

KANSAS FARMER

For the improvement

of the Farm and Home

Volume Number 10.

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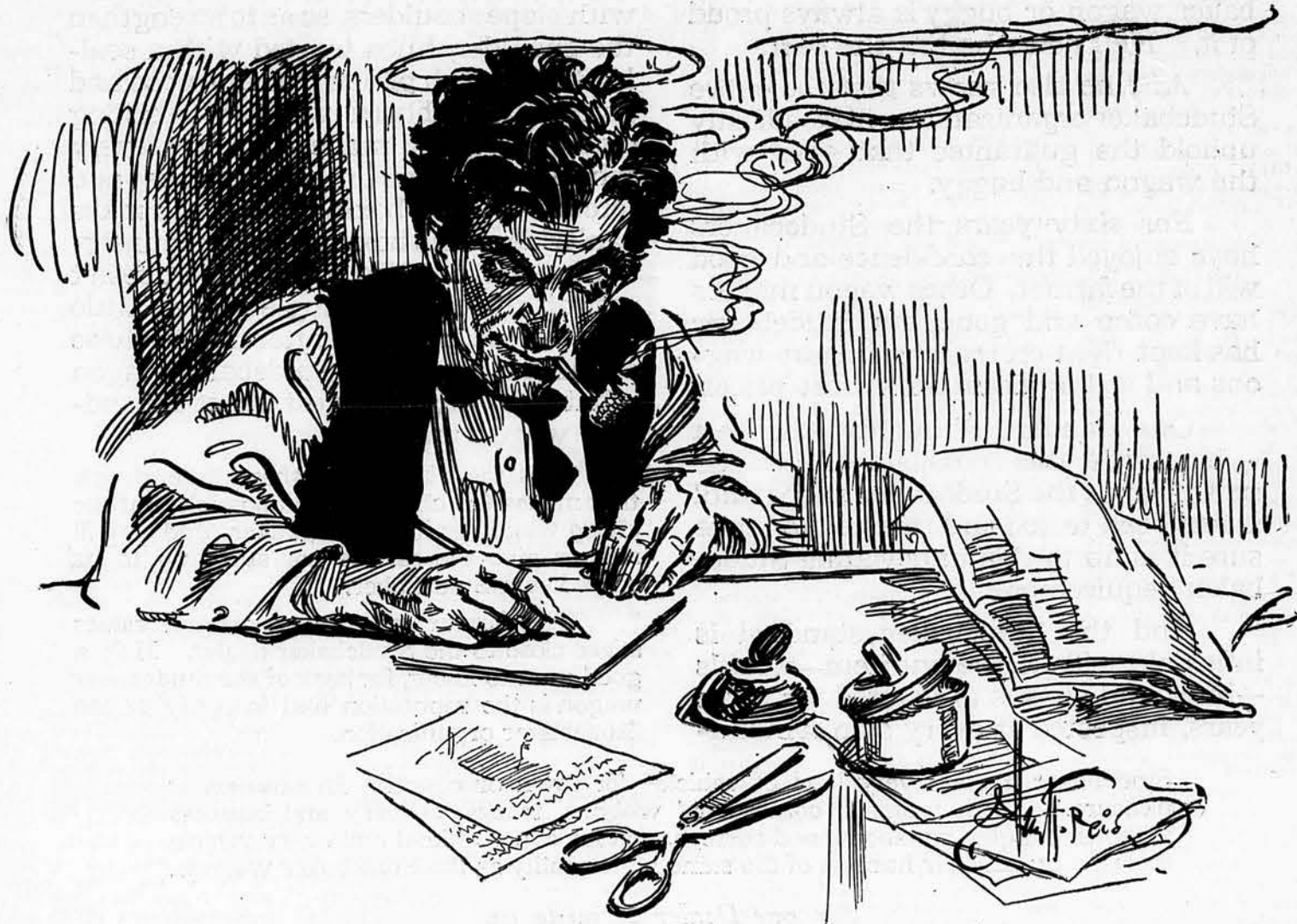
Established 1863. \$1 a Year

EVERY man thinks his lot the hardest.

When he leaves college to begin his education the country editor is filled with ideas for man's betterment, charged with reforming zeal and overflowing with enthusiasm for the purification of politics. He calls attention to neighborhood conditions, suggests improvement and is shunned by nice people. He pounces upon the first wrong that shows its ugly head and subscriptions stop. He tries to sweeten the fetor of politics and loses all chance at the county printing.

He soon learns that men do not trouble to change conditions. Conditions change the man. The head is squeezed to fit the hat and he acquires the charming art of touching up truth. Youth accepts positions instead of getting jobs; ancient maidens entertain and "a delightful time was had", while a henhouse fire is a holocaust.

But he does his work in the world and we give a mead of praise to the busy, brainy, bustling body whose only hope of reward is in getting the postoffice. —I. D. G.



Sharing all our Joys and Sorrows, Boosting our Business and Working With Tireless Energy for Others, the Country Editor is the Most Important Factor in his Community

Studebaker



"Your new wagon's a Studebaker?"

"Sure! I bought a Studebaker buggy, too."

"Well, there's no better made. I'm driving a Studebaker myself."

Confidence — the feeling that back of the mechanical excellence of the wagon and the buggy is the Studebaker name and reputation made this conversation possible.

For the man who buys a Studebaker wagon or buggy is always proud of it. He knows he has the best.

And he also knows that the entire Studebaker organization will steadfastly uphold the guarantee that goes with the wagon and buggy.

For sixty years the Studebakers have enjoyed the confidence and good will of the farmer. Other wagon makers have come and gone, but Studebaker has kept right on making honest wagons and selling them at honest prices.

One standard of quality—the best—has made this possible. A wagon never leaves the Studebaker shops until it has been tested and retested to make sure it is up to this undeviating Studebaker requirement.

And the Studebaker standard is inflexible. Take the one item—wheels—hubs and spokes are stored for three years, inspected at every step of manu-

facture. Spokes turned from billets, cut with slope shoulders, so as to strengthen the shoulder, hubs treated with a sealing fluid which penetrates the wood and gives it a stubborn weather-resisting quality. Tires made one for every wheel—not kept in stock sizes and forced on. Hub boxing made, so spokes can ride on the boxing, spokes counter-sunk on the face so the load doesn't rest on the end of a single spoke. Little details, it is true, but attention to these details have made the Studebaker wagon what it is—the strongest, most dependable wagon made.

It is the absence of these little details that makes the cheap wagon possible, but the cheap wagon isn't a Studebaker, and it will neither give the service nor stand up to its work like a Studebaker.

The farmer who knows wagon values sticks close to the Studebaker dealer. He's a good man to know, for back of the Studebaker wagon is the reputation and integrity of the Studebaker organization.

Studebaker makes every kind of vehicle—for town or country, for business or pleasure. Farm wagons, contractors' wagons, trucks, delivery and business wagons, buggies, runabouts and surreys, and for every animal and every vehicle there's a Studebaker harness of the same high quality as the Studebaker wagons.

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KANSAS FARMER

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

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GUARANTEED CIRCULATION OVER 60,000

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.



STATE FAIR SITUATION.

"An act authorizing the State Board of Agriculture to hold an annual state fair at Hutchinson, Kan., providing for the management and control thereof, and authorizing certain counties to participate therein." This is the title of the bill passed by the House and Senate which last week gave this great commonwealth a state fair located at Hutchinson. Under that title no appropriation could be made, and was, according to Attorney General Dawson, the only title that could be used without conflicting with the constitution.

KANSAS FARMER has received many letters asking in what shape this leaves the business of the Kansas State Fair Association which gives an annual exposition at Topeka, asking also what Hutchinson has gained and how the trick was turned, and to throw some light on a situation apparently not well understood, this article is written. Had the people of Kansas and the local press of the state given vent to their feelings before the bill passed, as they have since, the story might have had a different ending—although the Hutchinson supporters had the organization in the committees, the support of the speaker of the House, and votes enough by systematic trading, to act without regard to the protests and feelings of the people and local press. It is the belief around the state house that when the miscellaneous appropriations are made, a piece of money will be quietly slipped to the fair treasury to enable the preparations for the next fair to go along. If you have any feeling that an appropriation should not be made it would be well to drop your representative a line. Unless an appropriation is made to actually build a fair, we fail to see wherein the state has gained anything. We see wherein the Hutchinson management has gained much, because in case of a rainy week or other condition which would cut the gate receipts, the State of Kansas is obligated for the indebtedness.

But a name is not everything—and the fair business is no exception. The title—State Fair—will not pull big crowds. Good treatment, a good time, something to see, is necessary to bring the visitors and money at the gate. Good treatment, good shipping facilities, good housing and prompt payment of premiums are the things which attract exhibitors. No fair can be successful without a well balanced combination of these essentials. This is a tip to the State Board of Agriculture in the management of its fair—and the tip does not cost a cent. Kansas will have something to learn in the fair business—her experience will cost money, too. The grounds the state has taken over do not have a single building adapted to comfortable or satisfactory housing of exhibits—without any consideration for permanency or credit to the commonwealth. Every building on these grounds must be replaced by a substantial structure if exhibits are to be accommodated. To shape grounds and erect buildings requires money, and the money will not be made from the fair—therefore it will require subsidizing. So the people of Kansas must not be fooled into believing that they have even a beginning for desirable fair grounds or that such can be had without liberal appropriations for buildings and other improvements.

The members of the present legislature who put over this piece of "useful and well timed legislation" seem to think that their action will cost the state nothing, inasmuch as they accepted a gift and agreed to give nothing. It must be plain from the above that first of all a state fair plant must be constructed—then the minute the fair opens its gates the state assumes \$40,000 to \$60,000 of obligations—represented by premiums and operating expenses. A rainy week or other adversity will put Kansas up against a deficit in its fair experiment. This is the financial side of any state fair situation and is mentioned only to substantiate an opinion ventured in these columns a few weeks ago,

viz., that Kansas should not go into the state fair business until the state was ready to spend a half million dollars during a five-year period to equip and maintain a state fair. The taking over of the Topeka grounds would have made possible the building of a fair at half this amount, because the ground is shaded, sodded and parked, and has \$100,000 worth of brick and concrete buildings erected on a state fair scale, and a patronage bordering well on state fair proportions.

In spite of Topeka's advantages in so far as grounds and buildings are concerned, together with advantages of railroad facilities, accessibility to the largest number of people of the state, the state capital, with dozens upon dozens of attractions, a population of 60,000 within walking distance of the main entrance, Topeka's merits were not even considered by those who had their heads set on Hutchinson. No argument of reason, logic, figures, etc., was of avail. Then you say, "How was it put over?" Put over—why, bless your soul—because our system of doing such things is not one that represents the people. To the wind with the people! That was the spirit in the state fair business. A mass meeting in two counties passed resolutions favorable to Topeka, but failed to budge its representative who was voting for Hutchinson. Telegrams and petitions from other counties failed to influence the representatives appealed to. Senators from northeast and southeast Kansas whose constituents can make the trip to Topeka in a few hours, voted that they should go to Hutchinson—a whole day's ride or longer—to attend their state fair. You can see why senators and representatives in territory naturally tributary to Hutchinson should vote for their town, but you can't see why eastern, southeastern and north-eastern Kansas representatives and senators should vote as they did. Well, the reason for this kind of voting was because of a trading deal, commonly known as a "pork barrel."

That you may be posted and better prepared to understand what is to appear later in these columns, here is the way the members of each house voted on this state fair business:

The House, for Hutchinson:—Armstrong of Cherokee, Barrett, Bay, Blaisdell, Boyd, Brewster, Daily, Davis of Edwards, Davis of Gray, Dawley, Doderidge, Doerr, Drew, Focht, Foster, Freeland, Gibson of Cowley, Gillum, Gilman, Gordon, Graber, Hangen, Hanna, Harned, Helton, Hendricks, Herr, Hines, Houston, Houtz, Jewett, Keene, Kincaid, Lane, Lauback, Lyon, McCollum, McDannald, McGregor, Miller of Cherokee, Milton, Mulroy, Nichols, Noble, O'Connor, Ostlund, Ossweiler, Perryman, Phillips, Reitzel, Riddle, Robson, Ross, Satterthwaite, Schlicher, Scott, Smischney, Spiker, Stevens, Thorpe, Timken, Wacker, Walker, Williams, Wilson of Crawford, Wilson of Greeley, Zutavern, Speaker Brown—68.

Against—Armstrong of Cloud, Ashcroft, Atkinson, Bailey, Bentley, Blakeley, Bunger, Burtis, Carnahan, Chase, Coop, Crippen, Cummings, Dowling, Fallas, Frey, Hamm, Holbrook, Kerschen, Kyser, Laing, Lumpkin, Mahurin, Mitchell, Moorhead, Moyer, Orr, Ragle, Sharpless, Stone of Shawnee, Stone of Sherman, Sutor, Tanner, Tilley, Todd, Tromble, Tulloss, Turner, Tyson, Uplinger, Voiland, Woodbury—43.

The Senate, for Hutchinson:—Carey, Carney, Davis, Denton, Howe, Huffman, Joseph, Kinkel, Lambertson, Mahin, Malone, Milton, Nixon, Overfield, Pauley, Porter, Price of Clark, Price of Greenwood, Shouse, Simpson, Waggener, Sutton, Williams, Trout, Wilson of Jefferson.

Against—Bowman, Gray, Hinds, King, Klein, Logan, McMillan, Meek, Nighswonger, Paulen, Stavelly, Stillings, Troutman, Wolf, and Wilson of Washington. Pick out your senator and representative and see if he stood for the best interest of your county.

The editor of KANSAS FARMER and writer of this is president of the Kansas State Fair Association, chartered under the laws of Kansas, and which has the last three years expended \$100,000 in the highest class of permanent buildings on beautiful grounds within a ten minutes' walk of 25,000 of Topeka's 60,000 people. You say we are biased in our view. We are not—read KANSAS FARMER of February 8 for detailed proof. It is our contention that the people of Kansas do not yet feel the need of a state fair—principally because they do not want to be taxed to support such fair, and next because Kansas already has two fairs as good as it is possible to put on under community stock company management. We contend that Kansas should not engage in the state fair business unless she will spend the money to build a state fair commensurate with the importance of Kansas' agricultural and live stock interests and making a favorable showing with surrounding state fairs. This may not be the right attitude for the president of the Topeka institution to assume. If not, we can't help it. We make our living from KANSAS FARMER, and our first obligation is to the thousands of our readers throughout the state. We know something of the feelings of the farmers of Kansas, and we know there was no sentiment in favor of establishing a fair and none in favor of adding to the present burden of taxation. The people of Kansas have some pride, too. They prefer not to have a fair to which the name of the state is affixed unless it be a state fair in fact. The annual exposition of the Kansas State Fair Association will be held. The Association will continue to serve the people fully as well and better if possible than in the past. It has made a wonderful record and we see no reason why that record should not be continued.

STANDARDIZED CHOLERA SERUM.

If the present legislature shall have adjourned without taking action on the matter of inspecting and standardizing various remedies used in animal husbandry and especially the hog cholera serum, there will be a good many people in Kansas who will feel that a necessary action has been either neglected or overlooked. With 10 factories in Kansas City and one in Wichita turning out commercial serum for the treatment of hog cholera, and with only one Agricultural College manufacturing such serum, it would seem that there should be some provision made in law for standardizing these serums of different makes so that the farmer who finds it necessary to have his hogs treated should have some assurance that he is getting the proper serum and that it has a proper composition and efficiency. Next to the control and inspection of medicines which are intended for human use there is nothing so important to the interests of Kansas as the control and inspection of remedies intended for use with our domestic animals. The state of Kansas has by far its largest investment in her agriculture and the most important part of this investment in live stock. It is only economy to take care of this investment and this cannot be done if the state is made the prey of unscrupulous manufacturers or practitioners who are not held responsible for the quality of their product. It is not believed that any of the factories mentioned are guilty of intentional fraud in any way, but it is believed that there may be variations in a product which is manufactured in a number of different places and perhaps under different formulae and that this variation could and should be prevented by a standardization of the products which can only be accomplished under process of law.

Farmers all over Kansas are urged to test their seed corn March 17, not that that day is any better than March 16 or 18, but because the Kansas Agricultural College has set aside that time as "Corn Testing Day."

HALF WAY APPROPRIATION.

One of the best things that any legislature could do is to prevent extravagance in the appropriation and use of public money and in doing this it is necessary that extreme care should be exercised in discriminating between extravagance and real economy. The present legislature has announced its determination to cut down the running expenses of the machinery of state in every possible way consistent with efficiency. This pledge has been given over and over again and it is believed that a majority of the members, if indeed not all of them, are honestly trying to redeem it.

There are places, however, where it is evident that a full knowledge of the facts in all their bearing had not been obtained before action was taken. It is understood that there has been authorized two farm experiment stations for western Kansas, but that no adequate appropriation has been made for their maintenance. One of these stations is to be located in Kearney County where the citizens will donate 100 acres of land and improve it to the value of \$7,500, while the state grants an appropriation of \$10,000.

While the enterprising citizens of Kearney County are to be commended for their zeal in seeking for the advancement of the agriculture of their community, the location of a new experiment station so close to the one already established at Garden City, is the subject of criticism as to a state-wide policy. The meagre appropriation of \$10,000 for the maintenance of this station is an example of the poor economy which arises from reduced appropriations. Very little can be done in breaking in a new station, erecting the necessary buildings, purchasing equipments and employing capable men who will get results, on \$5,000 a year.

Another instance in point is found in the Agricultural College appropriation bill where an appropriation of \$25,000 was asked for the Animal Husbandry Department. It is understood that \$10,000 has been allowed, although the bill has not reached its final passage at the time of this writing. The College asked for \$25,000 for this purpose because it needed that amount. The estimates were made by the state architect who had been furnished with full information as to the needs of the department. The granting of only \$10,000 for this purpose is absolutely worse than nothing, as the object cannot be accomplished for which the money was asked and the reduced amount will compel the abandonment of the plan now in hand or a return of this appropriation to the state treasurer entire and the waiting of two years longer until another legislature can assemble. It is no saving of money to reduce appropriations that are absolutely needed for economical and effective work in such an institution.

Things look good for the appointment of President Waters of Kansas Agricultural College for Secretary of the Federal Department of Agriculture. This is indicated by the statements of leading Kansas Democrats who have recently talked with President Wilson. The Washington press entertains the same opinion. The Washington Post says that "several Democratic leaders in Congress known to enjoy the confidence of President-elect Wilson, declared recently that they were confident President Waters was foremost in the president-elect's consideration for the post of Secretary of Agriculture. Department of Agriculture officials here regard him as one of the leading agricultural scientists of the middle west. Those leaders who know of his candidacy consider his selection as practically settled."

Cattle men from all over the country are camping on the Rio Grande waiting for a cessation of hostilities, when a big cattle rush is expected.

