansas subscriber asks at what age a gilt should farrow. We cannot expect such good results from the use of immature gilts as brood sows as from more mature brood sows. A good brood sow may be thoroughly satisfactory for a number of years, her usefulness gradually decreasing until it becomes necessary to dispose of her. The brood sow herd, therefore, must be constantly replenished by the selection of choice gilts for breeding purposes. The gilts are but experimental brood sows at best until their worth has been established. Fall gilts are usually more satisfactory as brood sows since they are usually better developed at farrowing time. When it becomes necessary to breed spring gilts for spring litters, early farrowed, well matured gilts should be selected as far as possible. These gilts should not always be discarded because of the fact that the first litters may be small, especially if the dams and grand-dams back of them on both sides have been prolific. It is a common observation of breeders of hogs that practically all of the outstanding individuals have been the offspring of mature sows. In selecting gilts to replenish the brood sow herd, it is always desirable to select gilts from mature mothers. In this way only can the vigor and vitality of the female portion of the breeding herd be kept up to a good, high standard.

Take Good Care of Colts.

The sire and dam of a horse are not the only points to be considered in the production of heavy drafters. The care of the colt probably will influence its growth and development as much as its breeding. Some very good horses sometimes are produced from inferior stock if they are well cared for. The colt should be taught to eat some grain as soon as possible and then, if the dam should get out of condition either from over work or other causes, the colt will not be stunted, as many often are. If some oats or bran is placed within reach of the colt when the mares are fed, they will soon learn to eat. If alfalfa hay is available keep it before them, for it is a good conditioner, as well as one of the best feeds grown on the farm.

The colts should have the run of a lot so they will get plenty of exercise, but they should not be allowed to follow the mares in the field. If given this privilege they will keep suckling the mares whenever they stop and will keep them excited and cause them to tire easier than if the colts were kept out of sight. But the damage to the mares is the least part of it. The colts will walk so much in a day that they will be tired out at night and they will be stunted, as they are when worked too young.

When the mares are brought in from the field and are hot and sweating the colts should not be allowed to suckle till the mares have rested and cooled off. The hot milk will cause scouring, and this is to be avoided as much as possible.

If several colts are kept together they usually will cause very little trouble when the mares are taken away. A good plan is to have a small pasture adjoining the barns so the colts can have the run of the pasture but may go in the barn at any time. They should never be left out in severe storms, but should have access to a barn or shed at all times. If these few precautions are followed, better horses will result, and this will increase the profit to the breeder as well as furnish better animals for work. And a ready market always can be found for the surplus stock.—Industrialist.

Some Painting Pays.

Why not use a little paint occasionally? It prolongs the life of the buildings, adds value to the price of the farm, and helps to make a "home beautiful." Buildings last 25 to 50 per cent longer if painted. That means that a building which would last 50 to 75 years unpainted would last 75 to 125 years if painted. It is the same with certain fences and farm implements. It is easy to see that paint saves money.

If you keep the top soil on your farm you will keep the whole farm; if you lose the top soil off your farm you lose the whole farm. If you fill up the small gulleys in your field you will have no large ones. Drain tile will give you perfect control of every foot of soil and every drop of rain on your property.

Do You Want Men? Do You Want Work?

THE harvest coupons are printed again this week—it is not too late to get help or to get work. You are urged to use KANSAS FARMER. Fill out the coupons and mail at once.

Last week harvest began in the dry spots in the southern tier of counties in Kansas. This week harvest is on generally across the state south of the main line of the Santa Fe. Next week it will move north to the Union Pacific, and the next to the north line of the state.

The rains of the past two weeks have been local. Wheat is extra good in spots—in other spots fair, and in others poor.

Kansas needs men for harvest and for other work. No complaint regarding shortage of help has yet reached us, but the real press has not yet come. Many farmers write that they have secured through KANSAS FARMER the men needed, while men reply that they have found positions, and we have just cause for a feeling of satisfaction as a result of this harvest hand propaganda.

Farmers who want harvest hands will please cut out this blank and mail it at once to KANSAS FARMER, T. A. Borman, Editor, Topeka, Kansas.

When will your harvest begin?.....

How many men do you want?..... Do you want shockers, pitchforks, stackers, extra teams?.....

What have been the prevailing harvest wages per day?.....

Will you need any men after harvest and at what kind of work?.....

Name.....

Address..... R. F. D..... State.....

Telephone Office..... Telephone Address.....

If you want to work in the harvest fields, fill this out and mail to KANSAS FARMER, T. A. Borman, Editor, Topeka, Kansas.

Name..... Address..... Age.....

Occupation..... Have you ever worked in the harvest fields or at outside day labor?.....

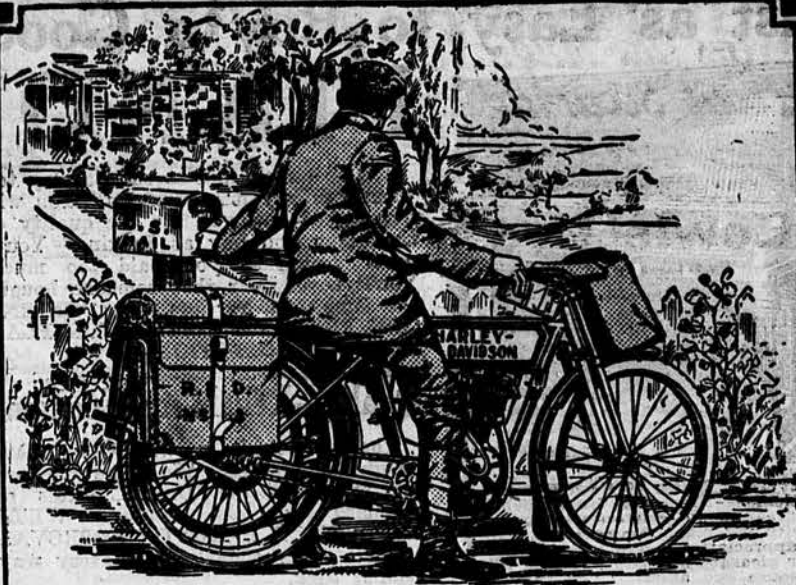
Can you go to any county?..... Do you want work after harvest, and what kind?.....

If you have a team or harvesting outfit and want to give additional information, write on separate sheet. We will endeavor to put every man who applies into direct communication with the farmer nearest him we know what wants harvest hands.

KANSAS FARMER will act as a clearing house for farmers who want harvest hands and for harvest hands who want work. No charge whatsoever will be made to anyone, under any circumstances, for the service, unless you want information by telegraph or telephone, in which case you will pay the charges.

Fill out one of these blanks and mail at once to

KANSAS FARMER, T. A. Borman, Editor, Topeka, Kansas.



Why the Harley-Davidson is the Best Motorcycle for Country Use

THREE hundred thousand farmers last year had their mail delivered to them by carriers riding Harley-Davidsons. We believe there are more R. F. D. Carriers today riding Harley-Davidsons than there are riding all other makes combined. This in itself proves that the carriers have found that the Harley-Davidson possesses in the greatest degree the two qualities which a motorcycle must have if it is to render satisfactory service on country roads, namely; Power and Comfort.

POWER

That the Harley-Davidson is the most powerful motorcycle built is conclusively proven by the fact that it has won this season such celebrated contests as:

Colorado Springs-Pueblo 90 mile Road Race.

Bakersfield, California Road Race. (In this contest the Harley-Davidson 8 H. P. twin attained a speed of 68 miles an hour.)

Seattle-Portland Endurance Run.

Oklahoma Road Race.

Springfield Hill Climb. Missouri Road Race. (In this contest the Harley-Davidson defeated its nearest competitors by 29 minutes.)

Established a new World's Record at San Jose, California, when the Harley-Davidson twin cylinder traveled 346 miles in seven hours on a dirt track.

COMFORT

A motorcycle to be ridden in comfort on country roads must be so built as to assimilate all the jar, jolt and vibration which would come from irregularity or roughness of the road. For this purpose in building the Harley-Davidson, we incorporated the Ful-Floteing Seat, which places 14 inches of concealed compressed springs between the rider and the jars and has a play or action of nearly 4½ inches. Thus when the rider strikes rough stretches of road the Ful-Floteing Seat will assimilate all irregularities up to 4½ inches. Therefore, while the back wheel may vibrate up and down over the bumps the rider rides along in an even line.

The Ful-Floteing Seat is a patented device, found only on the Harley-Davidson. Unquestionably this one feature is partially responsible for the fact that there are more Harley-Davidsons to be found in rural communities than any other make.

The Harley-Davidson holds the world's record for economy and will travel five to ten miles on a cents worth of gasoline. It costs nothing when idle and never tires. We have letter after letter from parents stating that the Harley-Davidson has been the means of curing the desire of their boys for city life and making them happy and contented with life on the farm.

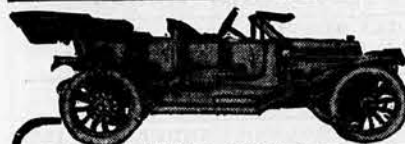
We have issued a little booklet entitled "The Harley-Davidson on the Farm." Copy of this together with catalog can be obtained from our nearest dealer or will be gladly mailed direct, on request. Call on our dealer or write for copies of these books today.

HARLEY-DAVIDSON MOTOR COMPANY

Producers of High Grade Motorcycles for Over Eleven Years.

795 A Street

MILWAUKEE, WIS.



GET THIS CAR FREE

Students who take my course in motoring and qualify for the Agency receive this big 50 H. P. Coey Flyer without one cent in cash.