KANSAS STATE UNIVERSITY LIBRARY

GENERAL FARM INQUIRIES

Something For Every Farm—Overflow Items From Other Departments

WHILE the silo has been used to some extent for over half a century, the past ten years have probably seen more silos built than the forty years preceding.

The growing sentiment in favor of the silo is due to the great improvement of the machinery used in filling the silo and the urgent demand for cheaper and better feed. Many who are still skeptical in regard to the value of the silo, ask why the silo was so much talked of twenty-five or thirty years ago and then practically unheard of until recent years. If you will take into consideration that less than twenty years ago we were still cutting corn by hand and the silage cutter was still in its infancy, and will compare past conditions with the present—with the corn binder which cuts and ties the corn in neat bundles which it deposits in solid rows across the field faster than a man cares to walk, also the powerful silage cutters which cut the silage into one-half inch lengths and shoot it into the top of the silo at the rate of fifteen tons per hour—the answer to the question of why the silo is in such favor at the present time, becomes at once apparent.

But, to get to the subject assigned—Why the Cement Silo?—for the same reason that the Dutchman bought the large shoes, to get the most for the money, but unlike the Dutchman, to take out the extra part in wearing qualities rather than size. The cement silo will not dry out and fall down, will not rot, has no hoops to get loose. The silo stands empty during the worst season of the year for wooden vessels of any kind, and it also happens to be the season when the farmer has the least time to look after such things. If the cement silo keeps the silage as well as the wooden silo, takes care of itself when empty, and will last forever or as large a portion thereof as concerns us, what better do we need?

Silage, besides being the cheapest feed we know, is as nearly in the form in which nature hands it to the cattle as can be provided out of the growing season. In feeding dry fodder, taking into account what blows away when it is too dry, what the cattle refuse to eat when it is too wet, and the part of the plant they will not eat at all, it is safe to say they do not eat more than one-third of the plant on an average. While the part of the plant which they do not eat in dry fodder and which they do eat in silage, is not so rich in feeding value as the rest of the plant, yet the entire plant is served in so much better form that it more than balances the difference.

Corn and Kafir are the two plants most extensively used for silage. While it is generally conceded that corn makes somewhat better silage than Kafir, yet Kafir has many points in its favor. Kafir is a surer crop than corn. When the dry weather comes, Kafir will roll up its leaves and then with the first rain it re-views and will make a fair crop, when corn is past redemption. Kafir, unless it is literally burned by drouth and hot winds, stays green until frost. While there is a proper time when it is best to put Kafir into the silo, yet it isn't always possible to get everything done at the proper time and Kafir assures us more days of grace than any other plant. I find one fault with Kafir in that some of the seed passes through the cattle, especially when they are fed all they will eat, but we also have a remedy for this fault, in the presence of the pig in the feed lot. I think Kafir has enough points in its favor to give it first place as a silage crop, especially in parts of the country not most favorable for corn.

More silos mean more cattle; more cattle mean more manure; more manure means better crops; better crops are what we have been longing for, so let us build more silos.

After all has been summed up, the silage and not the silo, is the great idea to impress upon people's minds. With land at the price it has reached in Kansas, and still soaring, silage spells the difference between success and failure in stock raising.—W. L. MUESER, Anson, Kan., before Farmers' Institute.

Measuring Silage.

E. B. M., Osage City, Kan., writes: "I am about to sell my silage. I have a 16x30 silo. The silage to be sold is 20 feet deep. How can I arrive at the number of tons I have?"

A 16x32 silo is regarded as a 120-ton silo. The twenty feet of silage still remaining in the silo cannot be regarded

as two-thirds of the original quantity for the reason that the weight of a cubic foot of silage increases as the bottom is approached. In other words, the nearer the bottom of the silo, the heavier the silage and the fewer cubic feet required to make a ton of silage. The weight of silage also depends upon the amount of grain in the silage. For the above reasons it is apparent that it will be difficult to arrive even at a close estimate of the tonnage remaining in the silo, or even at the weight of a cubic foot.

It is considered, however, that the average weight of a cubic foot of silage in a 30-foot silo is 40 pounds; the weight at the top being around 20 pounds, and at the bottom around 60 pounds per cubic foot. The chances are that the average weight of the silage remaining in your silo would be near 40 pounds. Using this weight as a basis, you may figure as follows: Square the diameter which is 16x16 or 256; multiply this by 20—which is the depth of silage—and you have 5120; divide this by seven-eighths, which will give you 4480; multiply this

Spanish peanuts are grown almost entirely for forage. This variety has a small upright vine producing numerous pods near the tap root. It can be planted closer than other varieties. It yields heavily per acre, is an especially desirable variety to grow for hogs, the hogs doing their own harvesting. The peanut is sometimes attacked by leaf spot which may be checked by Bordeaux mixture.

Write seedsmen who are advertisers in KANSAS FARMER, for the variety you want.

Arkansas Valley Overflow Lands.

Subscriber L. E. C., Derby, Kansas, writes to know to what the overflow lands of the Arkansas Valley can be profitably planted.

There is no man better posted on the uses to which these lands may be put than J. Moncrief, of Winfield. He says the overflow bottom districts that are unsuitable for alfalfa growing and general farming, could be utilized in growing timber products. Should we have 2000 acres of Catalpa Speciosa timber,

with a heavy coat will be dull, out of condition, and seldom or never dry or clean. Clipping removes the tendency to sweat, and there is no comparison as between a long, wet coat and a short, dry one. When the long coat is warmed up, and the horse is being worked regularly, it is next to impossible to thoroughly dry the coat, and this causes the animal to lose flesh in addition to making him a prey to a multitude of ills. Big companies which require hundreds of horses in carrying on this business, have experimented and found that where their horses were clipped, coughs and pneumonia have been practically eliminated.

Rolling Winter Wheat.

Subscriber, W. S., Tonganoxie, Kan., asks if it is advisable to roll winter wheat in eastern Kansas, and if so, whether or not it should be rolled more than once.

The object of rolling winter wheat is first to conserve the moisture, and second, to pack the ground which has heaved and become loose as a result of winter freezing and thawing. To roll in order to pack the ground for the latter reason is also to accomplish the first named object. If you will read the article on page 15 of the February 15 of KANSAS FARMER, you will get a detailed statement of the advantage of rolling wheat. If you do not have a copy of this issue and will drop us a line, it will be mailed.

The rolling, of course, should be done as soon as the frost is out of the ground and the field is dry enough to roll. The flat or smooth surface roller should not be used. There are two implements thoroughly well adapted for this purpose; one is the Western Land Roller made at Hastings, Neb., and advertised in KANSAS FARMER, and the other is the ordinary sub-surface packer. The latter, however, is not so well adapted to the rolling of wheat as is the former. Either of these implements has the effect of leaving the field in ridges and the surface in a granular condition, either of which conditions has the effect of preventing damage by blowing.

If, after rolling, heavy rain should follow and the field become packed, it would pay to roll again, particularly so if the field is sandy. Usually the rolling of wheat can and should be done before other spring work begins.

Profitable Catalpa Plantation.

C. W. Delker, St. John, Kan., writes: "Eight years ago I planted five acres of sandy, sub-irrigated land to catalpa trees. At the time the trees were set out the land was not worth more than \$30 per acre. The trees were set four feet apart each way. The following statement sets forth the actual returns from this catalpa grove."

434 Corner posts, 8 feet long, at 50 cents	\$217.00
200 Extra posts, 6 ft. 8 inches, at 25 cents	50.00
9690 No. 1's 6 ft. 8 inches, at 12 cents	1162.80
3138 No. 2's 6 feet 8 inches, at 10 cents	313.80
2800 No. 3's 6 ft. 8 inches, at 05 cents	140.00
18 Twelve foot poles, at 60c.	10.80
120 loads of cord wood, at \$1.25	150.00

Total returns for 5 acres of trees. \$2044.40

Openings Not Often Considered.

J. F., Jefferson, Okla., a former Kansan, writes that in all parts of Kansas and Oklahoma there are good openings for the growing of all kinds of seeds for the wholesale seed houses. "Growing watermelon seeds is quite an extensive and profitable business here in Jefferson. The growing of all kinds of farm and garden seeds can be made a profitable and pleasant vocation."

Size of Furrow Openers.

A. M. A., Jayton, Texas, asks what size of disk furrow openers he should use for a two-row planter. Twelve inch disks will give him good service for either bottom or upland. The furrow opener is a valuable attachment for the corn planter.

Calf Scour Remedy.

Subscriber A. C. K., Topeka, gives this remedy for white scours in calves: Three drops carbolic acid, five drops camphor in a quart of warm milk. Repeat in 10 hours if first does does not have effect.

Kafir and Milo Areas



NUMBER 1 in the above map shows the area where dwarf milo has been grown successfully from home-grown or northern-grown seed. Southern-grown seed usually fails in this section. Dwarf white and amber sorghum make good forage in area No. 1 and in favorable years produce good seed. Kafir, owing to the short seasons and cool weather, produces poor seed but fair forage.

In area No. 2 black-hulled white Kafir makes good forage, but seldom a profitable seed crop. Dwarf white and amber sorghum do well in this area.

Dwarf milo is at home in areas Nos. 2 and 3. Home-grown seed and northern-grown seed produce better in No. 2 area than does southern-grown seed. Home-grown seed does better in area No. 3 than introduced seed, but northern or southern-grown seed can be planted with success.

Kafir does well in areas Nos. 2, 3, 4 and 5. Black-hulled white is the favorite variety. In areas 2 and 5 it is most profitably grown for forage, but Kafir cannot compete with dwarf milo in area 2 or 3 for seed production, nor does Kafir produce seed profitably in area 5.

Black-hulled white Kafir does well in area 4. It can be profitably grown for grain and for silage. The sweet sorghums can be grown profitably for forage in area 5. The sweet sorghums do well for grain or for forage in area No. 4, while dwarf milo cannot compete with Kafir or with sweet sorghums in area No. 4.

Northern-grown seed of any of the sorghums should be planted in the north one-third of the state, extending from east to west. Home-grown seed should be used in every area where obtainable. Southern-grown seed makes good in the south one-third of the state extending from east to west.

This is reprinted from KANSAS FARMER of June 1, 1912. This data, with that regarding Kafir contained in last week's issue, is important to all Kansas farmers who would be most certain of a forage and grain feed supply.

by 40—the weight of a cubic foot of silage—which will give you 179,200 pounds; divide by 2000, or the number of pounds in a ton, and you will have about 89 tons remaining in the silo.

Regarding Peanuts.

Answering H. F., Burlington, Kan.: Peanuts will grow with a reasonable degree of success anywhere that corn matures. Various varieties mature in from 120 to 150 days. A sandy loam soil best suits the peanut. On heavy soils the pods cannot push their way into the ground to mature. The field in which peanuts are planted, should be plowed early, the seed bed well pulverized and packed.

Planting may be done about the time or immediately following corn planting. The seed is planted either in hills or drills and the distances apart depend upon the variety grown and the richness of the soil. Generally the rows are 24 to 36 inches apart each way, and two seeds planted at each intersection. The Virginia bunch or the Tennessee white or Tennessee red are those most usually grown in this section, for seed.

that could be used for manufacturing of all kinds of wood products, such as butter moulds, paddles, base ball bats, single trees, etc., it would support a general factory somewhere in the valley, and the cut would be sufficient to keep it going.

Also the orchard industry has been almost totally neglected in this section, largely on account of failure to adopt scientific methods of pruning, and later following this up by proper cultivation. There is much room for large commercial orchards in this section of fruit particularly adapted to this climate, such as Keiffer Pear, Cherry, Plum and commercial Peaches, also Apple Culture along the Arkansas river.

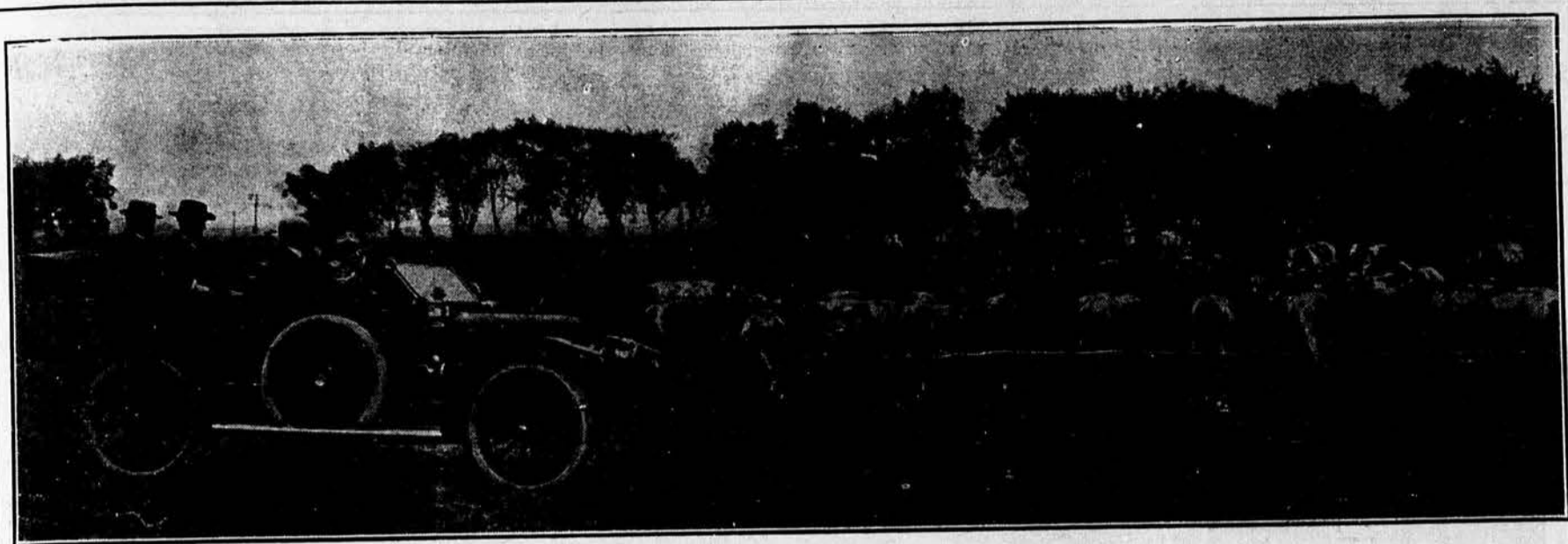
Advantages of Clipping.

H. S., Axline, Kan., asks what advantages are to be had from clipping work horses and mules in the spring of the year.

A clipped horse will not only do a greater amount of work on the same amount of food than a horse with his natural coat will do, but he will also be fresh and full of vigor, while the horse

PRESENT CATTLE SITUATION

Present Scarcity and High Prices Due to Policy of Small Farm Owners



GOOD LIVE STOCK MAKES GOOD FARMS, GOOD HOMES AND GOOD FARMERS.

By HON. WALTER J. BURTIS, Fredonia, Kansas

WITHOUT multiplying statistics, let it suffice to say that the gradually depleted stocks of American cattle have discontinued our exportation of cattle, have about doubled the price of the beef animal to our consumers, and even threatens an extensive importation of beef from the great plains of South America.

The policy of the small farm holder is responsible for this. In grain and meat production the small general purpose farm feeds the consuming world from the surplus. Under our present economic condition, as that surplus is reduced or increased, the price of cereal and meat foods must in a general way rise and fall. Adhering then to time honored economic principles, the future of our American cattle industry lies with the small farmer. The individual holding the key to the situation and at the same time being so much the creature of circumstances, stands as a vacillating, uncertain business proposition. His guess on the market controls his plans for production. There are some well defined reasons for this individual's temerity.

The cost of production has little control over market quotations. The cattle producer is always stared in the face by the losing market bogie when the feeder puts his cattle on feed in the fall. The price of corn may rise over the entire producing area, but an unfavorable fat cattle market may develop and ruthlessly wipe out his margin of profit and even draw on his accumulated resources. The cattle breeder on the farm has still more trouble, for he is still further from the market. I venture that until very recent years three-fourths of the cattle leaving the small farm were sold at an actual loss, all expenses considered. How often we have witnessed, in the fall of the year at the usual farm auction, a calf bringing \$16 and \$18 and the mother of that calf selling in the same ring for only \$22 to \$25, although the cow may be in full breeding condition. We are all familiar with the local buyer for the market. The butcher, on riding into your herd, wants the nice heifers, to be sure. He is out for beef at the lowest possible price, and he usually gets it for less than it is worth. A country rider for the general market has "been in" with cattle often enough to judge with considerable accuracy what individuals, of that very variable class of farm cattle called "she stuff" will bring on the market, and in matching his bickerings against the indifferently posted owner of the cattle, secures the flower of the young breeding herd at an unprofitable figure to the owner, and saps the cattle industry at its fountain head. The small breeder tries feeding a few steers, a few cows, or a few heifers, but not having enough together to allow sufficient grading to suit market demands, is handicapped thereby when his product is ready for market. The feeder is convinced that he should sell his corn on the local market, or put it to some more remunerative use. The small breeder sees a quick and sure return from vealing the calf, from selling the steer at a year old, or off the cow at pasture in the fall, from disposing of the heifer because she is wanted, or of the aged breeding cow because she is not wanted.

This much discussed individual, the small farmer, is a business man in his own way. Although according to the rules of bankruptcy courts, he never "busts up," he may "peter out," and he knows it. While he is not interested in an approved trial balance of the business office, he realizes that he must always make a trial to have a balance. Is it strange, then, that he so readily falls into the way of getting on the market by the shortest route his judgment approves? The small farmer is one of the best losers in the business world. His life has been a battle to make both ends meet and secure advantages for his family. His experience is a law unto himself. Adverse conditions, however, will finally make him a pessimist—a condition he is slow to shake off.

The small farmer has so largely given up raising and fitting steers and breeding cattle because he becomes discouraged in meeting market conditions. He has been slow to engage generally in dairying, because of the special problems ever present in this industry. The aged cow so freely discounted in the farm sale ring in the fall—the biggest eater on the farm and a mere canner when she reaches the market—easily lost favor in the financial plan of the farm. The much sought for heifer is sold to supply the city local market, where heifer meat is popular with steer meat, although it is discounted a cent a pound at the farm. For these reasons many have concluded to quit cattle, and when their range brother was compelled to quit our cattle surplus disappeared, creating one of our great agricultural problems of the day—the production of more cattle on our farms.

But our failures are of interest to us only so far as they may point a way to success. Our great free American ranges have practically disappeared forever. Range cattle have been bred up and fed up with an allowance of winter feed until they come to our markets in full competition with our native farm cattle; and in many classifications outdo us, sending our stuff to the speculators' pens as tailings. While range competition of the past has done much to discourage the small farmer from producing cattle, low priced range cattle undoubtedly are a thing of the past. Range cattle and farm cattle of our domain are to meet on an equal footing in our markets of the future. Every acre of land that will warrant general agricultural operations is being rapidly adapted to the production of live stock, grain and other food stuffs for the support of our ever increasing number of consumers.