MY BIG BOOK TELLS HOW—I WILL SEND IT FREE Also first lesson to every one answering this ad. C.A. Coey, Pres., C.A. Coey's School of Motoring Dept. 202 1424-26 Michigan Ave., Chicago.

When writing advertisers, please men-

Broom Corn

Is probably the most profitable crop to be planted after harvest. Prices and Broom Corn Pamphlet mailed without cost.

Ross Brothers Seed House
317 E. Douglas Ave. Wichita, Kansas.

BEEES on the Farm

Need little attention and pay big profits. If you are interested in them send for a sample copy of Gleanings in Bee Culture. Also a bee supply catalog. THE A. I. ROOT CO., Box 320, Medina, Ohio
tion KANSAS FARMER.

Just as Easy to Buy a Good PIANO!



It's so simple and so satisfactory too when you buy it at Jenkins. You will never need apologize for the quality of the piano you buy at Jenkins. You'll never feel that you paid too much. You'll never hear that someone bought the same piano for less. The JENKINS ONE PRICE, NO COMMISSION PLAN IS YOUR PROTECTION.

Quality-Reliability-Economy

These positively go with every piano bought of Jenkins. We make the lowest prices in the United States on standard high class pianos. WE'LL SEND YOU A PIANO ON APPROVAL. If it is not satisfactory in every way, send it back.

Steinway, Vose, Kurtzmann, Elburn Pianos on comfortable payments. Write for catalog and prices. High class guaranteed Player-pianos, \$435 and up. Call or write.

What They Think of Good Pianos.
Gentlemen—I feel that I am indebted for a great many courtesies in connection with my piano contract and I am very appreciative. Trusting to have further pleasant business relations with your house and assuring you that my piano is still in most excellent condition—Prof. D. F. Conrad, head of the piano department of Central College of Lexington, says it is the best Vose piano he ever played on. I am
(Signed) B. M. LITTLE, Supt.
Lexington Public Schools, Lexington, Missouri.

J. W. Jenkins Sons Music Company, Kansas City, Mo



Treat Them

to the treat of treats—
always welcomed, by all,
everywhere—

Coca-Cola

Sparkling with life—delightfully cooling—
supremely wholesome.

**Delicious—Refreshing
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Demand the Genuine—
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THE COCA-COLA COMPANY, Atlanta, Ga.

PURE BRED POULTRY ORPINGTONS.

WHITE ORPINGTON EGGS, \$2.00 PER 15—\$10.00 per 100. Special price on larger amounts. Ed. LeClere, Central City, Iowa.

BIDE-A-WEE BUFFS — EGGS FROM winners. Mating list free. Roy J. Lucas, Agra, Kan.

BUFF ORPINGTONS — SPECIAL SALE. Big reduction in price of breeding stock of my prize winners at Kansas City, St. Joseph, Topeka and Des Moines. Eggs and baby chicks. H. F. Farrar, Axtell, Kan.

BUFF ORPINGTON EGGS FOR HATCHING from our prize winners at Kansas State, Newton and Hutchinson shows, \$2 to \$5 per 15. Special discounts shown in our fine mating list. Eggs, half price after May 15. Wichita Buff Orpington Yards, Wichita, Kan.

PLYMOUTH ROCKS.

BUFF PLYMOUTH ROCKS—EGGS AND baby chicks at reasonable prices. Mrs. Fred Miller, Wakefield, Kan.

BARRED PLYMOUTH ROCKS EX-clusively—Ringlet strain; good layers, rich color, fine, narrow, regular barring to the skin and good size. \$2 per 15 eggs. L. P. Coblenz, La Harpe, Kansas.

WYANDOTTES

BUFF WYANDOTTES—CHOICE BREED-ing stock at all times. A few bargains in males and females from our 1913 breeding pens. Must be taken soon. Wheeler & Wylie, Manhattan, Kan.

RHODE ISLAND REDS.

SINGLE COMB REDS—100 EGGS, \$3.50; 30, \$1.25. Mrs. Rosa Janzen, Route 3, Geneseo, Kan.

EGGS FROM S. C. REDS THAT ALWAYS win. Choice cockerels for sale. Write for mating list. Moore & Moore, 1239 Larimer Ave., Wichita, Kan.

ROSE COMB RED EGGS, FROM PENS mated to roosters costing from \$10 to \$30. Eggs at sacrifice prices after May 25: Fifteen eggs, \$1.00; 30 eggs, \$1.75, and 50 eggs, \$2.50. Also a few extra good roosters at \$2.50 and \$5.00 each, and good hens at \$1.00 each. W. R. Huston, Americus, Kan.

BUFF COCHINS.

FOR SALE—BUFF COCHINS OF QUAL-ity. Send for mating catalog. J. C. Baughman, Topeka, Kan.

White Plymouth Rocks

Again prove their superiority as egg layers in the National Egg-Laying Contest, one White Rock hen laying 281 eggs; 646 hens competing. I have bred White Rocks exclusively for 20 years and have them as good as anybody. Eggs from three high-scoring pens, \$2.00 per 15; \$5.00 per 45, delivered free by parcel post or express. Safe delivery guaranteed. A limited number of eggs from a specially fine mated pen, \$5.00 per 15. You will get what you order, or money refunded.

THOMAS OWEN,
Station B, Topeka, Kansas.

LEGHORNS

ROSE COMB BROWN LEGHORN EGGS—100, \$3.00. M. E. Hoskins, Fowler, Kan.

FOR SALE—ROSE COMB BROWN LEG-horns, stock and eggs. Mrs. J. E. Wright, Wilmore, Kan.

EGGS FROM PURE-BRED S. C. BROWN Leghorns, \$1 for 15; \$4 for 100. H. N. Holdeman, Meade, Kan.

SINGLE COMB BROWN LEGHORNS exclusively. Choice farm flock, carefully mated. Eggs, \$3.00 per 100. Mrs. D. A. Wohler, Hillsboro, Kan.

SEVERAL BREEDS.

PURE-BRED EGGS, SIXTY VARIETIES. Quick delivery. Catalog free. Jordan Poultry Farm, Coffeyville, Kan.

DUCKS AND GEESE.

INDIAN RUNNERS, FAWN AND WHITE. Eggs, \$1 per 15. Baby ducks, 25c each. J. W. Fretz, Bosworth, Mo.

HAMBURGS.

SILVER SPANGLED HAMBURGS IN ALL their purity. Eggs, 15, \$2.00; 30, \$3.50. Harry Inman & Sons, Route 1, Keokuk, Ia.

LANGSHANS.

EXTRA BIG-BONED HIGH-SCORING Langshans, guaranteed. Osterfoss Poultry Farm, Hedrick, Iowa.

BLACK LANGSHANS—PEN, \$1.50 PER 15, \$2.75 per 30; open range, \$1 per 15, \$1.75 per 30. Good hatch guaranteed. D. W. Wolfe, Route 2, Carrollton, Mo.

Poultry

This is the time of year when chicken lice get in their work.

If any of your chicks look dumpish, see if you cannot discover some lice on them. Nine times out of ten lice is the cause.

All weaklings and cripples should be killed. It is a sorry sight to look upon such creatures in your flock of chickens.

Don't forget to salt your chickens. Even the little chicks will relish it and it will do lots of good to both old and young. But don't overdo the matter and give them too much. Salt their feed just as you would if you were to eat it.

The American Poultry Association will hold their annual meeting August 11 to 16 at Atlantic City, N. J. This will be a fine opportunity for Kansans to see the great Atlantic ocean.

A new breed of fowls is now being exploited—the Rhode Island Whites. They are said to be the best egg layers in existence, and not inferior as flesh producers to any breed of fowls. This may be so, but why call them Rhode Island Whites? They were not originated in Rhode Island, but in Pennsylvania. There is no Rhode Island Red blood in them. The originator says the first cross was a White Wyandotte cockerel on Buff Cochins. The pullets from this cross were mated with a Rose Comb White Leghorn male. Out of 100 chicks from this mating there were ten pure white ones—two cockerels and eight pullets. These ten white birds were the original Rhode Island Whites. But why the name, Rhode Island? Simply, we presume, because the Rhode Island Reds had such a favorable reputation among poultry people that the originator of the Whites thought he would trade on that name to his own advantage. Does not this come under the head of frauds? Is it not trying to sell goods under false pretense? Can we not stick to fair business methods in the poultry fancy? It is true that some white breeds were named after other well known breeds, such as the White Wyandottes after the Silver Wyandottes and the White Plymouth Rocks after the Barred Rocks, but these were sports from these breeds, and not made up from other breeds, totally dissimilar, as is the case with the Rhode Island Whites.

Blackhead in Turkeys.

Oberlin, Kan., June 2, 1913.—Please state through the columns of your paper what is the cause of Blackhead in turkeys and also a preventive as well as a cure for same, and oblige

Mrs. D. C. P.

Ans: Blackhead is a disease caused by a minute organism, which places the malady among the infectious diseases. It is now demonstrated that turkeys contract the disease from the droppings of diseased birds. Hence, sick birds must not remain with the breeding birds, nor should stock be obtained from infected sections. Broods of young turkeys should be kept away from buildings where turkeys have passed the winter, and be kept on ground uncontaminated by the droppings of diseased turkeys or suspicious breeding stock. If the disease is known to exist in the flock, sprinkle the premises liberally with a mixture of carbolic acid one-half gallon and crude sulphuric acid one-half gallon, to which twenty gallons of water are added. The disease is usually accompanied by a diarrheal discharge from the bowels, while the heads turn dark or purple. It attacks young turkeys at all ages, and gradually develops. More turkeys succumb to the trouble in the latter part of July and early in August, and at the approach of cold weather, than at any other time. The affected birds seem able to hold out against the disease during warm, dry weather, but they quickly succumb to it in wet, stormy weather. The turkeys dying from blackhead almost invariably have a disease of the liver and a part of the intestines. The disease apparently first affects the pronged part of the lower bowels, which becomes thickened and enlarged and badly ulcerated. The liver is also spotted and in advanced stages is covered with circular areas, showing destruction of tissue within the organ. The changes in the liver and bowel are so pronounced when it causes death that turkey raisers may in many instances learn whether their own turkeys are affected by examining those that die. There is no known cure for the disease after it once gets into a flock.