Our live stock problem is to convince the farmer that it is to his interest to raise more cattle.

Here we can draw at least one lesson from the range. Our brother, the range-man, has given us an object lesson in the use of good sires. He has used his money, lavishly perhaps, but wisely we must admit, until the long-horned, long-nosed, cat-hammed, sunfish-bodied steer of the romantic west is as such a rarity on our markets as the buffalo. The scrub bull has been swatted editorially and from the agricultural platform until

the statement has become a memory gem, and never was a truer sermon preached from an agricultural text.

Perhaps one must live in the middle west to fully appreciate conditions that have made possible this misapplication of nature's law—the use of the scrub sire. In an early day many sires brought west were unfit for duty. They had been found wanting, and were bargained to the traveling speculators, who in turn peddled them through the rapidly developing live stock communities of the west; doing untold injury to live stock interests by sowing seeds of distrust in the mind of the farmer doing business on a small scale. Close on the heels of this pioneer came the hothouse sire—a triple product from the imagination, the money of the fortune spender, and the immutable laws of nature. It must be admitted that thousands of sires have been sold throughout live stock communities that failed in their purpose, for no other reason than that of poor feed and poor care. However, it is true that sires must be sent to the small farmer that have been reared on such feed and in such environment as will fit them to proper adaption to farm conditions. Improper fitting has created much feeling against the product of the sale ring. This must be removed.

Would it not be possible for our powerful and forehanded cattle registry board to establish and enforce a standard of prolificacy that would actually be an instrument of protection when issued by said board to the purchaser of an animal? Might it not do more to convince the purchaser that he is getting what he wants and needs than the usual sale ring guarantee and a breeding certificate? Would it not be possible for our registry boards to set standards of feeding and environments, varying to be sure with climatic conditions, that the purchaser of breeding animals might know, from official authority, how the animal in question was reared as well as bred? Pure blood, coming from an ancestry admitted to record because of outstanding individuality and known virility, is the nucleus of a revived cattle industry. There is much respect for pure blood in our country communities. It is a clear cut business proposition, however, to the farmer. He wants to be shown before he buys.

Our reviving cattle industry has enlisted a most important ally in the alfalfa plant. That portion of our corn territory not being blessed with tame grasses for winter pasture has found alfalfa indispensable in conditioning and fitting cattle. In the past stock cattle have been wintered largely on the frosted native meadows and stubble fields, brush lots, stalk fields, prairie hay and the various fodders; all of which feeds are highly carbonaceous, constipating in effect and generally unsatisfactory in results, producing a staring coat of unthrif, a fickle, wasteful appetite, and a net loss of flesh for the winter season. The use of alfalfa hay and alfalfa pasture in the fall has worked wonders in improving these conditions. The grazing period is prolonged, the animal system receives the effect of succulent feed at a

time when it is sorely needed. The ration has been nearly balanced. Ten pounds of alfalfa hay per day, per head, if commenced at the end of green grazing, before inclement weather sets in, will produce gains with a two-year-old stocker or the 900-pound cow, if supported with reasonable auxiliary feed and good care. This is a considerable increase to the cost of wintering, but prices are more remunerative than a few years ago. This hay is figured at \$10 per ton, which is more money than most alfalfa hay fed to stock cattle is worth at the farm. For fattening cattle, alfalfa hay is well nigh indispensable in small farm operations.

In districts where alfalfa does not do well, cow pea hay is being used. Our fall institutes, just closed, brought out much reliable testimony concerning results with this important land improver and stock conditioner.

We are waking up to the use of the silo for cattle in western communities. Twelve pounds of silage per day, per head, with stock cattle, when supported with ordinary feed, is found sufficient to secure winter gains, and much more satisfactory gains the following grass season over cattle "roughed" in the usual manner. These improved feeding conditions are encouraging to an enlarging cattle industry.

We need more explicit market reports on the characteristics of individuals actually sold and the prices they bring. In our country anything with flesh is a canner in the farm cow dicker. The requirements of the numerous fat cattle classes of the market are little understood by the farm bargainer. In the large class of cattle known as stockers, the usual market report is of small use to the unsophisticated observer looking for precise information. The farmer who is being urged by the entire consuming world to raise more beef will be fortified in doing so by a market sheet published regularly in his interests.

The small farmer is compelled to get back into cattle in self defense. The problem of maintaining soil fertility must receive attention. Nature has ordained that animal and plant wastes, mingled with the mineral crust of the earth's surface, shall constitute the soil of agriculture, and nature is immutable in her laws. If it is natural for animals and plants to inhabit the face of the earth, man, their colleague, is a foolish being to thwart this great provision of nature.

Each farm should keep enough cattle to feed up the forage crops of the place and field wastes. I believe the time must come when our farms will be called upon to such a capacity that the production of cattle on the small farms will be solved.

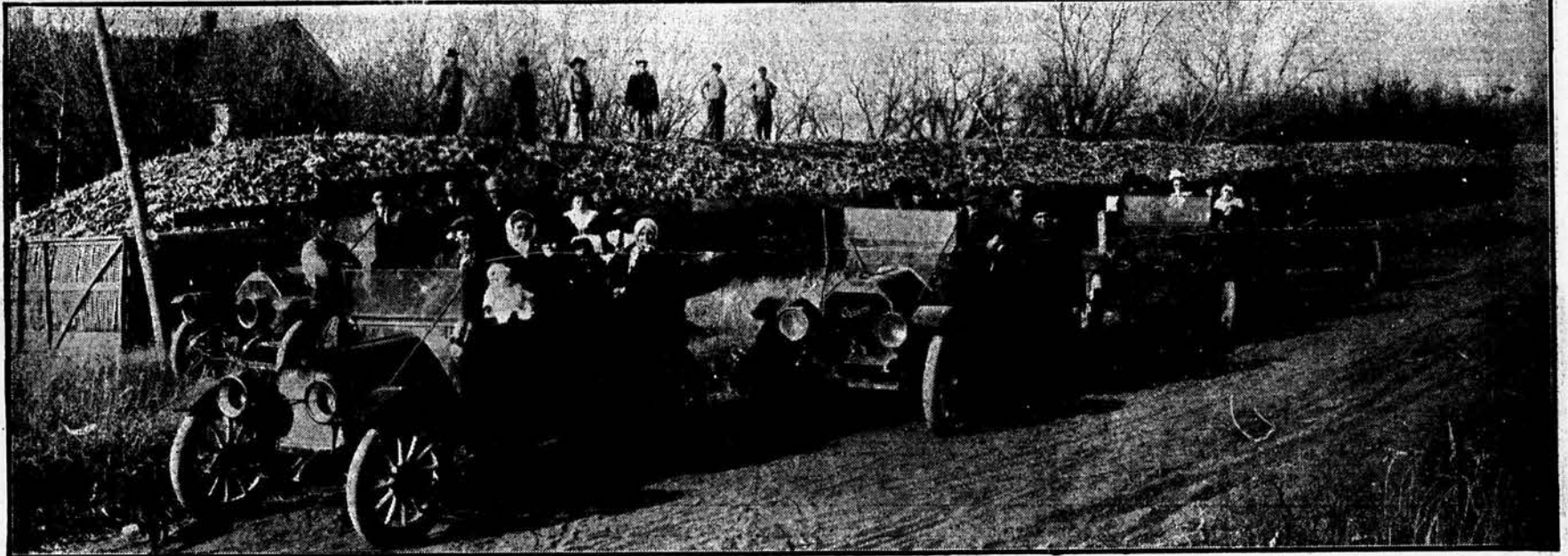
The too common market glut that works such dire results to cattle interests is a specialized form of the old problem of agricultural organization. Co-operation among farmers has made little actual headway. In this age of organization the cattle man comes to the market without the advantages of co-operation. He wishes every one well. He is an optimist by nature. He can take a losing market without batting an eye. He can sell for less than he buys

(Continued on page 13.)

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BEST METHODS FOR WEST

Listing, Good Seed and Good Cultivation Wins in Western Kansas



FIFTEEN THOUSAND BUSHELS OF CORN GROWN BY WILFRED CARPENTER ON THE W. G. WILSON FARM FOUR MILES SOUTHEAST OF GARFIELD, KANSAS. THIS CORN WAS GROWN ON 520 ACRES AND WAS PLANTED ON WHEAT GROUND AFTER THE WHEAT HAD BLOWN OUT DURING THE SPRING OF 1912.

MY FIRST crop in Sheridan county was produced in 1895. The crops of 1895-6-7 and 8, however, were grown by the long distance method and while on the whole they made satisfactory rent on the land, I will not include them, but will take into consideration only the crops grown under my personal supervision, which began with the crop of 1899. Including that crop, I have now produced 14 listed crops in 14 consecutive years.

In these years I have tried several varieties of corn; red, white and black chaffed white kafir, early and black Amber, Folger, Coleman, Red or Evergreen, Club Head, and Collier's cane or sweet sorghum; standard and dwarf Milo; Jerusalem corn; brown durra; Soudan durra; Chinese Kowliangs; Shallee; cow peas and soy beans. I have also used various methods and implements, as deep and shallow, early and late listing, fall listing, disking before listing, knife or sled weed cutters, disk weeder with and without shovels, ordinary four and eight shovel cultivators, harrowing between cultivations, and five-tooth cultivator for crops too tall for ordinary corn plow. I have used both eastern and home-grown seed.

GOOD FEED CROPS EVERY YEAR.

All these different crops and methods have not been equally satisfactory or successful, but in each and every year—and this includes the season of 1911—I have succeeded in growing good feed crops. Crops that marketed by way of good live stock would pay going wages for all labor performed and a high rate of interest on the value of the land—this without a silo and with a good silo I am confident the net profit would have been fully twice as much, some seasons even more than that.

I have found that not infrequently very favorable results are shown in a test plat—results that theoretically one should be able to duplicate in the field crop—but that when it comes to actual field work the methods to be followed are simply impossible. All the crops I have mentioned with the exception of the Chinese Kowliangs, which were grown in test plat, have been grown under field conditions and on a field scale.

COST OF CROP PRODUCTION.

The cost of producing such crops will vary from season to season owing to going wages and the cultivation required. At the prices for team work current the last two or three years, the average cost of crop is \$2 per acre ready to harvest, or \$3 per acre in shock for fodder or loaded on wagon for silage.

The lowest cost I have had was \$1 per acre ready to harvest, and \$1.50 per acre in the shock, all work—both men and teams—being hired, and though it was a very dry season a good crop was produced.

The highest cost has been \$2.50 per acre ready to cut and \$3.25 per acre in the shock, all work of my own teams being charged for at current rates.

Hard and fast rules cannot be laid down for the growing of such crops. Each season and crop will bring its own problems; at the same time there are

By M. G. BLACKMAN, Hoxie, Kansas

some general principles and important items that should always be remembered, the first being good seed.

USE VIGOROUS ACCLIMATED SEED.

It goes without saying that a crop cannot be produced from seed that will not grow, but it should be more than that; it should make a good vigorous growth and for this reason seed should be secured, if possible, that is well acclimated, home grown or grown under conditions similar to ours. Rainfall, latitude and longitude are not the only things to be considered in this connection. The matter of altitude with many plants is important. This is especially true with corn and the sorghums. With increased elevation always comes cooler nights and both corn and sorghums not acclimated to these cool nights will mature but very slowly if at all.

Varieties should be selected that have not only been proven to be drouth-resistant or hardy, but that are known to be adapted to the particular locality in which they are to be planted and suitable for the purpose required.

If cane is to be grown chiefly for the seed, I have found Early Amber far the best with Club Head a good second. These will both produce good fodder also. Coleman's, Collier's and Evergreen cane, if fodder is the main crop desired, will be found entirely satisfactory.

Eastern or low altitude kafir matures seed here with but little certainty but produces splendid fodder, while the home grown Red or Early White furnishes just as good fodder and usually a fair seed crop besides.

For sure grain yield nothing as yet equals acclimated Dwarf Milo. Cut at the right time the fodder is relished by all kinds of stock, but it will not produce as much fodder as either the Kafirs or sweet sorghums.

Soudan Durra is a new importation and is claimed to be earlier and more drouth-resistant than Milo. Last year's planting of about June 25 was showing some ripe heads on August 20 and produced a good growth of fodder which was relished by sheep, but cattle and horses did not eat it so well.

LISTING METHODS FOLLOWED.

I have found fall listing of decided value some seasons, while in others the advantage was not so marked. Disking in the early spring before listing is good all the time.

Listing should be done at the right time, not too late and not too early. The seed is better in the sack until the ground is warm enough to make it grow; for corn some seasons this may mean April 20 and others not before May 10, with kafir and Milo following close after.

It should be remembered that a poor job of listing lasts all summer—in fact I am inclined to think it may reach over into the next season.

The furrows should not be too far apart—five to the rod is just about right. At this width the middle will be well cultivated. The lister should be run as deep as it can be without throwing too much dirt over into the next furrow—always deep enough to entirely cover the ridge with fresh dirt. I have yet to see a good crop from shallow listing.

WHAT CONSTITUTES GOOD STAND.

A poor stand cannot make a good crop. Now a poor stand may be either too few plants, too many plants, or not evenly distributed.

A dozen stalks in one foot of furrow and no more for eleven feet averages one stalk to the foot, but is a far different thing from one stalk in each foot of furrow. The first would be a very poor stand and result in a practical crop failure, while the second, if the crop were kafir, would be what I consider a perfect stand and would probably make a crop of cured fodder of 3½ tons per acre or a silage crop of seven or eight and possibly 10 tons to the acre.

A stalk of cane or Milo in each six inches of furrow and carrying one ounce of seed—only a small head—would amount to about 30 bushels of seed per acre, grown and harvested at a cost of ten cents per bushel without any allowance at all for the forage. In cultivating the especial aim should be to save the moisture and not get the surface too fine and dusty.

GRANULAR SOIL MULCH BEST.

The much talked of "dust mulch" is a harmful delusion in the west if the words are taken literally, and that is just what many people do. A loose, granular soil mulch we must have to save the moisture, but a dust mulch if it does not all blow away, will, with the first good rain, all run together and make a cement or plaster coat of the top inch or two of the dust, preventing any moisture getting down to the subsoil and in a

few hours this plaster coat will commence to crack and crust and in a very few days time the crop may suffer for want of moisture more than if there had been no shower at all. On the other hand, I have seen deeply plowed ground that was left rough and granular take a 3-inch downpouf and on examination three weeks afterward found no cracks at all and a crust not exceeding 3-16 of an inch in thickness. The road was open and the water went straight to the subsoil.

It should also be borne in mind that a crop of weeds requires both plant food and moisture. When growing with other crops the weeds will take what they require first.

GOOD FEED CROP WHERE WEEDS GROW.

Any field that produces a good crop of weeds any season, with proper care would have produced a good crop of any of the sorghums or probably a good crop of corn as well. However, with the cultivation necessary to maintain proper soil condition the weeds will give but little trouble.

The two-row disk weeders with a shovel following each disk, are good implements provided a good job of listing has been done, but without the shovels the ground is left in about the worst possible condition.

The filling of the lister furrow should be done when the ground is wet if possible. In no case is it best to fill it when the soil is very hot and dry. Banking six or eight inches of hot, dusty soil around a corn plant is particularly bad. Keep the ground cultivated without filling the ditch rather than fill when too hot and dry.

I have not found the much heralded "hot winds" and lack of rainfall the chief obstacles, but my greatest difficulty has been in getting the work done at the time and in the manner I wished it done.

Perhaps the matter of most importance in the whole thing and which I have so fully demonstrated is the fact that the conditions necessary to a profitable crop are so fully under man's control.

Removing Snow From Roads.

Many roads through various parts of Kansas have been kept in perfect condition this fall and winter by the removal of the snow before it begins to melt. We have in mind one stretch of fifteen or sixteen miles of dirt road in Shawnee county. Each two miles of this road is looked after by a farmer who does the work at a stipulated contract price per mile. He does the dragging to smooth the road and likewise removes the snow. The drag used for smoothing is a King drag and the same drag is used for removing the snow except that the hitch is so made as to give the drag a greater slope to the outside of the road. Two trips clear the road of three or four inches of snow. A trip one way on each side of the road does the work. This road is at this writing in as fine condition as any pavement in the city. Roads from which the snow has not been removed are more or less muddy and rutty.

IF the experience acquired in producing fourteen consecutive crops stands for anything, it shows conclusively that a listed crop properly handled in Sheridan County is not a gamble, but is as certain to be profitable as any crop grown in the \$100 to \$200 per acre section of the country.

Whenever the people of western Kansas realize the importance of listed crops and live stock, wheat growing will become a matter of secondary importance and we will see—not a boom, but permanent good times. Then indeed the "desert shall rejoice and blossom as the rose," and present land values will appear as they are, absurdly low.—M. G. BLACKMAN.



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 Murle Perry, Frankport, S. D., has broken 500 acres, plowed 1500, disced 3200 and harvested 1000 acres.

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—96 inches in diameter. They hold up the BIG FOUR on soft ground where other engines are helpless. Power is applied to rim of drive wheels—less waste. Patented features make the BIG FOUR Drive Wheels different from and better than others.

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Nels. Olsgard, Walcott, N. D., plowed 2000 acres and threshed 40 days with a 36 x 60 Separator.

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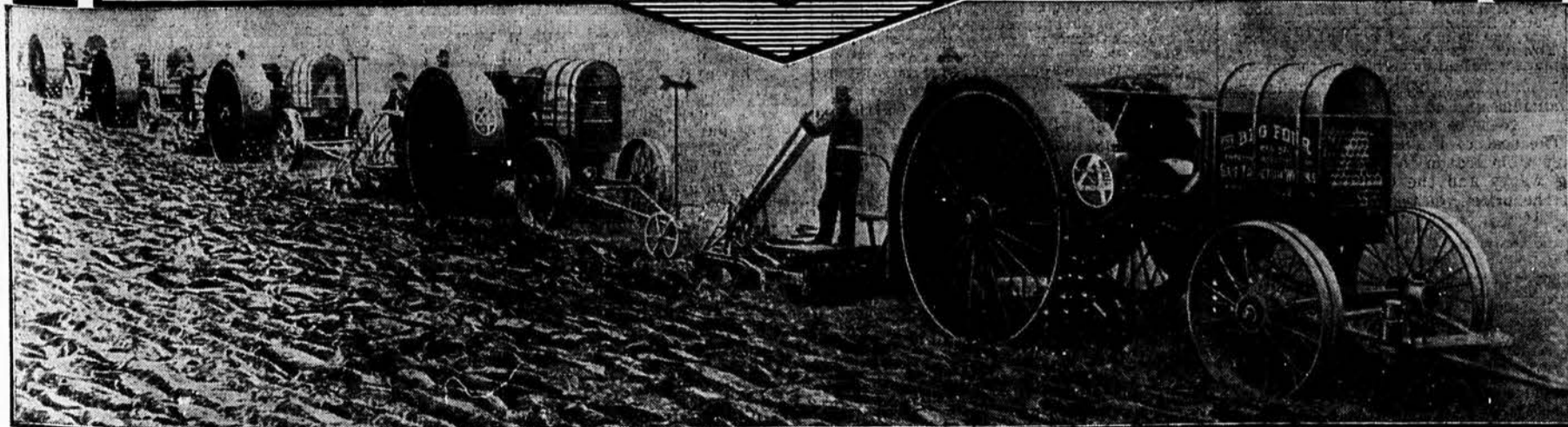
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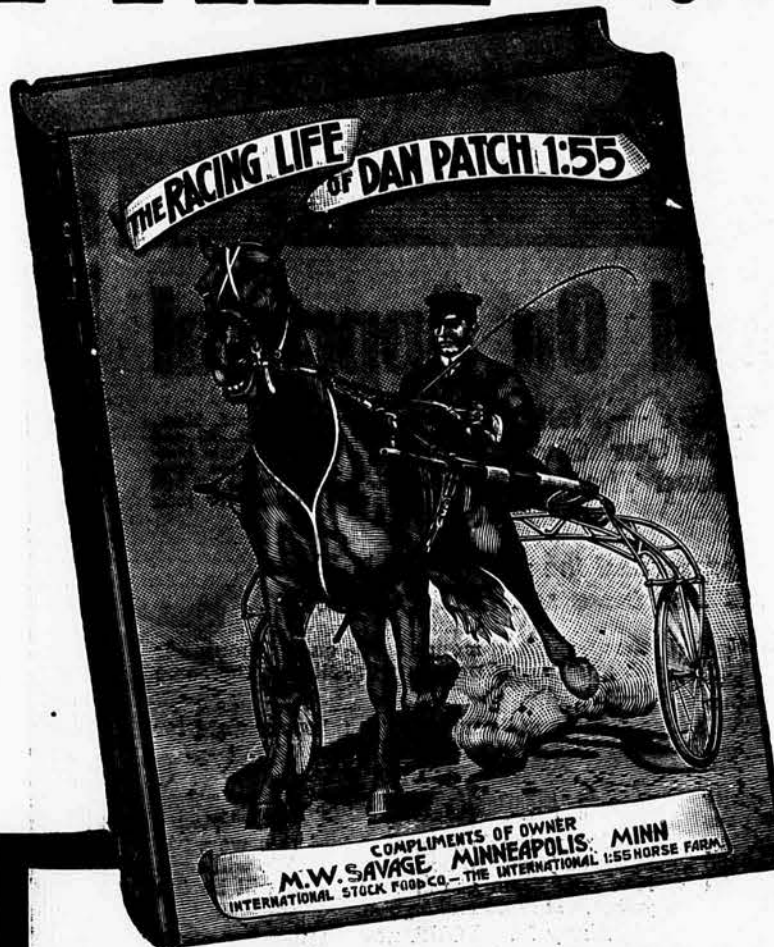
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for his age. You Will Enjoy Reading about the Thousands of People who visit My "International 1:55 Horse Farm" every year to see Dan Patch 1:55, the Mighty Hero and Harness Horse King. You Will Enjoy Reading about Dazzle Patch, — Dan's Sensational Son, that paced a half-mile in 59 seconds, a Quarter in 27½ Seconds, a 1:51 Clip, and an eighth in 13 Seconds, a 1:44 Clip, when only 23 months old. This Book gives all of Dan's Official Racing by heats and the Names and Places of Finishing of all Competing Horses in each race. It shows his Wonderful Speed Development, from year to year, down to the time he was retired. It is the Finest and Most Expensive Book of the kind, Ever Published for Free Distribution.

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I want 35 Names for 35 young Dan Patch Colts and have an offer of \$10 Cash for each name we select from any list. If You Write Me for the "Racing Life of Dan Patch," I will also Mail You Free my \$350 Cash Offer for Colt Names. You do not have to buy any goods or send me any money. I Also Have Colts and Stallions For Sale On Long Time Without Interest.

BEEF AND WHEAT

You urge us farmers to resume beef cattle raising, but I doubt very much if it will be done as long as the beef trust is in existence. You and the good professors of the Agricultural College kept urging us farmers to plow our ground for wheat and pack and harrow the plowed ground and prepare a fine seed bed. We followed your advice in the fall of 1911 and the consequence was that many thousands of acres of wheat were destroyed by the winds causing the dirt to drift. Last fall we put our wheat in according to the manner we thought best and there has been no disastrous drifting in the wheat fields.

I don't believe that the farmers of the wheat belt will resume beef cattle raising and let their wheat fields go back to sod unless they have a better guarantee that it will pay for a term of years than they now have.

Why don't you come out squarely for a constitutional convention and push it vigorously? We want a new constitution framed in such a manner that the state of Kansas as a commonwealth can

have been much more valuable if the sod had never been broken.

We urge live stock production because it will pay, and pay better than anything else. With the present nationwide shortage of meat producing animals and with our rapidly increasing population which must be fed, cattle and hogs are bound to be profitable for years to come. At least until production catches up with consumption, and that will take years. You cannot grow a crop of beef cattle in one year or in two years, if you consider the breeding end of the business as well as the market end.

We urge live stock production because of its influence on the land as well as on the farmer himself. With plenty of manure in the soil, bigger wheat and other crops are sure, and there is no better way to prevent soil blowing. The farmer who raises and cares for live stock is a bigger, better, broader man than is he who consigns himself to the routine of a single crop.

But our correspondent is wrong about the teachings of KANSAS FARMER and



The Free Seed Farce

PERHAPS no greater opportunity to enact reform measures has ever come to any administration than that which is enjoyed by the government officials now in office. This opportunity is great because the need is great. It has been well understood among high-class business men for a great many years that the methods in the several departments of government are in many cases inadequate and in others entirely obsolete. Change is demanded by the advance of our civilization which requires up-to-date methods for an up-to-date people. Conditions are such

that economy in governmental administration is demanded by the people, who will not be satisfied until they get it.

When a group of business men offered to take over the post office department at a time when it was showing a deficiency in millions of dollars each year and run this department, paying the federal government \$20,000,000 per year for the privilege and assuming all expenses necessary to handling the mails, they believed they would make their independent fortunes out of it. The agitation which resulted has placed this department on a much more economic basis so that it was able to show a surplus instead of a deficit at the end of the next twelve months.

Changes are needed in the Agricultural Department, and one of the most important of these is the abolition of the expensive, useless, and insulting distribution of free seed. People do not want these seeds, and it is an insult to their integrity that their votes can be influenced by a package of seeds, as is hinted at when these seeds are distributed by the congressman. And yet this farce continues, in spite of the recommendation of the Secretary of Agriculture, who has, year after year, showed its expensive features and recommended its abandonment.

Both the opportunity and the need are here, and the present administration can act without being hampered in any way.

Since the above was written the Senate declined to make the usual appropriation for seed distribution, but during its last hours reconsidered and the appropriation has again been made.

legally engage in any business which is monopolized by trusts. I believe that the state of Kansas can successfully buck any trust, if the trust cannot get at us through the higher courts, and a new constitution, properly framed, would prevent this kind of a trick.

If the state of Kansas could establish and maintain slaughter houses at a number of the larger business centers, then the beef trust would sit up and take notice and finally go into dissolution, because other states would not be slow in following our example. Then the farmers would again turn to raising beef cattle without any further urging.

If we had such a new constitution, then the state of Kansas could also sink deep wells in the western half of the state in search of water, gas or petroleum, and if such were found it would boost Kansas more than all the commercial clubs could do. We are just as much in need of a new constitution as the people of Ohio were, and we would have had one by this time but for the fact that every effort in that direction has been thwarted by interested parties who fear the initiative and referendum, which would surely be included in its provisions.—A. J. WENKENHEIMER, Bel-Pre, Kan.

Our correspondent is correct about our stand on the beef cattle question. We do urge the wheat farmers to raise cattle, either dairy or beef, and we do believe that there are thousands of acres now in Kansas wheat fields which would

the professors, so far as we know about the latter. We have never urged that wheat land be treated in the way suggested by our correspondent. Wheat requires a firm seed bed, and if the light soil is turned underneath and the soil is then compacted with a subsurface packer and left rough for the catching of the winter snows and the rains, there will be little of blowing of the soil.

It is not urged that the farmers of the wheat belt should abandon their fields and turn them back to sod, as wheat is a very necessary article of human food and commerce. Someone must raise wheat. It is urged that wheat should be raised in rotation, and that some care must be given to the land if we expect to raise wheat or any other crops very long. Instead of raising wheat after wheat, year after year, it is urged that the wheat belt farmers should rest their land by growing Kafir, milo, alfalfa, cow peas, soy beans or whatever else will grow that can be fed to live stock, and get the soil back into a condition where it will produce more than it now does when sown to wheat and enable the farmer to drive his crops to market instead of hauling them.

The conditions are such now as to mark an epoch in the agriculture of this country. There is no possible danger of an immediate overproduction of meat producing animals, and just as long as this condition exists there will be a strong market demand for every hoof the farmers of this state can raise.

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The private fight of Wards against the high cost of living—started forty years ago—has become a national issue.

Political parties have adopted it—after we have won.

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And—this is important—shopping has been made a joy through Ward's methods. In the quiet of your own home—under the evening lamp—with the help of wife or husband—son or daughter—you can select quietly—without the urging of impatient clerks—just what you want.

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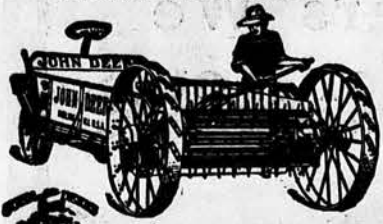
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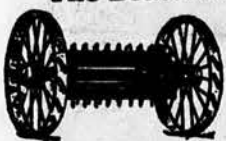
John Deere Spreader

The Spreader with the Beater on the Axle



Take any manure spreader you have ever seen, remove all the clutches and chains, all the countershafts and stub axles, do away with all adjustments and mount the beater on the rear axle. Rebuild the spreader so that the top of the box is only as high as your hips. Make it stronger. Remove some two hundred trouble-giving parts and throw them away. You will have some sort of an idea of what the John Deere Spreader, the Spreader with the Beater on the Axle, is like.

The Beater on the Axle



The beater and all its driving parts are mounted on the rear axle. This construction is patented. You cannot get it on any other spreader made.

Power to drive the beater is taken from the rear axle through a planetary transmission (like that on automobiles). It is positive, runs in oil, and does not get out of order.

Few Working Parts

The John Deere Spreader is so simple that there are no adjustments. It has some two hundred less parts than the simplest spreader heretofore made.

There are no clutches to throw it into gear. The lever at the driver's right is moved back until the finger, or dog, engages a large stop at the rear of the machine. All the chains and adjustments have been done away with.

Only "Hip-High"



Because the beater is mounted on the rear axle, it is only "hip-high" to the top of the box. Each forkful of manure is put just where it is needed. You can always see into the spreader.

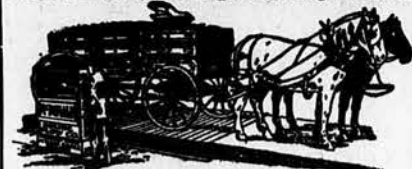
Roller bearings, few working parts, the center of the load comparatively near the horses, and the weight distributed over four wheels, make the John Deere Spreader light draft.

Spreader Book Free—Tells about manure, when and how to use it, how to store it, and a description of the John Deere Spreader. Ask for this book as Package No. Y. 13

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Moline, Illinois

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Weigh your grain, stock and coal yourself and know positively you're getting a square deal.



The McDonald Pitless Scale weighs accurately every day in the year. Protected bearings cannot freeze. No pit required—everything above ground. Steel frame—steel joists—10 year guarantee. U. S. Standard. Used for weighing U. S. Mails. Flying Dutchman Dealers sell them. FREE BOOKLET. Write today. MOLINE PLOW CO. Dept. 4 MOLINE, ILL.

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Better Corn and More of It

By F. M. RIEBEL, Arabela, Mo.


WE SHOULD raise more corn and better corn. But that doesn't signify that we should plant more acres to get it, but rather that we should cut down the acreage and by better seed and better culture increase our acre yield. We are growing all the corn we should grow at present selling prices. Corn is already as low as it can be profitably grown. We should grow corn to feed.

I believe in crop rotation and live stock. We should raise more clover so we could grow more stock to get more manure to fertilize our corn ground so we could raise more corn. Clover seed is the cheapest manure on earth and we never raise as much of it as we should. Of course the past two years were hard on new clover because it has been so dry and stands have been hard to get. But we must not get discouraged; we must keep trying for that is the way to win. Keep everlastingly at it and do not get discouraged.

It is nearly corn planting time again and we must face the problem of how to raise a fine, large crop. About the first thing to look after is the seed, for without good, strong seed we cannot expect to raise a large crop of corn. We want every hill occupied. We do not want to cultivate 50 acres to get 40 acres of corn. But that is what the most farmers are doing. They fail to get a stand because they do not test the seed. It

We prefer to plant our corn rather shallow as the soil is usually warmer near the surface and we get a better stand by so doing. If the corn is planted deep and we get a hard, cold rain, it would rot the seed, making it necessary to replant. We do not want to lose our best seed as we are very particular about our seed corn. We want to plant the very choicest ears. After the corn comes up so we can see the rows, we start the cultivator and we plow as close as we can the first time and we cross the corn as soon as possible. We then have it in good shape, for corn that has been plowed both ways can stand a lot of grief without any material damage. We like to cultivate every week or ten days if the weather permits, until it gets too large to plow. We plow as long as we can get over it with a riding cultivator. If any weeds should escape we go over it with the hoe and cut out what few remain.

We are going to plant the twenty ears with which we won first prize at the Missouri State Corn Show, in a breeding plot—ear to row. We have followed this practice several years with very good results. We always plant our show corn as we believe "like produces like," and if we want to raise show corn we must plant show corn. The best seed ear is the best show ear, and the best show ear is the best seed ear. This is what we are all after; we want the best



GOOD seed is essential to the best yields of all farm crops. Obtain the best seed from crop grown on your own farm or in the vicinity. Select seed from small grains on the basis of size and weight. A good fanning mill properly used is the most practical way to select good seed. Tests and experience have proven that heavy, plump seed will increase and improve crop yields. Treat seed to prevent plant disease. Make a germination test of seed to prevent planting seed that will not grow.

would surprise the average farmer if he would cross his corn field and count the missing hills in a quarter of a mile. It would open his eyes to the necessity of exercising more care in the selection of his seed, and in the method of planting and cultivating his fields.

The next step is to look after the ground. It should be an old clover sod—that is the best for corn. But the most of the corn will be planted in oat stubble or on stalk ground. If it is oat stubble it should have been fall plowed—if not, it should be plowed as early as possible in the spring as it will give the ground time to settle and would have a tendency to make the soil hold more moisture. Also, the weed seed would have time to sprout and a good disking would kill the crop of small weeds. I think this a great help in producing a crop of corn. If we have stalk ground to plant, the first thing to do is to break the stalks some cold, frosty morning—this gets them down. Then the next step would be to disk the ground. This will cut up the stalks so they will not be in the way in cultivating the crop. It would also make the ground plow about one horse lighter and besides this, would put a layer of fine soil in the bottom of the furrow so all the planted ground could be pulverized.

We should never plow deeper than we can pulverize the soil, for if we do, it will prevent the soil mixture from coming up through the soil. We hardly ever have enough rain to make a crop, during the growing season, but we must put the soil in condition so we can draw on the moisture that has been stored in the soil during the fall and winter by the snow and rain.

We like to plow our corn ground early, also as deep as we can pulverize the soil. We then let it lie until the ground gets warm. Then we disk and harrow until we have a fine, firm seed bed. We never give it a lick and a promise, for in this way a promise is all that it usually would get. But we should do everything that we think would help to insure a crop. We want to get the soil in the very best mechanical condition so the young plants will grow strong and vigorous.

corn, because it will make us more money, and that is what we are all working for.

But that isn't all. Money alone will not do us much good, unless we spend it so as to get the most good out of it. And the way to get the most out of it is to spend it for things that will make the old farm a better and nicer place to live.

Just got two letters complaining that some dairy cattle advertised in KANSAS FARMER had been sold before the writers could get to them. This is mentioned to show something of the enormous demand which now exists for dairy stock as well as to show that KANSAS FARMER can and does sell them through its advertising columns. We need 10,000 pure-bred bulls in KANSAS FARMER territory right now.

But then, we need some more pure-bred beef bulls as well. That it pays to use them is shown by the fact that the best cattle received at the Missouri River markets today come from the ranges and not from the farms. The ranch and range pre-eminence in good cattle over farms of the corn belt is a great commentary on the present situation, but it is one which furnishes a striking illustration of what has been accomplished by the use of good bulls.

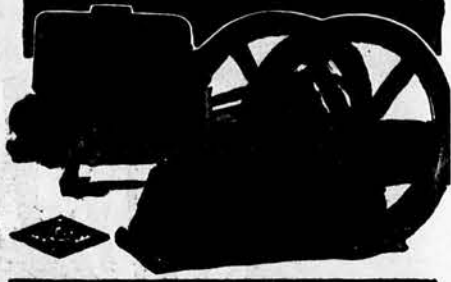
The other day four carloads of 10-year-old range steers appeared on the yards at Omaha and everybody flocked around to see them. They bore the famous old Dorr-Clark VVV brand so familiar up and down the eastern border of Wyoming from Deadwood to the Pumpkinsced 30 years ago when the cattle business meant something more than it does today. That outfit never knew how many cattle it had. They never got them all rounded up out of the hills and bad lands and last year they happened to find several carloads of these old steers. They got them corralled and fed them until they were fit to go to market. They were so old they would not take on good flesh from the range grass and had to be fed on layer cake to make them plump up.

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Whether your engine lasts ten years or two is a point that affects your pocket book. INGECO ENGINES are built to last. The main reasons for their unusual wearing qualities are perfect fitting parts, large bearings, best material and construction. The simplicity of INGECO ENGINES makes them easy to handle—economical from the standpoint of fuel—better when compared with other engines.

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You can keep THREE COWS FAT with an INDIANA SILO from the same land you now use to keep ONE COW LEAN. Some farmers do even better. One writes that he could burn his Indiana Silo and buy a new one every year and still be money ahead. You don't have to pay cash for an Indiana Silo. It pays for itself out of its own earnings. Write for Booklet. Address nearest office INDIANA SILO CO. Anderson, Ind. Des Moines, Ia. Kansas City, Mo. 311 Union Bldg. 311 Indiana Bldg. 311 Silo Bldg.

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Made of Vitalized Rubber—with Perfect 3-Point Rim Contact and No Pinch Safety Flap

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A tire made of pure rubber only would fail to give the necessary mileage because it would not be *tough* enough to withstand road usage. And a tire containing too little pure rubber would not have the necessary staying qualities.