The GRANGE

DIRECTORY OF THE KANSAS STATE GRANGE OFFICERS.

Master.....A. P. Reardon, McLouth
Overseer.....J. L. Heberling, Wakarusa
Lecturer.....L. S. Fry, Manhattan
Secretary.....A. E. Wedd, Lenexa
Treasurer.....W. J. Rhoades, Olathe
Chairman of Executive Committee.....W. T. Dickson, Carbondale
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Chairman of Committee on Education.....E. B. Cowgill, Lawrence
Chairman of Insurance Committee.....L. D. Hibern, Olathe
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NATIONAL GRANGE OFFICERS.
Master.....Oliver Wilson, Peoria, Ill.
Lecturer.....N. P. Hull, Diamonddale, Mich.
Secretary.....C. M. Freeman, Tippecanoe City,
Sec'y.....C. M. Freeman, Tippecanoe City, O.

Valley Grange Memorial.

Valley Grange No. 737 held a memorial service for Father Kelly and for those of its members who have died, at its last meeting in May. While the meeting was not open to the public, the families and friends of the deceased members were invited to be present. Worthy Lecturer Mrs. Eve Gasche had the following program arranged:

Song by quartet, "Beautiful Golden Somewhere."
Scripture lesson, by Worthy Master C. M. Allan.

Prayer, J. M. Patrick.
Song, "Over There."

"O. J. Kelly's Life Work," Past Master W. B. Cellar.

"Oration on O. J. Kelly," N. L. Towne.
"Laying of Flowers on the Altar—Tribute to Father Kelly," Mrs. M. Lindsay.

Reading, Mrs. W. Duffy.
"Laying Flowers on Altar for Brother Owen Edwards," Mrs. Nettie Miller.

"Tribute to Brother Edwards," C. D. Miller.

Solo, "Some Sweet Day," Frank Mathis.

Reading, Madge Lindsay.
"Laying Flowers for Brother Mansfield Bair," Mrs. T. Howell.

"Tribute to Brother Bair," E. Gernich.
Reading, "He Giveth His Beloved Sleep," Mrs. Belle Cellar.

Closing song (one of Father Kelly's favorites), "Father, We Rest in Thy Love."

Benediction, J. M. Patrick.—Mrs. BELLE CELLAR, Agricola, Kan.

Keeping Up Grange Attendance.

Granges do not become weak, sleepy, dormant or dead because their members lose faith in the principles of the Grange, nor because they do not need the Grange, but rather because of a failure of their Grange to do Grange work. A few Granges have become weak and dormant because of misdirected efforts. Some have split asunder over the dance question. But a lack of effort and work has destroyed more Granges than all other causes combined. Mistakes are often injurious, but doing nothing is fatal. If the lecturer and master of a Grange that sometimes fails to have a quorum present were able to place in one corner of their hall a large box full of big round dollars, and then advertise that each member who attended Grange should be allowed to take a dollar from the box, I imagine their meeting would be well attended. Why? Because there would be something there worth the member's time to go after. Something there that would be of so much value that they could not afford to miss sharing in it. We cannot have nor do we want a box of dollars at our Grange meetings, but we can and ought to have something there that is worth while. Something that our members cannot afford to miss.

If a farmer attends a Grange meeting and there hears such lectures, papers, or discussions as instruct, entertain and inspire him, and enable him to so handle his farm as to get a larger profit, he will feel that the Grange furnishes something that he cannot afford to miss. If the farmer's wife from the social intercourse, and the program, is cheered, instructed and encouraged, and thereby becomes a better wife, better companion and mother, is not that worth while? If the father and mother take their boys and girls to the Grange with them, and they are encouraged to take part in the program, and become interested in things that help to develop useful men and women, will not the value of the Grange be appreciated by them above that of dollars? If the Grange improves its opportunities by becoming a training school, where the latent abilities of its members are developed, thus better fitting them for citizenship, for their life work, and for leadership, will not the Grange be respected, honored, appreciated, and attended because of its real worth?—N. P. HULL, National Lecturer.

HOME CIRCLE



BRAD'S BIT O' VERSE.

Fishing Time.

O fishing rod, thy day is near—along about this time of year I get a most insistent call to strike for where the timber's tall, to find a calm, sequestered nook, to mend my line and bait my hook and let the toiling world go by, without a care, without a sigh. When'er I think of that old rod, the dreary walls where-in I plod dissolve; and on my raptured gaze there at the glow of 'soft, spring days. I see dim pathways through the glade, dew-splashed, and cool with welcome shade, I see green banks where mosses grow, where sheen and shadow come and go, sweet sheltered shores and winding streams like those I loved in boyhood dreams. I hear the voicing of the breeze, the mystic music of the trees, I hear the lapsing of the waves where many a speckled beauty laves, the drowsy hum of countless wings, the dreamy splash of gurgling springs. O fishing rod, thy day is here—the creek bend calls and toil is drear; let's make at record breaking rate, a bee line through the old back gate.—Copyrighted.

Be still, sad heart! and cease repining; Behind the clouds is the sun still shining; Thy fate is the common fate of all, Into each life some rain must fall, Some days must be dark and dreary.—Longfellow.

Raisins and figs should be plumped by dipping for an instant in boiling water before serving.

Toughness of angel cake is often due to the fact that eggs are not beaten properly. They should be beaten so stiff that they will "stand alone."

To remove scorch marks from fire-proof dishes soak them in strong borax water until the ugly brown marks upon them can be rubbed off with a cloth.

When cooking potatoes in their skins pierce them with the prongs of a silver fork. This makes them dry and delicious.

Left over fish should always be kept in a closed receptacle in the refrigerator, so as not to impart the flavor to other foodstuffs.

A delicious filling for tomato salad is to fill the tomato shells with minced pineapple, celery and chopped nuts. Mix with mayonnaise and garnish with green.

It is not difficult to give jewelry a rich luster if the articles are rubbed with a cloth wet with alcohol, diluted one-half. Then it should be rubbed dry with a soft cloth.

Frozen Dessert.

A frozen dessert that is quite unusual is made after this recipe, says the Newark News. Whip up 1 1-2 pints of sweet cream and then add 1 1-2 cupfuls of chopped nuts and a cupful of orange juice; sweeten if necessary. Pack in a mold and then in ice and salt. When the dessert is unmolded the juice of the orange will have formed a layer of rich yellow at the bottom of the mold with the delicate frozen nut-filled cream above.



No. 5111—Children's Rompers. Every small child needs a pair of rompers, and here is an excellent design for making such a garment. Gingham or percale can be used to make this garment. The pattern, No. 5111, is cut in one-year size only, and requires two yards of 27-inch material or 1 1/2 yards of 36-inch goods. Price of pattern, 10 cents.

Smooth Pattern. Every woman who cuts out from paper patterns knows of the bother in pinning it flat to the cloth. Take a hot iron and smooth the tissue pattern over the cloth, and it will remain flat without pins.—Minneapolis Tribune.

Olive Salad.

Olive salad is delectable, says the New Haven Journal Courier. Put nice crisp lettuce leaves on salad dishes, cut olives in halves, also a little hard boiled egg and sweet pepper—first a layer of egg, the olives in the center, and a border of sweet red peppers. Then add mayonnaise or salad dressing as preferred.

Fast Rug Making.

An invention which is said to have caused considerable interest among textile manufacturers is a rug making machine which will make clipped rugs 30 inches wide and six feet in length at the rate of 60 an hour. When it is considered that no less than 2,520 cloth clips are needed for each rug, says Popular Mechanics, and that these are picked up automatically by the machine, placed in the canvas and the rug completed all within the space of one minute, the capability of the machine must indeed be great.

To Air a Bed.

The proper way to air a bed, if you are opposed to removing the bed clothes from the bed, is to throw the sheets over the footboard across a chair placed to keep them off the floor, and then lift the mattress in the middle, tilting it up so that the air passes under and over it, says the Spokane Chronicle. One half hour of this will thoroughly air the bed, the windows to be open all the time, of course. In making up the bed shake the sheets well as they are put in place. You will then have a tidy, fresh bed and an orderly room soon after you are dressed. This will help make your housekeeping easy.

Wonder Cave in Arizona.

One of the most wonderful caves in the world has been found in southern Arizona. Unnamed, unexplored and almost unknown, it gives evidence of being a rival to the Mammoth cave of Kentucky, whose fame is world-wide, says the Christian Herald. Only a few have dared to enter it to view its grandeur. This cave lies at the foothills of the Huachuca mountains, about 40 miles northeast of Nogales, Santa Cruz County. Exploring parties have entered and spent days inside, but none have ever discovered the end. They report passageways, rooms and chambers innumerable. One room is level and smooth, and there are many deep chasms.

Kodak Films Developed Free.

Send a roll of films to J. C. Wolcott, Topeka, Kan. They will be developed free for you, to show you his high grade work. Write for price list and sample print.—(Adv.)



No. 6207—Girl's Cover-All Apron. This apron is what its name indicates. It will cover the entire dress or may take its place. The style is suitable for calico, cambric, gingham, or percale. It can be made with either the long or short sleeves. The pattern, No. 6207, is cut in sizes 4, 6, 8, 10 and 12 years. Size 8 requires 2 1/4 yards of 36-inch material. Price of pattern, 10 cents.

Classified Advertising

Advertising "bargain counter." Thousands of people have surplus items or stock for sale—limited in amount or number, hardly enough to justify extensive display advertising. Thousands of other people want to buy these same things. These intending buyers read the classified "ads"—looking for bargains. Your advertisement here reaches over 200,000 readers for 4 cents a word for one week; 8 cents a word for two weeks; 12 cents a word for three weeks; 14 cents a word for four weeks. Additional weeks after four weeks, the rate is 3 1/2 cents a word per week. No "ad" taken for less than 50 cents. All "ads" set in uniform style, no display. Initials and numbers count as words. Address counted. Terms, always cash with order.

SITUATIONS WANTED ads, up to 25 words, including address, will be inserted free of charge for two weeks, for bona fide seekers of employment on farms.

HELP WANTED.

POSTAL CLERKS, CITY MAIL CARRIERS, wanted for parcel post. Commence \$65 month. Franklin Institute, Dept. P-85, Rochester, N. Y.

MEN AND WOMEN WANTED FOR GOVERNMENT positions. Commence \$65 to \$100 month. Thousands of appointments. Write for list of positions available. Franklin Institute, Dept. P-85, Rochester, N. Y.

FREE ILLUSTRATED BOOKLET TELLS about 200,000 protected positions in U. S. service. Thousands of vacancies every year. There is a big chance here for you, sure and generous pay, lifetime employment. Just ask for booklet S-899. No obligation. Earl Hopkins, Washington, D. C.

SALESMAN—TO SELL HIGH GRADE guaranteed groceries at wholesale direct to farmers, ranchmen and all consumers. Earn \$4 to \$10 and up per day. A big chance to get into business for yourself. Save the buyers the retailer's profit. Every customer is a permanent one. Demand constantly increasing. Latest plan. K. F. Hitchcock Hill Co., Chicago.

REAL ESTATE.

LIST YOUR TRADES—GIVE COMPLETE description first letter. Frank King, Atlanta, Kan.

BARGAIN—A NICE SMOOTH 80 ACRES of tillable land, only 7 miles from Salina; \$3,200.00. Write for list. V. E. Niquette, Salina, Kan.

160 ACRES, THREE MILES FROM EASTON; 145 plowable, lays nice, good improvements. \$9,000. Edd Searles, Easton, Leavenworth County, Kansas.

CHOICE FARMS, \$40 TO \$65. WHEAT making 30 to 35 bushels; clover and timothy, 2 tons; alfalfa, 4. Byrd H. Clark, Erie, Kan.

WIDOW MUST SELL 400 ACRES, including 40 choice Holstein cows, all crops, 100 acres valuable timber, modern buildings worth \$7,000; running water. Price, \$10,000. Easy terms. Free catalog. C. J. Ellis, Farmers Bank, Springfield, N. Y.

DAIRY FARMS IN CENTRAL WISCONSIN, the best dairy section in America. Good crops every year. We sell all sizes of farms with and without stock and machinery, also unimproved land. Write for list. A. Kleinheinz & Son, Marshfield, Wis.

200-ACRE CENTRAL MINNESOTA stock farm; 50 cultivated, 15 natural meadow, balance timbered pasture; 7-room house, large barn, granary and other buildings; drilled well, pump with engine; one mile from school and station, 10 miles from county seat; good soil, good neighborhood. Price, \$40 per acre; \$2,600 down, balance on time to suit. Carl Bolander, Little Falls, Minn.

PATENTS

SEND FOR FREE BOOKLET, ALL about patents and their cost. Shepherd & Campbell, Patent Attorneys, 500-R Victor Bldg., Washington, D. C.

SHEEP

REGISTERED SHROPSHIRE SHEEP.—Special prices on yearlings, twos, and my herd ram, three years old. Also a few yearling ewes. D. E. Gilbert, Beloit, Kan.

DAISY FLY KILLER



HAROLD SOMMER, 150 DeKalb Ave., Brooklyn, N. Y.

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FIELD NOTES

A Successful Tour. One of the toughest trips made in an automobile this season was recently completed by three citizens of St. Cloud, Minn.—Matt Krier, ex-Sheriff Ben Moritz and George Kinney, who drove from St. Cloud to Glasgow, Montana, and return in a K-R-I-T car, negotiating safely and successfully some of the worst stretches of roads imaginable, although their car was loaded with 750 pounds of baggage. The trio left St. Cloud April 28 via Sauk Centre, Alexandria, Fergus Falls and Fargo to Valley City, N. D. Up to this point the roads encountered were in fair shape, but from Valley City to Harvey they were wretched. In fact they were so bad that the tourists were advised not to proceed any farther. Nevertheless they forged ahead and reached Harvey safely. From that point to Minot, N. D., the roads were fair. Good roads were also encountered in that portion of their itinerary that took them through Ambrose, Plenty Wood, Montana, Scooby and Glasgow. They made Fargo successfully and arrived at St. Cloud May 28 in good shape. The travelers had no trouble whatever with their car, in spite of the severity of the task set for it. The average per gallon of gasoline was about 16 miles, and about 500 miles per gallon of oil.

Land Buyers, Watch Kansas Farmer Columns.

A prominent auctioneer from one of our good farming counties was in the Kansas Farmer office recently and in the course of conversation stated that he had not long since sold a high-priced live stock farm at auction where a single advertisement in Kansas Farmer brought a buyer from a distant county. This buyer bought the farm, the price paid being \$1,000 in excess of what would have been received had he not been present.

CATTLE.

A FEW HIGH-GRADE HEIFER CALVES two to four weeks old, \$15 each. Burr Oak Farm, Whitewater, Wis.

FOR SALE—REGISTERED YEARLING Holstein bull. E. J. Castillo, Independence, Kan.

WELL BRED GRADE HOLSTEIN BULL calves crated at \$20 per head while they last. Arnold & Brady, Manhattan, Kan.

REGISTERED HOLSTEIN HERD—BULL and bull calves of choice breeding. Price reasonable. Carl Snyder, Route 7, Topeka, Kan.

FOR SALE—75 HEAD OF YOUNG dairy cows, just shipped in from Minnesota. Jerseys, Guernseys and Holsteins. Prices reasonable for quick sales. Also have some extra fine 2-year-old bulls. C. N. Himelberger, 405 Fillmore St., Topeka, Kan.

FOR SALE—32 HEAD HOLSTEINS, Shorthorns and Jerseys, all bred from winter cows. Good young stock. Owned by dairymen going out of business. Sell all for \$60 a head. Jack Hammel, 215 Adams St., Topeka, Kan.

CATTLE FOR SALE.—WE HAVE SEVERAL thousand head of southern cattle on our ranch here for sale at right prices, all above the quarantine line and can be shipped to any points without delay or dipping. Will sell in single calf lots or more, any class or age, at the following prices: Cows, \$25 per head; 1 and 2 year-old heifers, \$22.50; 3-year-old steers, \$21.00; 1 and 2-year-old steers, \$20. We must sell the larger part of these cattle this month, as we have more cattle than grass and the dry weather has cut us short on feed. Can show cattle in a short ride from station and will meet buyers at station any time. The above prices are loaded on the cars, no other expense. Write or wire us. Miller Brothers, Bliss, Okla.

HORSES AND MULES

FOR SALE OR EXCHANGE—YEARLING mammoth jack, good individual, heavy bone, long ears, black with mealy points. Price, \$300. Matt & Kohler, Herington, Kan.

HOGS.

REGISTERED DUROC SPRING PIGS, both sexes. Bred gilts, Yearling and aged boars. Prices reasonable. James Weller, Faucett, Mo.

YOUNG MAN

YOUNG MAN, WOULD YOU ACCEPT and wear a fine tailor-made suit just for showing it to your friends? Or a Slip-on Raincoat free? Could you use \$5 a day for a little spare time? Perhaps we can offer you a steady job. Write at once and get beautiful samples, styles and this wonderful offer. Banner Tailoring Co., Dept. 321, Chicago.

BEE SUPPLIES.

BEE SUPPLIES, ROOTS GOODS. SEND for catalog. O. A. Keene, 1600 Seward Ave., Topeka, Kan.

FOR SALE—THIRTY-SEVEN 8-FRAME empty supers, good condition, painted, 20c each. O. A. Keene, Topeka, Kan.

DOGS.

FOR SALE—SCOTCH COLLIE PUPS. Sable and White stock farm. U. A. Gore, Seward, Kan.

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MAIL PRESCRIPTIONS TO GIBLER'S drug store. Filled correctly, sent parcel post. Topeka.

THE ANDERSON LOADER LOADS manure, cornstalks, stack bottoms, dirt, gravel, sand. No hard work. Write Anderson Mfg. Co., Osage City, Kan.

LUMBER—ENORMOUS SAVING IN BUYING direct from mill. Send list of material for estimate. Write today for catalog number 48. Keystone Lumber Company, Tacoma, Wash.

A GOOD THRESHING OUTFIT TO trade for land. Also some nice irrigated land in the Laramie Valley, Wyoming, to trade for land in Western Kansas. W. J. Trousdale, Newton, Kan.