Our chemists have discovered how to toughen pure rubber by a scientific process. The result is additional mileage for you. The pure rubber we use comes direct from the trees of the tropics—it is fresh and contains all the vitality of youth—it is elastic and easy riding. Then we toughen this pure rubber so as to give it the necessary vitalizing, wearing, *more mileage* quality.

This scientific process has been vainly sought after for years by tire makers. After 15 years of successful tire making we have solved the problem—and you enjoy the benefit of our really wonderful discovery—in "Diamond" Vitalized Rubber Tires.

Add to this the Diamond proven principles of proper construction—nothing inferior in rubber, fabric or workmanship—and you have as perfect a tire as money can buy.

Here is a combination of easy riding and more mileage advantages you can't get in any other tire today—*Vitalized Rubber, Perfect 3-Point Rim Contact, No-Pinch Safety Flap*, for inner tube protection, and if you wish, the now famous Safety (Squeegee) Tread—made to fit all types of rims.

So this time specify Diamond Vitalized Rubber Tires—you can get them to fit your rims at any of the

25,000 Diamond Dealers
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A Perfect 3-Point Rim Contact Tire at last

Diamond 3-Point Contact Tires hold with a vise-like grip absolutely preventing the tire from breaking above the rim, insuring no rim skid—no rim trouble at all.

Our engineers have mastered the principles of Rim Contact construction, and you can get the Diamond (No-Clinch) Tire, with a perfect 3-Point Rim Contact—an important advantage that has been heretofore overlooked.

No-Pinch Safety Flap absolutely protects the inner tube

The No-Pinch Safety Flap that comes in every Diamond (No-Clinch) Tire will reduce your inner tube bills—because it forms a substantial wall separation between the inner tube and the rim, making it impossible for the inner tube to be pinched or cut under the rim, or injured by rim rust.

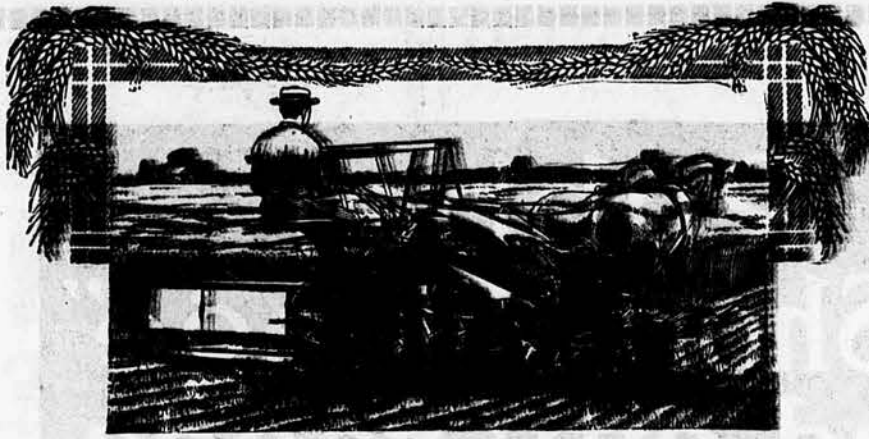
This No-Pinch Safety Flap is made of the best grade of fabric, and is finished with a "Feather Edge" as a further protection against inner tube cutting.

There is no rubber in this flap to adhere or vulcanize, so that the inner tube can be quickly and easily removed at all times—another big Diamond advantage.

Diamond Vitalized Rubber Tires for Automobiles, Motorcycles and Bicycles

The guarantee on Diamond Tires becomes null and void when used in connection with any substitute for air, fitted to rims not bearing one of these inspection stamps or having had its serial number removed in whole or part.

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Settle Important Things First

THE time to investigate harvesting and haying machines—the time to know which binder or mower is the best for you to buy, is before, not after, you have given your order. The success or failure of your whole season's work, from the plowing of the ground to the ripening of the grain, depends upon the quality and efficiency of the machines you take into the harvest field. Therefore, the selection of the harvesting machines that you will use is the most important decision you make. Settle that first—now—before the busy days of the season are on. Get catalogues from your local dealers, or send to us for them, and study carefully the harvesting and haying machines and tools made and sold under these names:

- Champion Deering**
- McCormick Milwaukee**
- Osborne Plano**

Bear in mind when you come to pay down your money that these machines have harvested the grain, and cut and cared for the hay from fields in every part of the world, and some of them have been in use in the United States for more than seventy years. The efficiency gained through this long period of field work under practically every conceivable condition adds nothing to the cost of the machine. In fact, it is because of this long experience that you can buy these time-tried and field-tested machines at the lowest market prices for reliable harvesting and haying machines and tools.

Another important point to bear in mind when considering the purchase of a harvesting or haying machine is the facility with which you can obtain repair parts if they should be needed. Delays at harvest time are too expensive to take any chance with them. You can secure practically any part of an H. C. harvesting or haying machine within a few hours of the time that an accident occurs, and when you get the part to the binder it will fit in the place of the broken one.

To get the best work out of a binder it is imperative that the twine used be strong and smooth, strong enough not to break under the strain of tying the bundle and smooth enough to run freely from the cam to the knottor. Twines that will do this is sold by I. H. C. dealers under the trade names, **Champion, Deering, McCormick, Milwaukee, Osborne, Plano, and International.** There are four grades of each brand, namely, Manila, Pure Manila, Sisal, and Standard.

Your neighbors know I. H. C. machines and binder twine. They will tell you what their experience with them has been. The I. H. C. local dealer can furnish you with catalogues and full information, and will explain fully all the good points of the machines he handles. You can get catalogues from the local dealer, or by addressing a letter to the:

International Harvester Company of America
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Cost only one-third as much as ordinary iron, wire or gas pipe gates. Best looking, longest, neatest appearance—best and strongest gates made—light, easy to handle, opens both ways. Boards are double bolted between uprights—steel uprights and double truss braces—guaranteed never to sag.

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Can't See Gates are furnished complete, ready to hang, or just the Gate-Steel-which includes everything except the boards. Patent self-locking hinge feature—reinforced hinges—unbreakable hinges. Six Triangular Truss Braces make gates extra strong.

Improved Elevating Attachment permits the gate to be raised full length from 50 to 100 inches—no small stock can pass under, and allowing over snow.

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Obtain a catalogue showing complete Gates and just the Steels, at prices you can't afford to miss. Send for my new catalogue with 30 days' trial and freight prepaid offer.

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Elevate silage to any height at 600 to 800 R.P.M. with one fifth less power than any other blower cutter. This is due to the fact that the Papec first uses centrifugal force, then with its six fans moving the cut silage in a steady stream—not in bunches—the elevating is accomplished under high pressure through a small pipe. Iron and semi-steel construction—easy to operate. Built in sizes for any power from 4 H. P. up. Investigate the Papec now—and save time, annoyance and money at cutting time. Write today for our new illustrated catalog. It is FREE.

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20 Distributing Points in the U. S.

MENTION KANSAS FARMER WHEN YOU WRITE.

LIVE STOCK



The Percheron on the Farm.
A KANSAS FARMER reader of Shawnee County, Kan., who forgot to sign his name, contributes the following:

"Horses on the American farms are gradually increasing in number and value as indicated by report of Jan. 1, 1918. Recent report on conditions shows a total of 29,587,000 with 29,277,000 two years ago. The census enumeration of 1918 showed that three years ago there were 19,933,133 horses, making allowance for a decrease of about 435,000 old horses and a gain of about 615,000 foals we have about 19,653,000 horses for 1916. This shows a gain of 5 per cent. in the three years period. The increase in horses from 1900 to 1910 was almost 9 per cent. The increase, however, is not keeping pace with the increased demand for them as indicated by the rise in value from \$105.08 in 1910 to \$110.77 in 1913, a gain of \$5.71.

"The profit on a good Percheron mare that would probably cost from \$300 to \$400 in 10 years, mated with a good sire, the colts being fillies at an average of \$100 apiece, would be \$3100. If, however, a man is not able to buy a registered mare, take his inferior mares and mate them with a good sire and note the difference in the market value. We hear of the motor truck taking the place of the Percheron horse. The only reason we have motor trucks today is because we have failed to raise enough of the right kind of draft horses. Ask any man that supports a motor truck today and see what he will say. The motor trucks cost their owners six times what a good draft team would cost him and would cost him three times as much to keep it up. The time has come for us to plow deeper, farm better and consequently we must have bigger and better horses and the only and cheapest way for the farmer to get them is to raise them, and to raise the best ones you must use a good sire."

Against Free Beef!

There seems to be a determination on the part of the politicians and packers to admit to this country, free of duty, all live stock and other commodities such as the farmers raise. And then they urge the farmer to raise more meat. I am a stock raiser, and I have had to sell fat cows for 2 cents a pound and good steers of high grade beef blood for 3 cents a pound. I have shipped cows to Kansas City when extremely fat, and a few old cows that raised calves and were so old and poor that they were weak, and all sold for canners. Some cows that were so fat they would make extra good beef sold for the same price, 2 cents a pound, as canners.

Just now cattle raising will pay, and there will soon be more cattle if free trade does not spoil our business. The city people have to depend upon the farmer for a market for the products of their labor, and the farmers depend on the city for a return for their labor. We go hand in hand and need each other, but we need more of the consumer's dollar and they need more of ours. The middlemen get too much out of both the city laborer and the farmer. The railroads, the dealers, the rich manufacturers, all gouge us both coming and going. There is too much profit in the milling business. Our wheat here is about 60 cents a bushel, while flour is \$1.30 per sack of 48 pounds—more than double the cost of a bushel of wheat. The poorest part of the wheat—bran—sells for more than the wheat brings the farmer. What we need is government flour mills and government railroads. I am not a Socialist, but we must have more fair play, or there will be unrest until something is done.

I just noted that potatoes are selling f. o. b. Yakima, Wash., for \$4 per ton, and the same potatoes are retailing in Seattle, Wash., for \$40 per ton—a jump of ten times the selling price on the farm. The nicest kind of apples are rotting on the ground because the middleman wanted so much out of them that the owner of the orchard could not handle them without a loss, while people in other places needed and were hungry for them. Yes, we need the railroads and direct trade with the consumer.

The law makers want to provide experts to show us how to produce more and at our expense, while we are taxed

almost to death now. We are supporting too many drones. Now I would like to hear from other farmers and stock raisers through KANSAS FARMER, the great paper that we all should be interested in.—**ED. J. WHELFREY, Jaques, Cheyenne County, Kansas.**

That Stallion Law.

I saw in KANSAS FARMER that you think there is another piece of good work done by the Legislature in amending the state stallion law. I want to ask you right here, did you ever own and stand a stallion for public service? If you ever have, you certainly would not approve of a stallion law like the one that exists now. What good does this law do? It lays all the blame on the stallion and its owners, and seems to think stallions are gold mines to their owners when we have to pay a veterinary \$4 each year for condemning our horses, and it does not benefit anyone in particular. It does not prohibit a stallion from standing, but only exposes him to the public. If a horse has a little defect, what would be the difference whether it was the horse or the mare that transmits it? You never said a word about the mare. A man can go ahead without having his mare examined, and if she has any disease whatever that is all right. I don't think there should be a law to compel one man to do something and let another go. For my part I think this law is an imposition on the stallion owner and should be repealed. Is a law of this kind constitutional where both sides are not equally bound? I believe in pure-bred stock and would not use a grade. We may have a few men who impose on people, but on the other hand the stallion may have a hard road to have to guarantee colts to stand and suck. That is, you have to wait one year to see if you are going to get anything out of your service. If colts come, all right. About one-fourth pay, and the balance run on six months to one year, and some leave and never pay at all. Lots of bills cost as much to collect as they are worth. I feel that this law is not fair, and should not exist. I both stand and sell stallions, but such laws will drive lots of the small dealers out of business and that will give the big fellows a chance to gull the people. Again, horses that they used to sell for \$3,000 to \$4,000 are now selling for from \$500 to \$2,000. Let's give everyone a chance. I have lived in Kansas since 1873 and have seen this country develop from a wild prairie to a good state of cultivation, and believe in the best, but want everyone on an equality.—**C. F. COOPER, Nickerson, Kan.**

Soiling Cattle.

I have 40 acres in eastern Kansas, of which 32 are in alfalfa and the remainder in bluegrass pasture with an excellent spring in it. I am considering the plan of buying young steers in the spring and running them in the pasture, feeding them the green alfalfa directly from the field as it is cut. This could be done by cutting down a small load every two or three days, hauling it into the pasture and allowing the cattle to eat it directly from the wagon. This would simplify the labor of handling and eliminate the risk in curing the hay. I should like your opinion on the feasibility of the plan. Can it probably be made more profitable than cutting and curing the hay for the market? If not, why? What kind of cattle would be the most suitable for the purpose? What number could probably be fed on the 32 acres? Kindly give any suggestions concerning the plan.—**O. T. Lawrence, Kan.**

The process of cutting and feeding alfalfa as suggested is called soiling and is quite frequently used in dairy herds. It is thought to be a somewhat troublesome method for use with beef herds, although we do not see why, under the circumstances stated, it would not be very profitable for such use.

We think it would be much more profitable to feed this alfalfa on the ground to either dairy or beef cattle than to market the hay. Alfalfa is a gross feeder and takes up the strength of the land rapidly. While it is true that it leaves behind a store of air-gathered nitrogen, it is also true that it consumes other elements of plant food from the soil, and any soil which is lack-

ing in any essential element of plant food is a poor soil.

At present prices the profit on cattle would come in two ways—from the cattle themselves and from the enrichment of the soil, and if you are not equipped for handling dairy cattle the profit would be a satisfactory one with beef cattle. The number of either would depend upon the alfalfa. In soiling one has to guard against the encroachments of crab grass and foxtail, as the alfalfa which is cut under the soiling method in the latter part of the season will suffer more or less from intense heat. This gives opportunity for these grasses to get a hold. With good alfalfa, such as grows on Kansas River bottom land or strong second bottom, a cow to the acre can be kept throughout the year.

THE PRESENT CATTLE SITUATION.
(Continued from page 5.)

part of the time. He can live on dreams of a rising market some of the time, but his financial balance must be on the right side most of the time or his credit will be destroyed and he is a business wanderer in the land of plenty. Market writers tell us that the recent slump, resulting in a dollar and a half loss to fat steer prices, was wholly unnecessary, and it was. But there is a reason for this not satisfied by market pleasantries. The cattle man who takes eight-cent feeders to his pens in the fall puts his money into a game of chance. He knows in a general way how many others have done the same. The nearer his cattle are ripe, the more he is at the mercy of the market. When to ship is a problem he solves from his experiences. Thousands of others are in the same game. Is it strange that too many reach the market on the same day, where just such breaks are expected and planned for?

Relief must come from the cattl raisers. Relief must come from the cattle raiser at remunerative prices. The leak is between the feed lot and the dining room. No one yet comes forward with a system for regulating the stream of cattle into the market, as has been done for regulating the stream of cattle products away from the market. Untold homage from the cattle industry awaits the apostle of a new faith that can replace the out-of-date law of supply and demand with a plan of co-operative selling that will meet present economic conditions.

We hear some advocate legislative action forbidding the sale of heifer calves until they have attained a certain age. We might as well decree that people shall not eat beef from animals under a stated age. Such laws, hedging about agricultural production, will become so unpopular as to seriously curtail production. We need, rather, standards of prolificacy; official market standards, accurately classifying individual characteristics of market cattle and regulation of the volume of movement to the market.

The cattle industry can look forward with hope. Agricultural improvement propaganda is spreading irresistibly over the land and is resulting in improved agricultural conditions. As cattle men we should be boosters of this movement. As a matter of business we should see that our influence is placed in support of our agricultural experiment and demonstration stations and industrial schools that are doing so much to bring about better rural conditions.

The Percheron Specials.

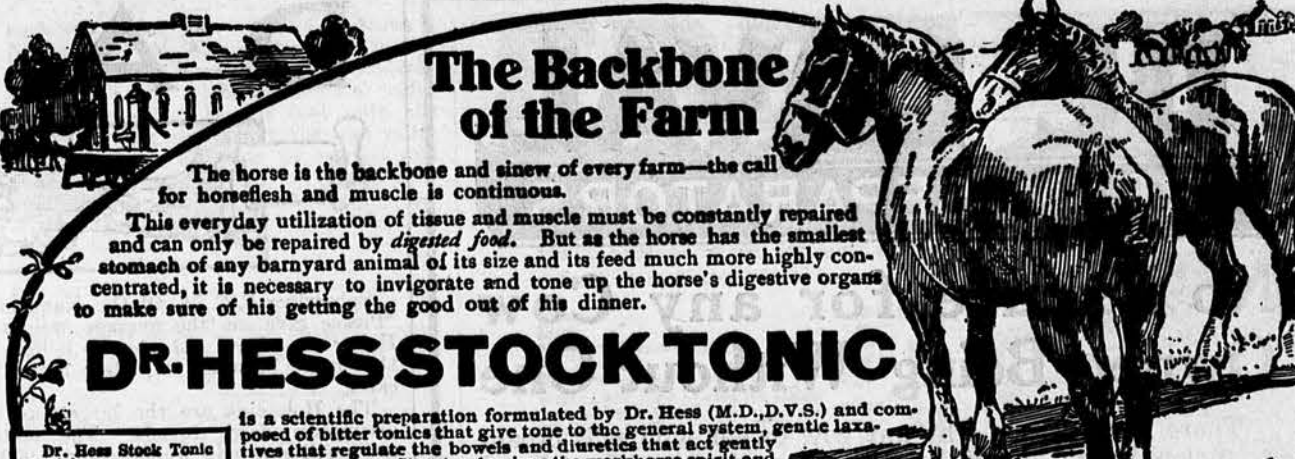
The Percheron Society of America will give special prizes in 46 fairs and expositions in the United States and eight in Canada this fall. These premiums in cash, cups, medals, etc., aggregate about \$17,000 in value, and most of them are offered for American-bred animals. The Percheron Society is the only draft association which has made such a nationwide campaign for the benefit of its breed. Hundreds of new breeders have been added to the roll since this policy was adopted, and these have come from among the farmers and others who were able to see the impressive exhibits made at these shows. The State Fair at Topeka is included in the list.

The Great Hog States.

The last census showed that the state of Missouri marketed 4,425,425 hogs and slaughtered 949,318 on the farms, accounting thus for a total of 5,374,742 head as the year's product. The state of Iowa shipped to market 5,524,519 hogs and slaughtered at home 507,167 head, together making a total of 6,031,686 head. The state of Illinois marketed 3,745,309 hogs and slaughtered 762,545 at home, making the Illinois total 4,507,854 head.

These three states together raised, slaughtered and sold a total of 15,914,283 hogs in one year.

The next three states in hog raising bring up their combined total to 9,988,420 head.