TAKEN UP—STRAY SORREL MARE, weight about 500 pounds, 9 years old, strip in face, three white feet, branded MS on right hip, 1A (inverted) on left shoulder, flying W on left shoulder, ISI and RII on left hip. H. T. Bandy, Kanorado, Kansas.

COMPLETE DAIRY OF 24 COWS, BULL, horse, and sheds, for \$2,400. Only dairy in fast growing town of 3,000. Sales about \$300 per month. Make \$200 above expenses by doing own work each month. Can't give personal attention. Best dairy offer in Oklahoma. James L. Hale, Poteau, Okla.

SUN CURED GROUND ROCK PHOSPHATE, the cheapest source of phosphorus in a system of permanent agriculture, containing 250 pounds phosphorus to the ton, delivered in Eastern Kansas for \$8 to \$10 per ton in car loads of 22 1/2 tons each. Further particulars free. Central Phosphate Co., Mt. Pleasant, Tenn.

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Herd headed by Sterling Prince, one of the largest and best 2-year-old boars of the breed. Assisted by Chief Price's Wonder, one of the best sons of the great breeding boar, Chief Price Again. Young stock for sale. Better than your grandpa ever raised.
B. T. WRAY & SONS, Hopkins, Mo.

FALL BOARS ALL SOLD

I now offer a tried herd boar, an excellent individual and breeder, priced where any good farmer can buy him. Also three January boars.
H. B. WALTER, EFFINGHAM, KANSAS.



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The mammoth 2-year-old grandson of the great Expansion is the sire of the great line of spring pigs I am offering for sale at weaning time. Either sex. The dams of these pigs are a splendid bunch of brood sows of the Black Mammoth breeding. None better in big-type Polands. Write for descriptions, breeding and prices. Book your order early and secure choice, mentioning Kansas Farmer.

PAUL E. HAWORTH, Lawrence, Kansas.

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TEN FALL BOARS, ready for service. Price, \$25 and \$30. Good ones, sired by Wedd's Long King, Wedd's Expansion and Big Logan Ex. Order quick. These bargains won't last.
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Sold Out—More to Sell

Our fall boars are now all sold. We are booking orders for the finest bunch of spring pigs we ever raised. If you want the great big-boned Spotted Poland Chinas, write us. Also young Jersey bulls and heifers.

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Hildwein's Big Type Polands

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20 Extra Good Fall Boars, ready for service, sired by Big Logan Ex. and Missouri Metal, out of my best sows. Prices reasonable. Write me.
L. V. O'KEEFE, Stilwell, Kansas.

MELBOURNE HERD POLAND CHINAS. Headed by Melbourne Jumbo, one of the large smooth sires of the breed, mated with the best of big-type sows, among them daughters of What's Ex. Big Prospect, Dor's Expansion 1st, and Union Leader. Stock for sale.
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POLAND CHINA GILTS FOR SALE. 20 - Yearling gilts, bred or open. Sired by a son of A Wonder and bred to a son of Big Orange. Five fall boars by a son of A Wonder, at reasonable prices.
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O. B. CLEMETSON, Holton, Kansas.

BUY EARLY AND SAVE EXPRESS. Fifty big-kind Poland China pigs, either sex, sired by Ott's Big Orange, Big Ben and other great boars. Booking orders now to ship when old enough to wean. Pairs not related.
J. F. FOLEY, Oronoque, Norton Co., Kansas.

SELECTED POLAND CHINA BOARS. Five October farrow, strictly tops, the last sons of Mastery, the great Expansive and Mogul bred boar. Dams by Big Tom and Prince O. K. Weight, 225 pounds each; 6 1/4 to 7-inch bone; 43 1/2-inch or more heart girth. Low prices for the kind.
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SPRING PIGS, 100 DAYS OLD. Forty big-type Poland pigs, sired by Big Four Wonder, grandson of A Wonder, and Orange Model 2d by Big Orange. Will sell them until they are 100 days old for \$25 each. Pairs, not related, \$40. First choice with every sale. Inspection invited.
L. L. CLARK, Meriden, Kansas.

Gritter's Surprise Fall Boars For Sale. Two good ones sired by Gritter's Surprise by Long Surprise. Dams of these boars is a Lady Wonder sow of the large Iowa type. They are immune from cholera and priced right. Also a few bred gilts for sale.
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ENOS OFFERS 20 BIG, SMOOTH, BRED GILTS. July and August gilts by A Wonder's Equal by A Wonder, dams by Nox All Hadley, bred for August and September farrow to the noted Orphan Chief. Blood lines and quality to spare. \$35 to \$40. Only good ones shipped.
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Herd headed by Tinc. Hadley, sired by Major B. Hadley, the grand champion at American Royal, 1911, and Long King's Equal 2d by Long King, two herd boars with size and quality. My fall sale of boars and gilts October 3, 1913. Write for catalog.
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ALBRIGHT TYPE POLANDS FOR SALE. Forty head of choice fall boars and fall gilts, bred or open, and 65 spring pigs, all sired by Cavett's Mastiff, one of the best boars now in service. Only the best of individuals offered. Inspection invited.
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Griffith's Immune Poland Chinas Forty choice early farrowed strictly big-type boars ready to ship. Buy now and save excessive express rates. All representations fully guaranteed. Inspection invited.
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POLAND CHINA HOGS—15 fall boars and 10 fall gilts sired by the champion boar at American Royal, 1911, priced to sell reasonable. G. M. Carnutt, Monticello, Mo.

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THIRTY EXTRA GOOD REGISTERED DUROC SOWS AND GILTS. Extra good ones. Popular strains. Sired by Kansas Kruger and College Lad. Bred for August and September farrow to Isenbeg's Choice. Can ship over four roads.
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Durocs. Two herd boars, \$25 each. Also choice fall boars.
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BIG-TYPE DUROCS. Monarch, Colonel Wonder and Buddy strains. Plenty of fall gilts, open or bred. Fall sale, October 17.
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Ruby Financial Count 87211, a grandson of Financial King, dam a Register of Merit granddaughter of Financial King; milk record of 56 pounds per day.
Herd founded on Finance, Interest and Gamboge Knight families. Cows milk, as three-year-olds, 40 to 56 pounds per day. Every cow in herd on test. No dairyman ever considered a cow beautiful unless she is a heavy producer. Constitution first, production second, beauty third.
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SUNFLOWER HERD HOLSTEINS. Highest A. R. O. backing. The entire herd, including heifers, average nearly 20 pounds each, 7 days. More cows above 20 pounds than all other Kansas herds combined. Best sires obtainable head herd. Address F. J. SEARLE, Oskaloosa, Kan.

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COOKE'S HOLSTEINS. Cows 2 years or older, \$225 to \$600. Nothing cheaper. No heifers or heifer calves for sale. Bulls 4 to 10 months, \$125 to \$175. Mostly sired by grandson of Pontiac Korn-dyke.
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HIGH QUALITY HAMPSHIRE. Headed by T. R. Fancy, prize winner 1912. Am offering Bessie 11982, tried brood sow bred to T. R. Fancy for June farrow.
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75 REGISTERED BERKSHIRE SOWS For Sale, sired by Danesfield Duke 10th by Berrington Duke Jr. and Artful Champion by Rival's Champion. These sows are high-class individuals and all trace direct to the great boar, Baron Compton Imp. They are bred to Robin Hood Premier, one of the few line-bred Black Robin Hood boars now living, and Ajax, a son of Rival's Lord Premier. Four hundred head in herd.
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LINSCOTT BERKSHIRES Choice tried sows and fall yearlings for sale, sired by Rival's Queen Premier 114255 and Imp. Baron Compton, bred for summer and fall farrow to Robhood 19th 16595. Also 25 selected boars and gilts ready to ship. February farrow by Robhood and Commander's Majestic. Nothing but tops shipped.
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Largest flock west of Mississippi River. Fifty rams, 100 ewes for sale. All stock sired by imported rams. 140 ribbons at the Iowa State Fair in last eight years. Call on or address, John Graham & Son, Eldora, Ia.

OXFORD DOWN SHEEP. Oxford Down Sheep—Large, hardy, prolific, well covered.
J. H. WALKER, Lathrop, Missouri.

HORSES AND MULES



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17 head large mammoth black jacks for sale, ages from 3 to 5 years; large, heavy-boned, broken to mares and prompt servers. Prices reasonable. Come and see me.
PHIL WALKER,
Moline, Elk Co., Kansas.

HOME BRED STALLIONS \$275 to \$650. Imported stallions \$700 to \$1,000, two higher. All draft breeds. Reference: Any banker in Creston.
FRANK L. STREAM,
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D. C. VAN NICE, Richland, Kan.

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10 SHORTHORN 10 BULLS 10

Sired by Double Champion and White Mystery, out of my best cows, priced reasonable.
ED GREEN, HOWARD, KAN.

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FOR SALE—One small registered Guernsey bull yearling; two registered Guernsey bull calves. Reasonable prices.
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FIELD NOTES

FIELD MEN.

O. W. Devine.....Topeka, Kan.
Jesse R. Johnson.....Clay Center, Kan.
W. J. Cody.....Topeka, Kan.

PURE BRED STOCK SALES.

Percherons.

Holstein Friesians.

Oct. 21-22, 1913—Woodlawn Farm, Sterling, Ill.

Jersey Cattle.

Nov. 6—Alvey Bros., Meriden, Kan. Sale at Topeka, Kan.

Poland Chinas.

Sept. 12—L. R. McClarnon, Braddyville, Ia.
Oct. 4—Frank Michael, Erie, Kan.
Oct. 3—Cline & Nash, Iola, Kan.
Oct. 9—J. L. Griffiths, Riley, Kan.
Oct. 11—Wigstone Bros., Stanton, Iowa.
Oct. 11—D. S. Moore, Mercer, Mo. Sale at Lineville, Iowa. (Big Spotted Poland.)
Oct. 16—Freeman & Russ, South Mound, Kan.
Oct. 20—Roy Johnston, South Mound, Kan.
Oct. 20—L. V. O'Keefe, Stillwell, Kan.
Oct. 21—H. B. Walter, Effingham, Kan.
Oct. 22—P. M. Anderson, Lathrop, Mo.
Oct. 22—E. C. Graner, Lancaster, Kan.
Oct. 23—J. H. Baker & Son, Butler, Mo.
Oct. 23—E. J. Peckham, Pawnee City, Neb.
Oct. 24—A. J. Swingle, Leonardville, Kan.
Oct. 24—A. B. Garrison & Sons, Summerfield, Kan.
Oct. 25—J. W. Leeper, Norton, Kan.
Oct. 25—M. T. Williams, Valley Falls, Kan.
Oct. 29—Walter Hildwein, Fairview, Kan.
Oct. 30—Hubert J. Griffiths, Clay Center, Kan.

Nov. 3—Joe Schneider, Nortonville, Kan.
Nov. 3—R. B. Davis, Hiawatha, Kan.
Nov. 3—R. Reystead, Mankato, Kan.
Nov. 7—U. S. Byrne, Saxton, Mo.
Nov. 8—M. Willson, Lebanon, Kan.
Nov. 8—T. H. Harter, Westmoreland, Kan.
Nov. 14—W. E. Dubois, Agra, Kan.
Nov. 15—John Kemmerer, Mankato, Kan.
Jan. 20, 1914—Roy Johnston, South Mound, Kan.

Jan. 23—J. J. Hartman, Elmo, Dickinson Co., Kan.
Feb. 7—Wigstone Bros., Stanton, Iowa.
Feb. 10—H. B. Walter, Effingham, Kan.
Feb. 11—E. C. Graner, Lancaster, Kan.
Feb. 11—H. L. Faulkner, Jamesport, Mo.—Old original Spotted Poland.
Feb. 26—V. E. Carlson, Formoso, Kan.
Feb. 28—A. R. Reystead, Mankato, Kan.
Feb. 12—W. E. Long, Meriden, Kan.
Feb. 13—J. E. Willis, Prairie View, Kan.
Feb. 14—J. P. Foley, Oronoque, Kan. Sale at Norton, Kan.
Feb. 17—L. E. Klein, Zeandale, Kan.
Feb. 18—J. H. Harter, Westmoreland, Kan. Sale at Manhattan, Kan.
Feb. 19—J. L. Griffiths, Riley, Kan.

Duroc Jerseys.

July 31—W. T. Hutchins, Cleveland, Mo.
Aug. 29—Jeff Constant & Son, Denver, Mo.
Oct. 17—Moser & Fitzwater, Goff, Kan.
Oct. 28—R. P. Wells, Formoso, Kan.
Oct. 31—A. M. Rinehart & Son, Smith Center, Kan.
Nov. 1—N. B. Price, Mankato, Kan.
Nov. 4—E. S. Davis, Meriden, Kan.
Nov. 4—Jeff Constant & Son, Denver, Mo.
Nov. 7—Leon Carter, Asherville, Kan.
Nov. 8—E. C. Jonagan, Albany, Mo.
Nov. 8—C. C. Thomas, Webber, Neb. Sale at Superior, Neb.
Jan. 26—R. P. Wells, Formoso, Kan.
Jan. 27—Ward Bros., Republic, Kan.
Jan. 28—W. E. Monasmith, Formoso, Kan.
Jan. 29—N. B. Price, Mankato, Kan.
Feb. 4—Moser & Fitzwater, Goff, Kan.
Feb. 5—Samuelson Bros., Cleburne, Kan.
Feb. 6—Leon Carter, Asherville, Kan.
Feb. 7—Horton & Hale, DeKalb, Mo. Sale at Rushville, Mo.
Feb. 7—E. C. Munsel, Herington, Kan.
Feb. 10—Kansas Agricultural College, Manhattan, Kan.
Feb. 11—Thompson Bros., Garrison, Kan.
Feb. 12—J. A. Porterfield, Jamesport, Mo.
Feb. 20—John Emigh, Formoso, Kan.
Feb. 21—Dana D. Shuck, Burr Oak, Kan.

Chester White and O. I. C.

Oct. 14—George E. Norman & Sons, New-town, Mo.
Oct. 16—J. S. Kennedy, Blockton, Iowa.
Nov. 6—Alvey Bros., Meriden, Kan. Sale at Topeka, Kan.
Nov. 18—J. D. Billings, Grantville, Kan.

Hampshires.

Nov. 4—H. D. DeKalb, DeKalb, Iowa. Sale at Council Bluffs, Iowa.

R. W. Gage's O. I. C. Hogs.

R. W. Gage, Garnett, Kan., is making special prices on spring pigs. They are sired by G's Model and Honest Leader. Mr. Gage has 40 spring pigs priced to sell. Please read ad in this issue.

Poland China Herd Boars.

L. V. O'Keefe, Stillwell, Kan., has a few choice fall yearling boars sired by Big Logan Ex and Missouri Metal. These are big husky fellows ready for hard service and priced reasonably. Write your wants. Please mention Kansas Farmer.

Jeff Constant & Son's Sale Postponed.

On account of the busy season the sale of Jeff Constant & Son, the well known Duroc breeders, which was scheduled for June 27, at Denver, Mo., has been postponed. They claim August 29 as the date of their next sale and will have a splendid offering for Duroc breeders on that date.

The Deming Ranch Polands.

C. H. Hay, manager of the hog department of the Deming Ranch, Oswego, Kan., reports 800 head of pure-bred Poland China hogs on the farm. Twenty-five boars and 25 gilts will be picked from 200 spring pigs and sold in a public sale on October 24. All the culls and poor ones will be fed out for stock market.

George Wedd & Son's Big Poland Chinas.

George Wedd & Son, Spring Hill, Kan., have three extra good September and October yearling boars for sale; one by Wedd's Long King, one by Missouri Metal, and one by Big Logan Ex, priced very low to close them out. These hogs will be sold for \$25 each and the first check gets the choice. Please mention Kansas Farmer when you write.

Portable Grain Bins.

This week we start advertising for Miller & Reed, Clay Center, Kan., manufacturers of the M. & R. portable grain bins. This bin is made in two sizes. The bottoms are made of 20-gauge galvanized iron made in one section, lapped and riveted with 1½-inch angle iron. Bins larger than eight feet are shipped folded and have dormer opening and new process ventilation. Write for circular giving all information.

Duroc Jersey Sale.

On July 31 W. T. Hutchins, Cleveland, Mo., will sell a draft of his high-class Durocs. Everything will either be sired by or bred to Drexel Pride or Queen's Wonder. There are several show prospects in this offering. Later mention of this sale will be made in Kansas Farmer. Please be sure and get your name on the list for a catalog.

Spring Pigs for Sale.

With this issue Hammond & Buskirk, Newton, Kan., change copy, offering spring pigs in pairs and trios not related. Herd headed by Tatarax, assisted by G. M.'s Tat. Colonel. If you need some new blood in your herd it would pay you to write Hammond & Buskirk for prices. Kindly mention Kansas Farmer.

Kyle's Polands.

Ira C. Kyle & Son, Poland breeders, Mankato, Kan., are very short on pigs this spring, having lost about all of them. For this reason they have but little use for the three big boars now on the farm, and will sell either. One is a son of A Wonder and one a son of Long King, the latter owned by the Kyles and Carl Jensen & Son, Belleville, Kan.

U. S. Byrne's Big Polands.

U. S. Byrne, Saxton, Mo., one of Missouri's pioneer breeders of Poland China hogs, claims November 7 as the date of his annual fall sale. Mr. Byrne now owns one of the great herds of big-type Polands and his offering will be one of the greatest of the season. During the past year Mr. Byrne's purchases have topped several of the leading big-type sales and breeders will find his offering one of the best.

Spring Pigs for Sale.

In this issue Paul E. Haworth of Lawrence, Kan., is offering spring pigs at very reasonable prices from the Black Mammoth herd. This herd is headed by the great boar, Advance 60548. This hog is one of the great boars of the breed, judging from the three important points that make a herd boar, namely, pedigree, individuality and ability as a sire. Please look up ad and write Mr. Haworth. Kindly mention Kansas Farmer.

J. H. Baker's Poland Chinas.

J. H. Baker, Butler, Mo., one of the reliable Poland China breeders of Bates County, Missouri, is claiming October 23 for a fall sale. Mr. Baker has raised 46 fine spring pigs. They are sired by King Wonder by Long King's Equal and out of an A Wonder dam. The spring pigs are out of Big Hadley Grand Look Jr., and other good sows. Please watch for further mention of this herd and write Mr. Baker about his hogs.

Good Report from Freeman & Russ.

Freeman & Russ of Kearney, Mo., report their spring pigs doing fine. A number of three-months-old pigs weighed last week averaged 120 pounds. They have also received a very fine spring boar bought from Wigstone Bros., Stanton, Iowa. This pig is a prospect for a great boar. They are also growing a very fine youngster sired by Big Superior that is an extra good one. This firm will have one of the great offerings of the season at their annual fall sale.

Grote's Big Polands.