The Backbone of the Farm

The horse is the backbone and sinew of every farm—the call for horseflesh and muscle is continuous.

This everyday utilization of tissue and muscle must be constantly repaired and can only be repaired by *digested food*. But as the horse has the smallest stomach of any barnyard animal of its size and its feed much more highly concentrated, it is necessary to invigorate and tone up the horse's digestive organs to make sure of his getting the good out of his dinner.

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INSTANT LOUSE KILLER KILLS LICE

420 head—Indiana with 3,677,128; Kansas with 3,235,490; and Ohio with 3,085,702.

These six states raise one-half of the marketable hogs in the United States, the total for the country being 52,878,675 head of hogs marketed and slaughtered.

These figures would probably have to be changed considerably to represent present conditions, but the relative numbers for the different states would probably remain the same.

Silage As Stallion Feed.

Among the thousands of silo owners in the United States it is safe to say that a great majority are using silage as a part ration for their horses. Many farmers in the east who have had silos for twenty-five or thirty years report most favorably on the use of this great feed. Especially do they recommend silage for growing colts and mares with colts; and for horses during the winter months, when they work short hours.

It is self evident that horses doing heavy work need a condensed ration, especially when they have a short time for feeding. For this reason large rations of silage to work horses are not recommended. As silage is a watery feed, bulky in nature and succulent like grass, it should be given as grass.

The horse importing firm of Watson, Woods Bros. & Kelley have for the past year been feeding to their fine imported draft stallions a ration of corn silage. They feed from six to twelve pounds per head per day, and have emptied one silo and are starting the second. Mr. Burkett, the foreman, has been caring for imported horses for over twenty years, and reports he has never fed a bunch of horses with better results. He has noted in particular the good gains and fine condition of the animals receiving silage. The horses have been entirely free from ailments of any kind, their coats are sleek and there is a freshness and finish to the animals which is better than he has ever seen. Many of these horses are extremely valuable, but the members of the firm count they are running no risk, provided they feed good silage, and certainly the cost of the ration is greatly reduced.

Co-operation among states is just as important, in very many cases, as it is among communities and individuals. There are many cases in which great good cannot be accomplished because of the lack of uniform laws among the states. The evils of divorce, which threaten our very civilization, and large questions of sanitation are among these. Control and prevention of tuberculosis, of hog cholera and other diseases, both human and animal, are only possible by co-operative effort, and here the states should co-operate with the general government and with each other. Co-operation, and not competition, is not only the life of modern business, but it is the basis of safety as well.

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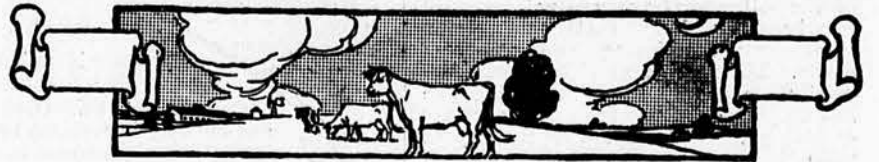
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NEW YORK CHICAGO SAN FRANCISCO SEATTLE

DAIRY



Subscriber F. C. M., Olathe, Kan., asks: "Please give me the average weight of Holsteins. How old should heifers of that breed be when they drop their first calf?"

The Holsteins are the largest of the distinctive dairy breeds. The mature cows will range in weight from 1,000 to 1,500 pounds. It is our judgment that the average weight of mature Holstein cows in good milking condition will not be less than 1,200 pounds. Were we breeding Holsteins it would be our object to breed large animals. As a rule, more work can be expected from a large animal than from a smaller animal. This is not an invariable rule, as your experience will in all probability have already taught you. Holstein bulls at maturity range from 1,500 to 2,000 pounds. We have seen bulls of this breed weigh 2,200 pounds in good breeding condition. We think we have heard of Holstein bulls weighing 2,400 pounds. The frame of the Holstein cows and bulls is not much behind that of the Short-horn.

We would breed heifers to calve at 18 to 20 months. We would so handle the heifer as to make her just as large as we could at the time of freshening. The heifer calf should be kept growing every minute from birth until calving. When fresh, the method of feeding and handling should be such as will permit her to continue to grow to maturity.

We have numerous times in these columns remarked that the heifer calf could be ruined as a milk cow, while a calf. This, by improper feeding resulting in stunting, producing an animal under size, and in dwarfing the internal machinery which is later expected to produce large quantities of milk. The heifer should not be fed a fattening ration. She should have abundance of hay that the digestive organs may be developed and made capable of handling large quantities of roughage. That roughage should furnish ample supply of protein which is supplied by alfalfa hay, clover hay, cow peas, fed with silage, which will cause rapid and large bone and muscle development. So fed, the heifer will be thrifty and well grown. The most favorable conditions of growth will permit the freshening of the heifer one to two months earlier than above stated. We believe she should be started in the milk-making business as early as is possible, depending, of course, upon the size and condition and prospects for her at breeding time.

Subscriber H. T. A., Olmitz, Kan., asks what can be expected in the way of beef from the dairy breeds, particularly the Holstein. This subscriber in all probability has a disposition to keep only such animal as will grow for him a calf which will sell at a profit at 12 to 14 months of age. This is the feeling of at least seven of every ten men who consider building up a herd of milk cows. Farmers generally—those not engaging in dairying as a specialty—are justified in asking this question, too. Generally speaking, in Kansas we have not yet reached the point where we can overlook the value of the calf when sold as beef or for feeding purposes and later to be sold for beef. This is so because on a large percentage of farms dairying will for many years to come be only a side issue and also because on many other farms the establishing of a dairy herd will be the result of a grading up process during which time the cows will not be as highly profitable as in later years. It is that time between the beginning of the grading up process and the time when the herd will reach profitable dairy production that the general farmer thinks about. During this time he does not want his income cut to the income from milk alone.

There is ample proof, supplied by experiment and farm practice, showing that the calves of the dairy breeds grow rapidly, take on flesh easily, fatten quickly and sell as beef at good prices and at a profit, even though they do not top the beef markets. It is not reasonable to expect that a calf bred along dairy lines should be as efficient a beef producer as one bred along beef lines. However, dairy breeding is not such as denies to the animal thriftiness and

rapid gains and the production of good meat.

It is our contention that there are hundreds of steer and heifer calves of dairy breeding produced annually in Kansas which will make more and better beef and produce that beef just as cheaply as thousands of other steer and heifer calves which do not have a drop of dairy blood in their veins and which do not have much beef blood in their veins, but which are regarded as of beef breeding. We know, too, that there are hundreds of calves of the first class named which sell for as much money as those of the second class named. There are many farmers in Kansas who have fooled themselves into believing that they are producing beef and who in fact are not producing beef, and the calves from which farms are not of more superior feeding or beef-making quality than are the calves of dairy breeding. In comparing the selling price and net profits from calves of dairy breeding with calves of beef breeding, we must differentiate between calves of so-called beef breeding and those which are actually of beef breeding, being high grades or pure-bred animals of beef breeds. Comparing the feeding quality and the profitable returns from dairy-bred steers and heifers with those of so-called beef breeding and which we may designate as "scrubs," there is such a small difference that the difference may not be taken into account and farmers who are growing the "scrub" need have no fear of their income being seriously affected when they change to dairy breeding and have well grown, thrifty calves of dairy breeding to sell. The danger, however, lies in the fact that the man who has "scrub" or calves of so-called beef breeding, will have "scrub" dairy-bred stock—stock poorly raised. The steer or heifer calf of dairy breeding, well reared, is not at a disadvantage compared with the steer or heifer calf of "scrub" beef breeding indifferently reared. One important cross overlooked in growing calves—either dairy-bred or beef-bred—is that of the silo, alfalfa stock and kafir or corn crib.

The feeding quality of the dairy-bred animal is accounted for largely through the fact that such animal has a quiet disposition and so grows rapidly and makes large gains—and in the case of the Holstein, Ayrshire or Guernsey, attains good size. The Holstein steer or heifer calf does not mature as quickly as those of some of the smaller breeds. Also as they approach maturity they frequently lose smoothness, although up to the age of about 18 months they grow and fatten readily and are of good quality. It is true that much of the discrimination against Holsteins when sold for breeding purposes—as is true of all dairy breeds—is largely grounded upon prejudice. The success with which the farmer may sell dairy-bred animals for feeders or as beef will depend upon how well he grows the animals and upon how good a salesman he may be. The grower of grade dairy-bred calves can well afford to feed and fatten his surplus from his own grains on his own farm, and sell these animals, fat, either to the local butcher or for shipment. By finishing such surplus stock the feeder realizes the whole profits and the well fattened animal will sell to better advantage than the feeder still to be fattened, and there is less of the prejudice to be overcome.

On our father's farm, when we first had black and white steer calves to sell and still had a majority of red calves in our herd, the feeder who had been accustomed to buying our surplus stock drove as sharp a bargain as he could. His offer, for instance, would be \$4.50 per hundred for the red calves, and \$3.50 or less per hundred for the black and white calves. There was no difference in the quality of the two so far as outward appearances were concerned. Usually the black and white calves were larger, having a larger bone, but not so fat. Under these conditions, so long as the herd was mixed it was necessary for us to make the best deal possible. But each succeeding year the percentage of black and white calves became larger and as this percentage increased we were

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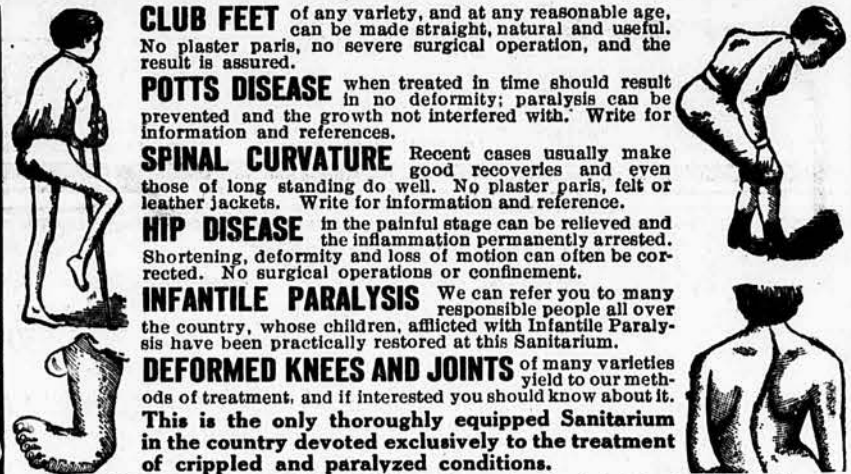
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each succeeding year enabled to make a better deal at selling time. Finally, when the farm was stocked exclusively with black and white cattle, the dealer knew that when he set foot onto the farm he could buy only black and white feeders. Then he came to himself and year after year we sold our grade Holstein calves for as much money per hundred pounds as our neighbors reared for their red calves. It was not unusual for us to obtain a higher price per hundred for our well grown thrifty black and white cattle than some of our neighbors received for their poorly grown red calves. When Holsteins came into the country in large numbers the prejudice grew less and farmers were able to sell Holsteins to their satisfaction. The buyers in question were the Smith brothers at Woodbine. To know just where they were getting off in the purchase of black and white cattle, they fed these cattle separately from those of beef breeding, and these gentlemen have repeatedly told me that the white and black steers and heifers put their gains on so rapidly and economically that in spite of selling on the markets at a slightly lower price per hundred they had made more money feeding Holstein grade stuff than they made feeding the common run of red cattle bought at that time through the eastern half of Dickinson County.

Silage As Horse Feed.

It is not entirely clear to prospective silo purchasers that silage is an excellent ration for horses, economic in character and wholesome in use. By using good judgment the horse feeder will make no error and will be better off financially. The Pennsylvania station gives the results of horse feeding test where silage was compared with hay and other forage.

"The horses fed silage as a portion of their ration consumed less grain, made their gains at a lesser cost per pound, were sleeker and better finished than those fed on rations not containing silage."

In this test they noted that silage could be fed in amounts varying from five to twenty pounds per day. They recommended silage free from mould and made from corn fairly well matured. They also advised against feeding horses large quantities of silage, especially after coming in from heavy work when they are in a heated condition.

The Michigan Experiment Station has been feeding horses for many years on silage and favors its use, especially for horses not at heavy work. In a test made some years ago with seven teams of work horses, one horse of each team was fed hay and grain, while the other received small amounts of hay and grain with about fifteen pounds of corn silage. These teams were doing moderate work. The experiment lasted twelve weeks and the following results were noted:

The silage fed horses showed an average gain of five pounds per head. Besides the increase in body weight the driver noted that the silage fed horses worked fully as well and did not appear to be any softer than those not receiving silage. The silage fed horses showed a better finish and sleeker coats.

Straight from Shoulder for Silo.

At the Valley Falls farmers' institute J. N. Groner read a paper on the silo and the profits of feeding silage. The silage cost about \$2.10 a ton and was worth more than three times the cost. Ben Schneider of Nortonville endorsed everything that Mr. Groner said about the silo and silage and said it was the best thing on earth. Fed on silage and some skim milk a July 28 calf of his weighed 580 pounds the other day. His boys milked instead of having the women folks do it, and they liked to milk when the feed was in the handy silo or mow, instead of in the snowy wet shock in the field. A. H. Jurgens of Rock Creek spoke in favor of the silo and its benefits, and economy. Ben Schneider offered to pay the cost of a silo if any farmer was not satisfied with its benefits at the end of two years' trial. Frank Gragg is the president of this institute and he made things move on this as well as former occasions.

And then there is room for a few sheep on many a farm. If you are near a city you can develop a nice trade in hothouse lambs, and it is worth while.

An exchange tells of talking with a farmer whose buggy then contained condensed milk, oleomargarine, eggs, canned peas, corn and beans, cucumber pickles, ham, sauer kraut and sausage, which he was taking home from the grocery. When asked about his business he said, "farming does not pay." When asked why he found it necessary to buy these things he said, "for my folks to eat."

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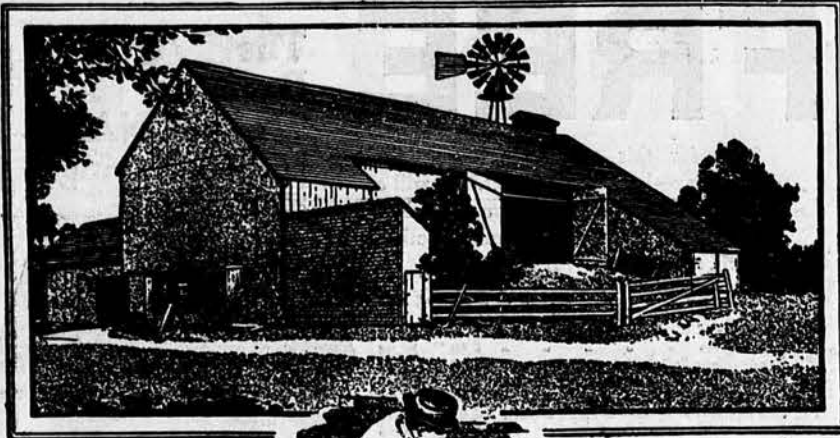
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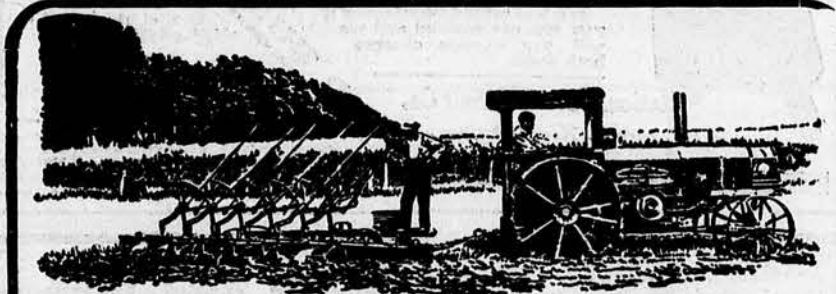


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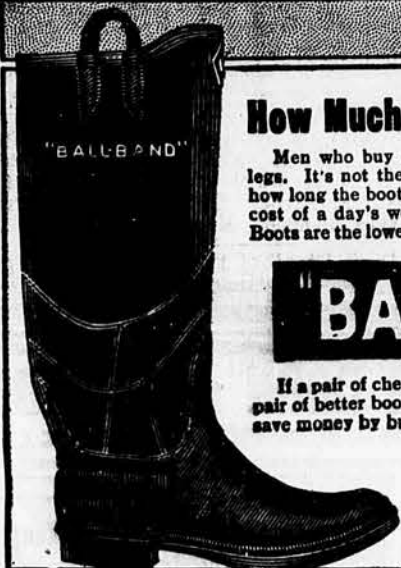
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Ask your dealer for "Ball-Band" Boots. Look for the Red Ball on the knee. Write for Free Illustrated Booklet MISHAWAKA WOOLEN MFG. CO. 216 Water Street Mishawaka, Ind. "The House That Pays Millions for Quality"

Three Years With Cow Peas

By A. REEVES, Conway Springs, Kansas

HERE are a few facts and figures that I have gathered during three years' experience with cowpeas, which I believe will be of interest and value to anyone interested in better farming.

I got my start with peas by picking the pods off of the ground for half of the seed. The peas had been planted with a lister and cultivated. They were harvested with a mower and rake, and half of the pods were cut into two parts.

There were six bushels per acre of

Total receipts\$17.50
Total expenses 10.25

Net returns\$ 7.25

The above does not include the benefit to the land.

I believe you will agree that this is a profitable crop when you consider that other crops such as Kafir which at 30 bushels per acre only return a clear profit of about \$2.00 per acre, 20 bushels of corn pays an equal amount and 12 bushels of wheat hardly as much. All



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peas on the ground and five bushels per acre in the hay. I learned that year that peas are a drouth resistant crop and that they should not be planted with a lister unless the crop can be pastured with hogs or other stock.

The next year we planted six acres. The land was double disced twice during the spring and plowed eight to 10 inches deep about June 1. The peas were planted June 12 with a wheat drill with every second hole closed, and at the rate of two pecks per acre. They made a poor stand but in spite of this they yielded 7 1/2 bushels of peas, 1,500 pounds hay and at least three bushels per acre were left on the ground to be picked up by the hogs. Corn on all sides of this field only made eight or nine bushels per acre, and the year before even less. That is how corn and peas compare in dry seasons.

Last year I planted 46 acres of peas on land that had been in Kafir the year before. The crop was handled the same as the preceding year except that three pecks of seed were planted on all except nine acres, which was seeded at the rate of one bushel per acre. The average yield was seven and one-third bushels per acre, 1,500 pounds of hay and three or four bushels per acre on the ground to be picked up by the hogs. The thicker seeding yielded more of a better quality of hay and about the same amount of seed. Grasshoppers did a great deal of damage to this field by cutting off blossoms and leaves.