This week we start advertising for L. H. Grote, auctioneer and Poland China breeder located at Morganville, Clay County, Kansas. Mr. Grote is the leading auctioneer in his locality and has one of the good small herds of his part of the state. He offers March pigs, either sex, sired by his big boar, Guy's Expansion 2d, a great son of Old Expansive. The pigs are well grown out and are from dams sired by a son of Colossus Pan. They are strictly big-type and are being priced low for the kind. Write Mr. Grote about these pigs or see him about helping on your next sale.

Griffiths Claims October 9.

J. L. Griffiths, Poland China breeder, Riley, Kan., claims October 9 for his fall boar sale, and writes as follows: "The pigs were never so good at this season of the year. I will have quite a lot of real herd headers for this sale. If they continue to do well I will have four choice boars of early farrow out of Long King's Equal and sired by A Wonder Jumbo. They are good enough to head any herd, and I will keep one for my own use. King of Kansas is the best boar of his age I ever saw, and is still growing rapidly. I will have 35 boars for this sale and some sows with litters. Everything immune."

H. G. Nash Poland Chinas.

In this issue H. G. Nash of Iola, Kan., is starting a card calling attention of farmers and breeders to the fact that on October 3 he will hold a sale jointly with J. R. Cline of Iola. Mr. Nash is a young breeder formerly from Minden, Neb. All his hogs are of the large type breeding. The herd boar used was Gold Medal by Gold Metal, and a number of the sows are of the Hadley, Chief Wonder and Big Tecumseh blood. Mr. Nash is growing his spring pigs out well and will have a nice offering. Please write him about his herd and get your name on the list for the October 3 sale catalog and watch for further mention in Kansas Farmer of this herd and sale offering.

Colonel Regan Starts Card.

Frank Regan, the wide awake young auctioneer of Esbon, Kan., starts a card in this issue of Kansas Farmer. Colonel Regan came to Jewell County when only a year old, and is therefore in reality a Jewell County product. Although still quite a young man he has seen a great development take place in his county and he rejoices in an earnest and intelligent manner in every movement for the advancement of better live stock or a better method of farming. In short, Colonel Regan is a progressive and brings to the sales that he makes the enthusiasm of youth and a high order of intelligence. Every year since he began the auction business has shown a marked increase in the number of sales conducted, and last year he made one-third more than in any previous year since he began selling. Colonel Regan has open dates and his charges are reasonable. Write him for full information.

J. R. Cline's Poland Chinas.

In this issue J. R. Cline of Iola, Kan., starts a card calling attention to a fall sale on October 3. Mr. Cline has at the head of his herd a son of Major B. Hadley and out of a Tecumseh bred sow. This boar is one of the best two-year-old hogs in Kansas. If properly fitted he would be in the money at our state fairs, but Mr. Cline is too well pleased with his pigs and will keep him at the head of the herd for his usefulness as a breeder. Mr. Cline has raised about 100 spring pigs of extra good quality. Among the choice sows are three two-year-old sows by Major B out of White Faced Queen by Blain's Wonder. These sows have litters by Long King Equal 2d. A number of

other good sows in the herd are Nevius's Sample by Designer; Bernice Hadley 2d, a granddaughter of A Wonder; Royal Lady by Taxpayer, and Nevada by Grand Perfection, all home litters by Tecumseh Hadley. Mr. Cline would be pleased to have any breeder or farmer write him about his hogs and get their name on the list for a catalog. Later mention of this sale will be made in Kansas Farmer.

J. T. and E. A. Hanna's Big-Type Polands.

J. T. and E. A. Hanna of Bolckow, Mo., are owners of one of the very high-class herds of big-type Polands in that state. They have the big, easy feeding, prolific kind, and the breeding stock sent out from this herd during the seven years since it was established has invariably made good. For the past two years their herd has been headed by Hanna's Expansion by Fisher's Expansion. Hanna's Expansion was one of the big-type boars with size and quality, and was an all around good individual and an extra good breeder. The sows of the herd are a select lot of big-type sows, among them being daughters of Giant Bob and out of May's Gintess, daughters of Grand Look and out of Mollie K., and granddaughters of Big Pete. They are a carefully selected lot of sows and are making good. The spring pigs of the herd are a very fine lot and they will have one of the high-class offerings of the season for the fall trade.

D. S. Moore's Big Spotted Polands.

The writer recently visited Riverside Farm, owned by D. S. Moore, Mercer, Mo. Riverside Farm is one of the finest in that section of Missouri and is noted as the home of pure-bred stock. Mr. Moore breeds Shire horses, Holstein cattle, and old original big-boned spotted Poland China hogs. The horses and cattle are as good as can be found anywhere and his herd of over 100 head of big-boned spotted Polands is one of the best of that famous breed now in existence. This herd is headed by Leopard, one of the great boars of the breed. He is by Good Enough and out of Massive. He has the size, quality and spots, and is one of the great spotted Poland China sires now living. He is assisted by Budweiser, an extra good individual and his spring litters show him to be a splendid breeder. Mr. Moore has a great herd of spotted sows. They are daughters of Brandywine, Clipper, Big Spot, Gates's Chief, Billy Sunday, and other good sires. The spring pigs from this herd are among the good ones seen by the writer this year. They are big and growthy and have lots of quality, and they sure have the spots. This is also true of an extra good lot of fall boars and gilts in the herd. Mr. Moore claims October 11 as the date of his annual fall sale, which will be held at Lineville, Iowa. Breeders wanting spotted Polands, the big kind with big spots, should not overlook this date.

Same Old Date but Better Hogs.

The writer called on the well known breeder, Roy Johnston, at South Mound, Kan., last week. For almost ten years we have been calling about twice each year at this farm, and each time we notice some improvement. Mr. Johnston has this year provided himself with a pair of scales, so that if anyone is from the "show me" state and does not think his hogs will weigh as much as he claims, he can show them. He has spring pigs 87 days old that weigh 94 and 95 pounds. In fact the best lot ever raised—287 head, all by Orphan Chief, Dan Hadley and Big Lige. Two new herd boars have been added to the herd this spring. O. K. Lad by Pawnee Lad, he by Clever's Best by Happy Perfection by Old Chief Perfection 2d. All of these hogs were noted sires and are big hogs. O. K. Lad's dam was Big Marie by Big Prospect. O. K. Lad is one of the big kind and a hog with lots of quality. Knox All Hadley by Big Hadley out of a Tecumseh Gold Dust sow by Johnston Chief is also a new herd boar at the Johnston farm. This hog traces back to the sire of Blain's Wonder, the hog that made Mr. Johnston a wide reputation. On October 20 Mr. Johnston will sell 25 spring boars and 25 gilts, the pick from 287 head. Then on January 20, 1914, the usual sale of bred sows and gilts will be made. Please watch for further mention of this herd and write early for catalog, as it will pay you to read it, for Mr. Johnston is a grand success raising and growing Poland China hogs.

R. W. Murphy's Prize Winning Durocs.

The Old Turnpike herd of Duroc Jerseys owned by R. W. Murphy of Cozy, Mo., is one of the noted Duroc herds in the West. For years Mr. Murphy has been breeding high-class Durocs and his show herds have been regular winners at Missouri State Fair, Sedalia; the American Royal, Kansas City, and the Inter-State Live Stock Show at St. Joseph. They have always been winners wherever shown, and Mr. Murphy is the possessor of a large number of ribbons won by his herd in the strongest shows in the country. The present head of this prize-winning herd is King of the Pike, by Ward King, by Crimson Rambler. King of the Pike is one of the great individuals and one of the best sires of the breed in service today. He has over a 10-inch bone, the best of backs, good feet, and a splendid head and ear. He is one of the big mellow kind and an extra good breeder. Mr. Murphy owns one of the good herds of sows now in existence. Among them are daughters of Crimson Rambler, King of the Pike, E. A.'s Crimson Rambler, Ohio Chief, and bred sows and daughters of other great sires. They are a very high class lot and are making good. The spring pigs of the herd are one of the outstanding good lots. Among them are several herd header prospects. The pigs were sired by King of the Pike, Dandy Colonel, and some by a fine Prince of Colonels bred boar. His offering for the fall trade will be one that will interest breeders wanting strictly high-class breeding stock, and it will be one of the best offerings of the season.

E. L. Dolan's Big-Type Polands.

The writer recently visited the breeding farm of E. L. Dolan, Platte City, Mo. Mr. Dolan is one of Missouri's progressive young breeders of Poland China hogs who is building up a herd along the lines of scientific breeding. He now owns one of the good herds of big-type prolific Poland Chinas, combining plenty of size with finish and easy feeding qualities. The present head of his herd is King Jumbo by Big Black Jumbo by Big Orange. His dam was Lady Beauty by Long King 2d. He is one of the big kind with lots of quality, big bone, good back and good head and ear. Spring litters by him show that he is a prospect for a great boar. Mr. Dolan has a splendid herd of big-type sows sired by such boars as Kansas Chief by Blain's Wonder, King Blain, and other big-type sires. The spring pigs of this herd were farrowed in January, February and March, and are among the best lots of spring pigs the writer has seen this year. Mr. Dolan also has three outstanding fall

RED POLLED CATTLE

AULD BROTHERS
Red Polled Cattle

Bull calves for sale. Prices right. Herd headed by Prince, one of the best sons of Actor.

AULD BROS., Frankfort, Kansas.

Coburn Herd of Red Polled Cattle and Percheron Horses.
25 extra good young bulls and 7 first class young stallions for sale at bargain prices. Also young cows and heifers.

GEO. GROENMILLER & SON,
Pomona, Kansas.

PHILLIPS COUNTY RED POLLS AND POLANDS.

All bulls over six months old sold. Bred sows and heifers for sale, also choice lot of big-type Poland China fall boars. Inspection invited.

Chas. Morrison & Son, Phillipsburg, Kan.

RED POLLS FOR SALE.

In order to reduce the size of herd we offer choice registered cows of large frame and splendid milkers at very low prices considering quality.

RESER & WAGNER, Bigelow, Kan.

JERSEY CATTLE.

Register of Merit Jerseys

The only herd in Kansas making and keeping official records. Eighty head to select from. Cows in milk, bred heifers, heifer calves, and the finest lot of young bulls ever on the farm. All ages. Six or eight now ready for service out of cows with official tests up to 512 pounds of butter with first calf, sons of Imp. Oakland Sultan, Gambos Knight, and a son of Golden Fern's Lad. Tuberculin tested, and fully guaranteed.

E. J. LINSKOTT, Holton, Kansas.

BANKS' FARM JERSEYS

Quality with milk and butter records. One of the best sons of CHAMPION FLYING FOX, imported, at head of herd. Stock for sale.

W. N. BANKS, Independence, Kan.

JERSEYS MUST BE SOLD SOON.

Fifty cows, heifers and young bulls, all registered. If this fine lot of cattle is not sold within a short time I will call a public sale. Watch for announcement.

S. S. SMITH, Clay Center, Kansas.

REGISTERED JERSEY BULL CALVES FOR SALE.

Nice colors and individuals and closely related to noted sires and dams. Low prices for young calves. Also few bred heifers. Farm near town.

Johnson & Nordstrom, Clay Center, Kan.

WINELAND FARM JERSEYS.

One of the strongest official record herds in the west. For sale, 10 choice young bulls, sired by Imp. "Euke's Raleigh," and other good bulls. Out of cows now undergoing or having authenticated tests. Also 25 females of different ages. H. C. YOUNG, Lincoln, Nebraska.

JERSEYS FOR PROFIT

AMERICAN JERSEY CATTLE CLUB,
324 W. 23d St., New York.

REGISTERED JERSEYS AND POLANDS

Best strains and individuality. Fed and handled intelligently. Stock for sale always.

O. E. NICHOLS, Abilene, Kan.

OHIO IMPROVED CHESTERS

WOLFE'S O. I. C. SWINE.

Large, prolific kind, March and April boars. Gilts bred or open. Fall pigs. Prices low. Pedigrees free. Write your wants.

D. W. WOLFE, Route 2, Carrollton, Mo.

MAPLE LEAF CHESTERS

Large, smooth and prolific. Our stock and prices are right. Write us your wants. Satisfaction guaranteed.

R. W. GAGE, Garnett, Kansas.

O. I. C. PIGS. HARRY W. HAYNES,

Meriden, Kan.

MULE FOOT HOGS

350 big-type Mulefoot hogs of all ages for sale, from champion herd of America.

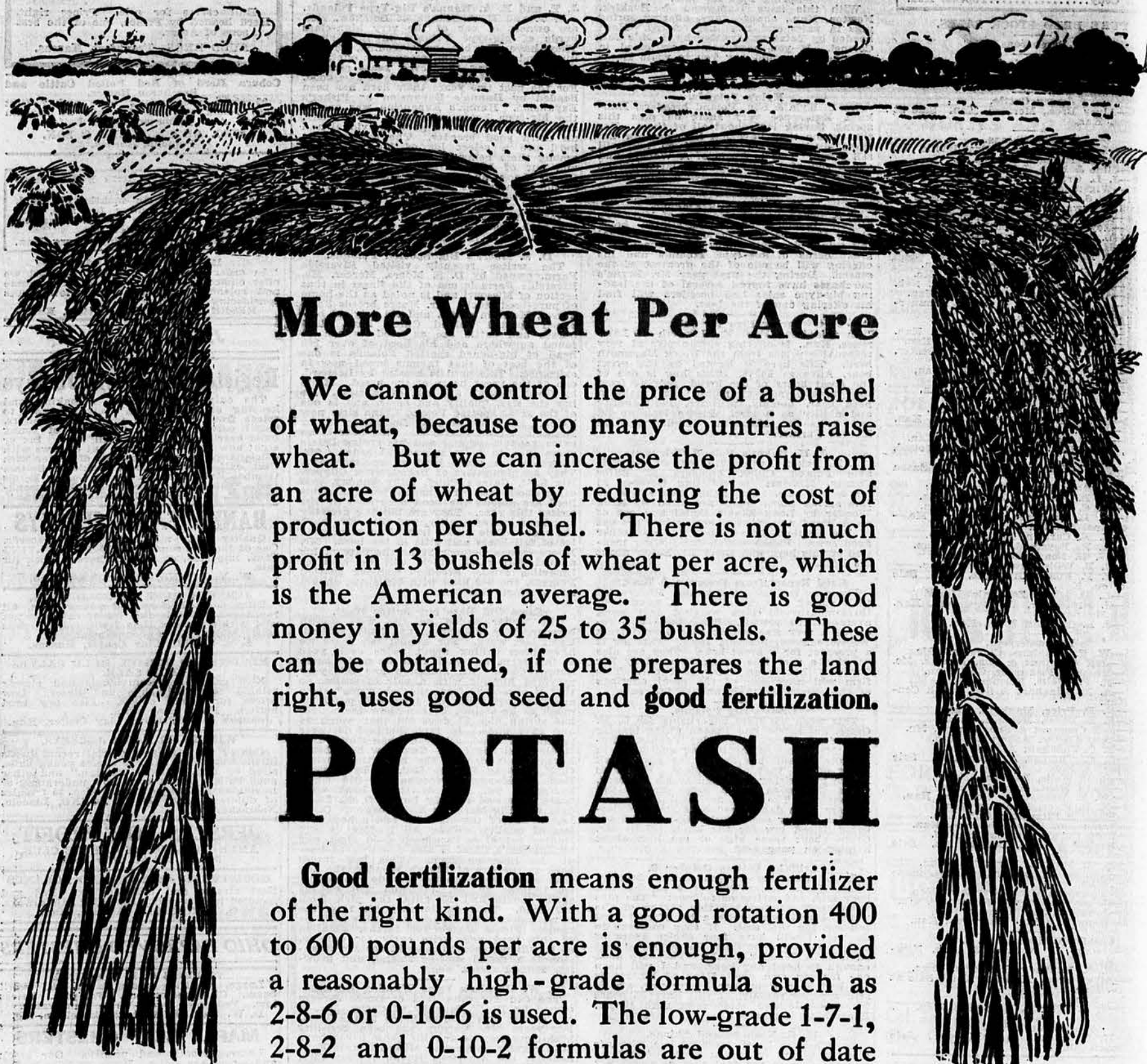
JOHN DUNLAP, Williamsport, Ohio.

LEARN HOW TO RUN AN AUTO. Auld's Answers on Automobiles will teach all about Carburetors, Ignition, Timing, Engine Troubles, Overhauling and Driving. A complete course of 500 pages with 375 diagrams highly endorsed by men who know. \$1.50 to any address. Money back if not pleased. Chas Clark Co., 334 Kansas Ave., Topeka, Kan.

boars of the herd-header kind. He also has an extra good lot of fall gilts. The fall gilts and boars and a greater part of the spring boars are by the great boar, Iowa Lad, at the head of the herd last year. This boar was by Blix Ex, dam Model of 1907 by Pawnee Lad. Competent judges concede Iowa Lad to be one of the great big-type boars, and his produce show him to be a breeder of rare merit. Mr. Dolan will have a great offering for his fall sale. Watch for date, which will be announced later.

Cline's Poland Chinas.

With this issue R. J. Cline, Iola, Kan., starts a card for his large-type Polands. Mr. Cline has at the head of his herd Tive Hadley, sired by Major B. Hadley, the grand champion at American Royal, 1911. This is probably the best son of Major B. Hadley, and since Major B. Hadley is gone Tive Hadley should be one of the best big-type boars in Kansas. Long King's Equal 2d is also used in the herd. He is a boar with plenty of length and extra heavy bone. Mr. Cline will hold a fall sale October 3 and sell about 51 head of boars and gilts. Please send your name in for a catalog, as Mr. Cline has no mailing list and try to arrange to attend this sale. Mention Kansas Farmer when you write.



More Wheat Per Acre

We cannot control the price of a bushel of wheat, because too many countries raise wheat. But we can increase the profit from an acre of wheat by reducing the cost of production per bushel. There is not much profit in 13 bushels of wheat per acre, which is the American average. There is good money in yields of 25 to 35 bushels. These can be obtained, if one prepares the land right, uses good seed and good fertilization.

POTASH

Good fertilization means enough fertilizer of the right kind. With a good rotation 400 to 600 pounds per acre is enough, provided a reasonably high-grade formula such as 2-8-6 or 0-10-6 is used. The low-grade 1-7-1, 2-8-2 and 0-10-2 formulas are out of date and out of balance, and the plant food in them costs too much per unit. Urge your dealer to carry high-grade formulas; or if he is stocked up with low-grade stuff, get him to buy some potash salts with which to bring up the *potash content* to a *high grade*. One bag of muriate of potash added to a ton of fertilizer will do it.

If you prefer real bone or basic slag in place of acid phosphate try 300 to 400 pounds per acre of a mixture of 1600 pounds of either with 400 pounds of muriate of potash. You will find that **Potash Pays**.

These high-potash mixtures produce better wheat and clover, heavy grain and stiff straw.

We sell Potash salts in any quantity from 200 pounds up. If your dealer will not get potash for you, write us for prices and for our FREE booklet on Fall Fertilizers.

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