Now what is a crop like that worth for feed? There is as much digestible protein in a bushel of ground peas as in a bushel of corn, Kafir and oats combined. A bushel of those grains at present market prices will cost \$1.15. Therefore for stock requiring a large amount of protein such as milk cows, young live stock and poultry, and to balance rations for other stock, peas are worth at least \$1.00 per bushel. For horses pea hay is much superior to alfalfa, and for cattle, silage and pea hay form a balanced ration.

Here is an itemized account of expense and receipts for this crop, based on its value as feed:

EXPENSES.	
Interest on land \$60 per acre, at 6 per cent.	\$ 3.60
Discing and harrowing	1.00
Plowing.	1.00
Drilling.40
Seed, 3 pecks, at \$3 per bushel....	2.25
Harvesting.	2.00
Total expense	\$10.25

RECEIPTS.	
7 bushels peas, at \$1 per bushel..	\$ 7.00
1,500 lbs. hay at \$10 per ton.....	7.50
3 bushels peas picked up by hogs..	3.00

of these figures are based on average south-central Kansas upland conditions.

Peas are the ideal crop to follow Kafir, and Kafir following a crop of peas will yield 10 bushels more per acre and ripen two weeks earlier than where not rotated with peas.—A. REEVES, Conway Springs, Kan.

A Few Do's and Don'ts.

Breed your sows so that the pigs will come about 75 to 100 at a time. This will enable you to finish in car lots and you can then ship direct to market and will not have to sell to the speculator. You need the speculator's profit yourself.

Feed protein foods while the sow is carrying her young, and when she farrows she will have milk instead of milk fever, and won't eat her pigs. It is the craving for protein that cultivates the habit of eating pigs and chickens.

Be kind to the sows at all times, so when they pig they will be glad to have you around instead of wanting to fight you.

Give the farrowing sow plenty of cool water and feed her no grain for at least 24 hours.

Floor all farrowing houses and pens so that the sows won't root a hole to lay in and crush her young. This will also prevent water filling up holes to drown little pigs.

Remember, cement for flooring is almost as cheap as wood, is easier cleaned, lasts longer, and looks better, and won't breed germs.

Feed hogs about the same time each day and always call them to feed so that you will get them accustomed to coming up at the sound of your voice. Never call them up unnecessarily, and when you need them for any other purpose than feeding, give them a few grains anyway. Nothing like having your hogs well trained.

Have a gunny sack soaked with crude oil hanging over the hole made for the little pigs in the farrowing pen to run through, just high enough to rub their backs as they run through. This will be sufficient to keep them disinfected from lice, etc. Not too much oil on the sack—just enough to slightly grease them.

Keep one wallowing place and keep the surface covered with crude oil, and the hogs will keep themselves free from lice.

When pigs are eight weeks old, give them about five doses of santonin (five grains to the dose) for worms, and some glauber salts with the last dose will help some. Feed it in the slop.

If you intend litter-marking the pigs, do it at two days old. Among other remedies for pig-eating

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head charges. These costs are added to the price of other cars and are costs that the buyers pay.

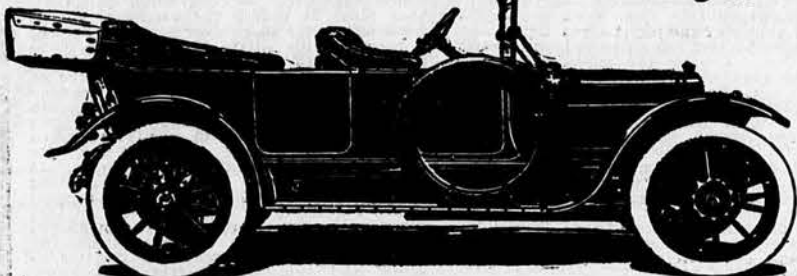
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We put all these savings into the car. You pay nothing extra for them. We are able to give them. You might as well have them.

We could save on our motors by using cheaper materials. We could use cheaper clutches, drive shafts, axles, wheels, and save in other essential points. We could cut our assembling cost in two, and this is one of our largest costs.

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THE FARM



The seeding and planting of spring crops will be upon us almost before it is realized. There is every indication of an early spring. Just so soon as the present snowfall has disappeared and the ground is dry enough to work, preparations for spring planting should begin. It must be kept in mind that we are entering the planting season with a shortage of moisture. The moisture content of our fields is considerably below normal. This condition prevails throughout the state. This, however, is not necessarily a condition for discouragement. The chances are that we will from this time on have through the growing season such moisture as is necessary to produce satisfactory yields if we take good care of what we get. It is apparent, therefore, that upon us devolves the employment of such methods of tillage and cultivation as will best conserve the moisture now present in the fields, and furthermore conserve such precipitation as we may have later and during the growing season. It is claimed—and we believe the statement to be correct in a general way—that only during three or four years since the establishing of weather bureau service in Kansas have the records shown a rain and snowfall which would fail to produce average crops. All other years the precipitation has been of such amount as would produce average crops had the best use been made thereof. Our evaporation is tremendous. Much greater than it need be if we would do as well as we know.

oughly disked—double disked. Early disking is good practice for the entire area for spring crops and should be done just so soon as the disk can be gotten on to the ground. It will pay to disk ahead of the plow. This will have the effect of conserving moisture while the field is waiting for the plow, will put the ground in condition to take up such moisture as falls, and the pulverized surface thrown into the furrow bottom will be a help toward good seed bed. Follow the plow with one or the other of the implements above named. This is especially necessary if the spring be dry. In seasons when rainfall is abundant the rain and the natural settling will make a firm seed bed. It is the business of the farmer as well as that of the man in any other line, to guard against the adversities of the future. The farmer must guard against dry weather and future adverse conditions to a greater extent possibly than any other man. The success of the crop depends upon the moisture in the soil at planting time, the proper preparation of the seed bed at planting time, and the proper cultivation, depending upon the rainfall during the growing season. Were we assured of an abundance of rain, farming would be quite a different business than it is. To make more certain the production of crops on the off season is the one big thing to consider in farming.

Good seed is essential. The good results of superior seed will be most marked under adverse soil and climatic conditions. The oats sown should be thoroughly cleaned; first, to remove the weed seed and the trash, and second, to remove the small and chaffy kernels which will not grow thriftily, if at all, and which have more or less of a bad effect upon proper seeding by the drill. We think of all crops the worst abused in Kansas is the oat crop. Seed taken direct from the feeding bin is not suitable seed. It should be cleaned. The use of a good fanning mill is necessary, not only for oats, but for cleaning all other small grain seed. The oat seed, too, should be treated for loose smut, which is the common species of smut and which generally prevails throughout Kansas. Treatment for smut will involve some little trouble and labor, but the results will warrant both. The work can be done during the slack time of the winter, but so to do would result in more labor than if done just before the seed is used. After treatment the seed should be dried. If the treatment is given during freezing weather the seed may be damaged by freezing unless it is thoroughly dried. When the treatment is given at seeding time the trouble of thoroughly drying is unnecessary.

It necessarily devolves upon the farmer, in so far as it is possible, to at all times have his fields in such condition as will permit the ground to take up water falling as rain or produced from the melting snows. Ground which is hard and which has a crust on the surface—the usual condition following the harvesting of crops in the fall of the year—will not take up moisture to the fullest extent possible and in a degree necessary to protect the succeeding year's crop from a shortage of water. For this reason land should be plowed or disked in the fall of the year, leaving the surface loose and mellow for the absorption of water and reducing to a minimum the possibility of water running off. Every man who plows in the fall of the year plows for this purpose, and fall plowing is generally recognized as good farm practice.

There are sections in which there is fear of damage to the fields by fall plowing because of the danger from blowing during the fall, winter and spring. Sure protection for fall plowed fields in such sections has not yet been devised. However, it is certain that the use of the subsurface packer, Blade harrow or Western Land roller used immediately following the plow will so pack the field that the chances for blowing will be reduced to a minimum. The effect of the use of such implements is quite different from the effect of the drag harrow. The latter pulverizes the surface, making the field a prey to winds. The above named implements pack the surface well, leave the surface granular, and the dangers of blowing are reduced to a minimum. In sections where fall plowing is permissible it should be done so far as possible, principally for the purpose of aiding the soil in taking up the moisture and further that the most favorable seed bed may be prepared for spring crops. It requires extra labor to prepare the seed bed in the case of spring plowing, especially so if the spring be dry. Rarely is it possible to prepare as good seed bed for oats, corn, Kafir, cane, millet, alfalfa, or clover by spring plowing as if the plowing had been done in the fall. We realize, of course, that under the prevailing conditions of farm management in Kansas it is not possible to in the fall of the year plow all those fields which must be seeded in the spring.

Soak seed oats for two hours in a solution of formalin containing 1 pound of formalin to 50 gallons of water. Care should be exercised that all the grain is thoroughly wetted by the solution. The oats may be put in coarse sacks. The common burlap or bran sack is good. Dip these into a barrel containing the solution. Spread the oats so treated on a thoroughly clean floor or canvas which is not infected by smut. Be sure the seed oats are not later infected. Be sure that the drill is free from smut, also that the bags in which the oats are taken to the field are not smut infected. There are other remedies for smut. The above is fully as simple and as effective as any other known treatment.

Generally speaking, in Kansas we do not sow enough oats per acre. It is our judgment that seeding should vary from two to three bushels per acre. On the better lands the larger amount should be sown, while on the poorer lands the smaller amount. Less seed will be required too, if the oats are drilled than if they are sown broadcast. The oat crop ranks second in the number of bushels and third in acreage, of the grains grown in the United States. However, the crop in Kansas does not so rank. The oat crop is valuable—especially so from the feeder's standpoint. The oat is regarded as one of the hardest cultivated cereals. We do not so regard it in Kansas and we believe that the reason the oat crop is not appreciated as it should be, is largely due to our oat seeding methods. Oats

Ground which has not been fall plowed should be cultivated just as soon as the frost is out and the ground is dry enough. If plowing is to be done, plow early. Early plowing for spring crops is fully as advantageous as early fall or summer plowing for wheat. If the field is not to be plowed it should be thor-

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for grain and oats for hay are without a superior for young stock. Let us have more oats. We can as well as not.

The value of the Kafir crop throughout Kansas is each year depreciating, principally because of the reasons so fully set forth in KANSAS FARMER of last week, and incidentally because of a loss of at least 10 per cent. each year on account of smut. Kafir seed can be successfully treated for smut. Place the seed in loose burlap bag and hang the bag for two hours in a barrel containing 50 gallons of solution made by two pints of formaldehyde added to 49 gallons and three quarts of water. It will be noted that this is nearly the same solution as suggested for oats, but the two printed formulas differ just as we have repeated them and we recommend that the formulas be used just as directed. The same care in drying and in preventing the infection of the treated kafir from smut, should be exercised as in the case of oats, stated above. Grain smut in cane can be prevented by the same treatment as is recommended for kafir.

For the first time reported in the history of kafir growing in Kansas, growers were seriously affected last spring by ants eating the seed. The complaint was so generally serious that the Department of Entomology of the Kansas Agricultural College investigated infested fields. The result was the discovery of preventive measures which are valuable and well worth while. The dipping of the seed in a solution of crude carbolic acid just before planting, will protect the seed from ants. It will pay kafir growers in the affected sections of last year to so treat their seed. The seed should be soaked long enough to allow a coating of acid on each grain. It was found that this method protected more than 90 per cent. of the grains. It was found, too, that the ants ceased working when the seeds germinated, so that the protective measures must save the seeds from the ants between planting and time of germination.

At the outset we intended to say more about necessity for thoroughly cleaning and obtaining good seed and the thorough cleaning of the same for all crops to be sown this spring. It would seem, however, that the advantages of good seed were so thoroughly well understood as to make comment in detail unnecessary. Aside from the necessity of good seed, is that of preparing the ground properly for the seed. Three things must be taken into consideration in connection with the preparation of the seed bed. These factors are moisture, heat and air. Every farmer knows that seed will not germinate while it is dry, consequently the necessity for so preparing the seed bed that it has in it the moisture necessary to germinate the seed and support the plant for a reasonable time until rain falls. Also, all seeds require a favorable degree of heat before they will germinate and the presence of air in the soil is necessary in order to supply the necessary oxygen. The heat cannot be had until it is supplied by the sun and it rarely pays to begin seeding until the ground becomes warm or until conditions favorable for the warming of the ground, prevail. The air for the young plant must also exist in the seed bed and it can exist only when the seed bed has been so worked that the air may find its way through the soil to the plant.

New Plan Proposed in Nebraska.

C. E. H., Sabetha, Kan., asks what we know about the state of Nebraska financing farmers in the purchase of silos. Dennis Cronin, a representative, has introduced into the Nebraska legislature now in session, a bill which provides for a fund of \$30,000 to be loaned to farmers at 4 per cent. interest in amounts not exceeding \$500. The money secured on such loans to be used in building silos and equipping the same. The loans are to be secured by first real estate mortgage.

Representative Cronin points out the necessity of promoting the stock interest of the state and shows that the most important thing necessary to that end is the lower cost of stock and stock products. In this he believes the silo all-important. He says, furthermore, that Nebraska has loaned three million dollars to other states and he thinks that this money should be kept at home and invested in a way that will result in profit to Nebraska people and to the state as a whole.

White vs. Black Hulled White Kafir.

The season of 1911, I grew ten acres of the white-hulled white Kafir. It matured thoroughly and from general observations and comparisons with fields of the black-hulled white, showed up the more favorably of the two varieties. The

season of 1912, I grew fifty acres of the white hulled and ten acres of the black-hulled; that I might get a reasonably accurate comparison of the two varieties.

The ground was all spring plowed, harrowed, and top planted with a disc grain drill, in rows proper width for cultivation of the crop. The time of planting and conditions under which the two varieties grew were identically the same for each. From observations of the two varieties, I have concluded:

That the white-hulled is the more resistant to both dry weather and chinch bugs.

That the white-hulled headed, seeded and matured about three weeks earlier than the black-hulled.

That the white-hulled did not grow as large and woody a stalk, and yet an equal amount of foliage, as the black-hulled.

That the white-hulled yielded 1 1/2 times as much threshed grain per acre as the black-hulled.

That the grain of the white-hulled was fully matured ten days before our early frost.

That the grain of the white-hulled is more readily eaten by stock than the black-hulled.—SCHUYLER NICHOLS, Herington, Kan.

More About Feterita.

I have had experience with only one crop of Feterita and I was highly

pleased. Last spring I planted Feterita, Red Milo, and Black Hulled White Kafir, and following are the figures as to the yield of grain:

Feterita, threshed and cleaned, 80 bushels to the acre; Milo, 60 bushels; and Kafir, 53 bushels. Each variety was planted with a lister and cultivated two times.

Feterita will sucker more than Milo or Kafir but each stalk will make a good head if not too thick in the row. Occasional hills made as many as 25 heads from one grain. It also varies in height according to the season it is planted. Mine grew from four to six feet high. Feterita is from 15 to 20 days earlier than Milo, the forage is much better for stock than Milo, and looks as if it would make extra good silage. The fodder is much heavier than Milo. Feterita will mature from 25 to 35 days earlier than Kafir.

I also had some Feterita and Kafir on this land. The Kafir was not worth threshing while the Feterita made 16 bushels to the acre. Feterita grains are white and softer than either Kafir or Milo; it has the same feeding value.

Feterita is recommended for hog pasture. It is claimed that it shatters more than either Kafir or Milo, too, but I do not think so. If you let it stay in the fields late it will fall down as will Milo or Kafir. Feterita grows straight, which

makes it more easily harvested than Milo. It appears to be a better drouth resister than Milo. If it proves a better drouth resister than Milo it is the stuff we are looking for.

I do not mean to exaggerate. I have given you my experience with the crop and can prove all I have given you. I have no seed for sale.—W. A. TAYLOR, Lone Wolf, Okla.

Depth to Which Alfalfa Adds Nitrates.

When we speak of soil and soil problems we are supposed usually to take into account about the first foot or less. For most crops it suffices to say that alfalfa adds nitrates to the soil, since most crops feed only on about the first foot. For deep rooted crops this will not hold true. From analyses made by the Idaho Experiment Station of several alfalfa tracts it was found that the first foot of soil was much richer in nitrates, but to a depth of six feet much poorer, on an average. In other words alfalfa land is usually rich in nitrates in the first foot and poor in nitrates below the first foot, while land in other crops may be just the reverse. The deep roots of the alfalfa plant penetrate far into the soil in search of food while the nitrogen bacteria accompanying the plant are working in the top soil. In this way the nitrates are more concentrated in the top soil for the use of succeeding crops, although the total content of nitrates may be far less.

**No-Rim-Cut Tires
10% Oversize**

**One Million Sold Another Million
in a Single Year**

One year ago—in our 13th year—we announced that one million Goodyear tires had then gone into use. It took 12 years to bring motor car owners to use a million of these tires.

This month we touch the two million mark, and it's only one year later. It took only one year for those million tires to sell a million others.

Mark What Those Tires Told

A million tires, within 12 months, sold a million others. That breaks all the records of Tiredom.

Don't you think you should know how they did it?

This is How

Men found that rim-cutting, with old-type tires, ruined 23 per cent of their tires.

They found that Goodyear No-Rim-Cut tires ended this loss entirely.

Men also found that the 10 per cent oversize added 25 per cent to the average tire mileage.

Hundreds of thousands of men

learned this, then told the facts to others.

The resulting demand now compels an output of 6,000 tires daily.

Are They Wrong?

You who still use other tires must infer that these men are wrong.

But these are days of odometers. Men are keeping track of tire mileage.

Mileage figures only sold those million tires—the mileage figures on the previous million tires.

And Goodyear sales, because of

those figures, are seven times larger than two years ago.

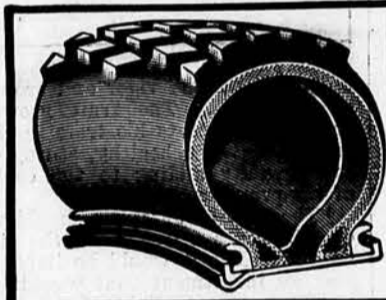
Find Them Out

For your own sake, test No-Rim-Cut tires. They save the average user almost half one's tire bills.

Think how that cuts tire bills. Think how it saves annoyance.

These tires now outsell every other tire in the world. Find out why they do it.

Write for the Goodyear Tire Book—14th-year edition. It tells all known ways to economize on tires.



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THE TRINIDAD-LAKE-ASPHALT
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Many substitutes are manufactured products whose oils of value have been extracted for other purposes, leaving a hard black pitch—a lifeless mass that gives roofing but little resistance. It soon cracks, breaks, and leaks.

Genasco—made of Trinidad Lake asphalt—has the natural oils preserved in it "for life"; and the life defends it against years of rain, sun, wind, hail, snow, heat, cold, fire, alkalis, and acids.

Get Genasco Roofing of your dealer. Smooth or mineral surface. Guaranteed. Genasco smooth surface roofing has the **Kant-leak Kleet**, that waterproofs seams without cement, and prevents nail-leaks. Write us for samples and the Good Roof Guide Book, free.

The Barber Asphalt Paving Company
Largest producers of asphalt, and largest manufacturers of ready roofing in the world.
Philadelphia
New York San Francisco Chicago

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Fruit Growers' Insurance

Proper Orchard Spraying Will Increase Previous Yields 600 Per Cent

ONE measure that occupied the attention of the Kansas legislature this session would thrust the state into the insurance business. Advancing this movement one point, a University of Kansas professor is urging the members of a great class of Kansas citizens, the fruit growers, to carry their own insurance.

S. J. Hunter, professor of entomology, wants the orchardists of the state themselves to guarantee their own crops and themselves to assure Kansas that the fruit yield of 1913 will not only equal the best record of any previous year, but will top it from 300 to 600 per cent.

And here is the free policy that Professor Hunter is distributing over the state. Three words covers the system that will make six apples grow where one grew before—"Spray the trees."

"The fruit grower's best insurance lies in spraying," declares Professor Hunter. "No investment of time, labor or money will bring so great returns. Where this treatment is used, 95 per cent of the fruit will be perfect, while if the trees are not sprayed little more than 15 per cent will prove sound.

"Not only does spraying make the fruit sound, but it also increases the actual yield of the tree from one-third to one-half. That is, if one part of the orchard is unsprayed and produces 600 bushels of apples, 14 per cent or 84 bushels would be perfect and the rest would have to be sold as imperfect or culls. If the other part is intelligently sprayed, it will yield 900 bushels, of which 95 per cent or 855 bushels will be perfect, sound fruit.

"Spraying is cumulative insurance, because each year spraying makes the work of the succeeding year more effective,

fruit crop from 300 to 600 per cent. Professor Hunter points out that practically every orchard in the state suffers more or less from codling moth and curculio so that spraying insurance might be adopted by all Kansas fruit growers. The following spray calendars prepared by H. B. Hungerford include full spraying directions for the orchards during the year:

SPRAY CALENDAR FOR APPLE ORCHARD.
Winter Spray.—Use winter strength of lime-sulphur or kerosene emulsion to kill scale insects.

Cluster Cup Spray.—When the bud clusters begin to open, spray with Bordeaux mixture, using 3 pounds copper sulphate, 5 pounds lime, and 50 gallons water, adding 2 pounds lead arsenate to every 50 gallons spray if canker worms or bud moths are present. This is the important spray against scab.

Spray as Blossoms Fall and Before Blossom End of Young Apple Closes.—Use Bordeaux 3-5-50, adding 2 pounds lead arsenate; or use summer strength lime-sulphur, adding 2 pounds lead arsenate to every 50 gallons.

This is an important spray against codling moth and should be used by all apple growers. It also aids in the control of curculio, canker worms, scab, etc., and is the most important and essential spray of the season. This spray should be directed so as to fill the calyx cups—blossom ends of the young apples—with the poison, that the first meal of the young apple worm may be its last one. The "driven spray nozzle" is recommended for use in applying this spray.

Ten Days After Blossoms Fall.—Spray with lime-sulphur, adding 2 pounds lead arsenate to every 50 gallons. This is to kill the feeding curculio and the late codling worms, and scab and black rot

"Good, Plain, Coat Off, Sleeves Rolled up."

I have at one time or another been a subscriber to at least a dozen different farm papers, but when it comes to good, plain coat off, sleeves rolled up, every day proposition, KANSAS FARMER beats them all.—WILLARD BELKNAP, Nara Visa, New Mexico.

Farm Tools That Stand The Test

In purchasing tools for the farm care should be taken to select the ones that stand the test. Hoes, Manure Forks and Garden Rakes bearing the name Keen Kutter are positively guaranteed the finest quality made. If you want to save money, time and worry, safeguard yourself by asking for the kind marked

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DIAMOND JOE'S BIG WHITE—A strictly new variety. None like it. It is the Earliest and Best Big White Corn in the World—Because it was bred for most Big Bushels, not fancy show points; because grown from pure inherited stock; every stalk bearing one or more good ears, because scientifically handled, thoroughly dried and properly cured and had the most rigid inspection. Also all other leading standard varieties at FARMER PRICES. OUR BIG ILLUSTRATED FARM AND GARDEN SEED CATALOG mailed FREE. A postal card will bring it to you. Write for it today. Address, RATEKIN'S SEED HOUSE, Shenandoah, Iowa. Box 7

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and increases the vigor and productivity of the trees. The fruit grower who consistently treats his trees in this way is building up a healthy, sturdy orchard and steadily adding to the cash value of his property.

"The cost of spraying should not run over 25 cents a tree, or at the most \$10 an acre. But it would be impossible to find an investment that would bring in a 600 per cent dividend as surely as this."

To apply methods worked out for treating affected trees, the University has leased a 10-acre orchard 15 to 18 years old. Under direction of H. B. Hungerford, instructor in entomology, the area was divided up into districts and plans were made to treat some of these blocks by spraying and to let others progress in the normal way. The orchard was afflicted with blotch, bitter rot and codling moth. Certain average trees in the unsprayed orchard and in the sprayed part were tagged while in bloom and counts made of all drops throughout the season, together with the tabulated reports of the ailment of each drop. A history was obtained in this way of each apple while growing and 81,457 were counted and tagged.

Missouri Pippins, Ben Davis and Gano, three of the hardest apples in Kansas to keep from fungus diseases, were sprayed with Bordeaux mixture and arsenate of lead three times, beginning as the petals fell and finishing with the late blooms. Each tree received six gallons, leaving it dripping. Other sections of the orchard were sprayed but a first and a second time.

The results of the test showed that the trees poorly sprayed developed blotches, while those bathed thoroughly were sound throughout. The codling moth was found in from 19 to 50 per cent of the unsprayed fruit picked, while but 1 to 1 1/2 per cent of the treated fruit was wormy.

Fourteen per cent of the unsprayed yield at the close of the season was sound and marketable in comparison with the 95 per cent salable product of the sprayed trees, a result which bullwarks Professor Hunter's statement that spraying would increase the Kansas

as well. Use Bordeaux on varieties susceptible to blotch. A nozzle throwing a fine mist should be used this time, as with all sprays save (C).

Twenty-five Days After Blossoms Fall.—Apply Bordeaux 3-5-50, adding 2 pounds lead arsenate. This is to control blotch and is used on varieties susceptible to blotch. It also aids in codling and curculio control.

About Last of June.—Use Bordeaux 3-5-50 for blotch and bitter rot.

SPRAY CALENDAR FOR PEACHES AND PLUMS
Winter Spray.—Use winter strength lime-sulphur or kerosene emulsion to kill scale insects.

As Buds Are Opening.—Use spray of Bordeaux mixture, adding 2 pounds of lead arsenate for every 50 gallons of spray. This is to kill leaf curl and bud moth.

When Calyx Drops, Blossoms Fall, Leaving Fruit Naked.—Spray with lime-sulphur, summer strength, or Bordeaux 2-3-50, to control curculio, scab, rot, leaf curl, etc. (For curculio add lead arsenate, 2 pounds for every 50 gallons.)

Ten Days After Bloom Falls.—Use lime-sulphur, summer strength, adding 2 pounds lead arsenate to every 50 gallons of spray. This spray is to control curculio, scab and rot.

WHAT SPRAYS TO USE.

The following insects are controlled by sprays containing lead arsenate: Tent caterpillars, leaf crumplers, bud moths, bag worms, case bearers, curculios, codling moth, pear slug, and other leaf feeders. Paris green, 1 pound to 100 gallons of water, or 1 pound added to 100 gallons of Bordeaux spray, may be used.

The following insects are controlled by kerosene emulsion: Apple aphid, peach aphid, woolly aphid, plum and cherry aphid, pear psylla, and peach-twig borer. The eggs of aphid—black, shiny bodies on twigs and limbs—and the peach-twig borer may be destroyed by winter spray of kerosene emulsion, made as in the directions, using, however, 12 gallons of soft water instead of 30 gallons.

The following may also be noted: The Bordeaux and the lime-sulphur are mainly for fungus diseases. The Bordeaux is a dry-season spray; the lime-sulphur is more to be relied upon than the Bordeaux in wet seasons. Spraying

with material not properly prepared may result in injury to the fruit.

KEROSENE EMULSION.

Hard soap, half pound; kerosene, 2 gallons; soft water, 30 gallons. Shave the soap into one gallon of the water and dissolve by boiling. Remove from the fire and add the kerosene; mix thoroughly and then add the rest of the water.

There is also a commercial brand known as Scaleside, which has been used by the department with success.

LIME-SULPHUR.

This can be produced in concentrated form and diluted, or it may be made as follows: Quicklime, 20 pounds; sulphur, 15 pounds; water to make 50 gallons. Place over an open fire a large kettle, one that will hold 25 or 30 gallons. Into this put eight or ten gallons of water. When the water is slightly warm, put in the lime and let slake, adding water now and then to keep from sputtering. While the lime is slaking, take the sulphur and stir in enough water to make it somewhat pasty. When the lime has broken up into a pasty mass add the sulphur and boil and stir constantly for three-quarters of an hour or until the mixture has become a dark red color. While boiling add water as needed to keep from sputtering. As soon as you have this dark red mass, take it from the fire and strain through a fine strainer, then add enough water to make 50 gallons. The wash is now ready for use in the spray pump. It should be made the same day that it is used, for the wash loses its strength if allowed to stand over night.

SUMMER STRENGTH.

To make the summer strength wash, dilute the winter strength to one-fourth of its strength; that is, add three gallons of water to each gallon of the strong solution.

HOW TO MAKE SPRAYS.

Bordeaux Mixture, Winter Strength.—Copper sulphate (bluestone), 5 pounds; quicklime, 5 pounds; water, 40 gallons. **Summer Strength.**—Use only 3 pounds of the bluestone. To dissolve the copper sulphate, suspend it in a gunny sack near the top of a barrel of water. In making this mixture it is a great advantage to dissolve large quantities, thus forming a stock solution; for instance, 100 pounds of copper sulphate dissolved in 50 gallons of water would form a solution containing 2 pounds copper sulphate for each gallon used.

To make a stock solution of lime, take a given weight of unslaked lime, place in a trough or box and slake slowly, using the least amount of water possible. In this way the best quality of slaked lime is obtained. After the lime is slaked, add enough water to make a putty-like mass, then cover with water to keep out the air. In this condition it may be used as needed. Since the original mass was weighed the desired portion may readily be estimated accurately enough to determine the amount of paste to be used in any given amount of Bordeaux mixture. For instance, if 50 pounds of lime were used, the mass after slaking in the box could be marked off into ten equal squares and each square would contain five pounds.

HOW TO MIX THE LIME AND BLUESTONE SOLUTIONS.

Now that the lime and bluestone are ready, the next step is to combine them. To prepare 50 gallons of the Bordeaux, take 2½ gallons for the winter strength, or 1½ gallons for the summer, of the stock that contains 2 pounds of copper sulphate to each gallon. Place this in a barrel and add 25 gallons of water. Take one of the squares of lime and add 25 gallons of water to it in a separate vessel. Pass the lime water through a cheesecloth to remove particles that would afterwards interfere with the spray pump. Now you have the two solutions, the bluestone and half of the water and the lime and the other half of the water. Pour the two solutions together, stir well, and the mixture is ready to be used in the spray pump. It is very essential that the Bordeaux mixture be made this way each time before applied, for it quickly loses its strength.

Lead Arsenate (to be used with either the lime-sulphur, summer strength, or the Bordeaux mixture).—To make the arsenate mixtures, add four pounds of lead arsenate to 100 gallons of either of the above mixtures. Dissolve arsenate in water before mixing with the other solutions.

The Farm Flower Garden.

If you have not already done so, cut back the hybrid perpetual roses at once. Cut out all old growths and cut back two-thirds of the new growth. Old stalks from your herbaceous plants, such as peonies and hardy phlox, should be removed, and any shrubbery you think needs trimming should be attended to also.

Do not trim your spireas or you will



Two Horses Do the Work of Three

Roller Bearings roll around the axle instead of wearing them out like the ordinary frictional sliding bearing and do away with one-third the usual friction. Our improved hardened steel bushing takes away practically all wear on the bearing and box. Don't think of buying a new wagon until you have seen the

Peter Schuttler Roller Bearing Wagon The Greatest Improvement in Wagon Construction in 50 Years

Saves horses because it pulls easier; saves time because you can go faster; saves repair bills because the whole wagon stands up better. Roller Bearings need oiling only about once a month and never get hot or tight on the wheel. They are the crowning feature of the old reliable Peter Schuttler "The One Best" wagon that has lead all others for quality since 1843.

Read What U. S. Government Tests Show

Official tests made by Government road experts on common axles in competition with Roller Bearing axles on the same roads report the following:

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cut your bloom short, as they bloom on last year's new wood. What trimming they receive should be given just after they bloom. Old undesirable canes may be removed at any time.

Altheas may be trimmed as freely as you like, as they bloom on the new wood produced the same year.

I cannot speak of the New Hydrangea Arborescens from personal knowledge, as I have never grown it, but it is highly recommended by authorities who are thoroughly reliable. It comes into bloom just after the snowball, which it resembles, in form of flower, and it continues to bloom over a long period.

The giant compact oval clusters of the old Hydrangea Paniculata are still popular. Cut the canes back from half to two-thirds now and the blooms will be finer.

The California Privet is considered the best ornamental hedge plant grown. It can be trimmed into any desired form or size and is practically evergreen, only losing its leaves in very severe winters. It is hardy still somewhat north of here.

If I were to choose an evergreen for planting in a yard or for a hedge, I would use the Chinese Arborvitea in most cases. It is a fine compact grower, hardy, and will admit of reasonable trimming. The new Rosedale Arborvitea is very pretty, but it is apt to kill out somewhat in spots like the Irish Juniper. The Chinese Arborvitea is a rapid grower.

A friend told me of a hedge which he considered the prettiest thing he ever saw. It was made of Altheas planted closely and cut flat across the top and down the sides. He said the hedge was three feet across, almost level, and a mass of bloom up both sides and on top.

It is now March 1, and spring days are beginning to call us out into the garden, and there is plenty there to do, yet we must remember that frosty days and nights are still to be expected, and not plant bulbs or plants that will be injured or seriously checked in their growth until settled warm weather. Nothing is gained by planting too early, for those planted at the proper season will usually more than overtake the earlier planting. Some plants grow right along in chilly weather and gain strength by doing so, and these should be planted as early as possible.—L. H. COBB, Dunavant, Kan.

The Kansas City market reports show some good trades in live stock. D. M. Wade of Maple Hill marketer two carloads of feeder steers for which he received \$82.95 per head. As these steers cost him \$20 per head, he got pretty good pay for his feed.

The Missouri College of Agriculture requires that each young man shall have at least six months of practical experience on the farm before graduating, and the farmers think they can furnish this experience during the summer vacations.

EXPERIENCE - CONCENTRATION - PERSEVERANCE

In these three words lies the key to the success of the "Flour City" Tractors. The result of fourteen years' specialization continually concentrating on improvements of mechanical design, has made the "Flour City" what it is today.

The 1913 "Flour City" surpasses all previous models in mechanical efficiency. It embodies all the desirable features that enter into the construction of a successful farm tractor. Its development has been guided by the requirements outlined by the progressive farmer, along the most conservative lines. Its reputation is of the character that comes through actual work in the field. It stands for QUALITY, EFFICIENCY and SERVICE. Built in three sizes—20, 30 and 40 h. p. Look up the records of the "Flour City" before placing an order.

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They are made from specially tempered spring wire, all nickel plated and sanitary. You cannot injure the mother and need not injure the young. Thousands have been sold on a guaranty and not one returned.

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REGULAR PRICE \$1.00.

You may not need one of these instruments more than once or twice in a season but when you do need it you need it **MIGHTY BAD**. It may mean the saving of a valuable sow and her litter of pigs. What would that be worth? Can you afford to take chances when you can get one of these reliable instruments free?

Size opened, 26 inches long. Closed, 11 inches. Weight, 4 ounces. Simplest instrument of the kind ever made. Any one can use it intelligently.

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 Adelia B. Hester, Lone Elm

Doing." "Home Sanitation." "Keeping Up a Rented Farm." "What the Grange Has Done for Me." "Advantages of a Country Boy and Girl." "Influence of a Church in a Country Community." "Amusements for the Young." "Woman's Work in the Grange." "What Besides Dollars and Cents Should Be Counted in Your Year's Profits?" One evening is devoted to music, one to schools, one to men, and several to women.

Highland Park Program.
 March 11—Poultry Methods and Housing, by O. L. Aley. Discussion.
 March 25—Open meeting. Music, reading, and an address by Hon. Robert Stone.

Oak Grange Program.
 March 12, 8 P. M.—Music. Lecture. Music by Emery Brobst.
 March 19—Music, Mrs. Baxter. Home Sanitation, Mrs. Blodgett. Keeping Up a Rented Farm, Frank Baxter. Paper, Mrs. Lytle. Table committee, Mrs. and Mr. Will Engler, Mrs. and Mr. O. B. Eddy.

March 26, 8 P. M.—Music, Dorothy Simms. Lecture, to be provided.

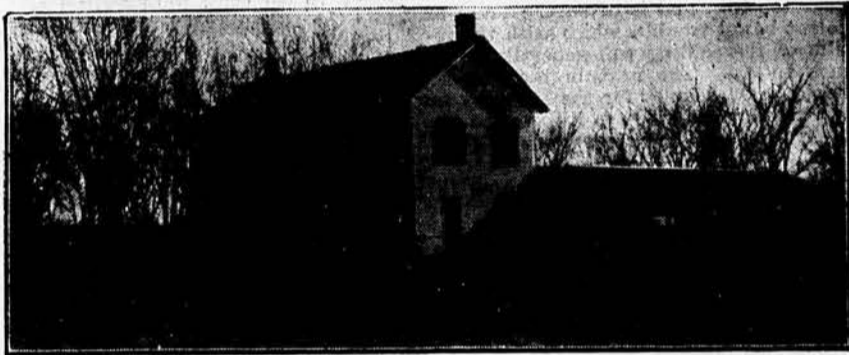
Write to Your Paper.
 Surely there is not a patron anywhere in Kansas that is not anxious to read and hear what other Granges round about are doing. What good are all the Granges in this state if they are only

W. H. Black, deputy for Jackson County, has sent for organization blanks and all material necessary for starting new Granges. Let the good work go on.

Let us hear from all the subordinate Granges and workers, so we can make the Grange Department in KANSAS FARMER interesting and beneficial by exchanging ideas and plans.

The State and National Journals of Proceedings for 1912 are now ready for distribution, but owing to the loss of part of the subordinate Grange reports at the printer's, the roster will be delayed a little longer.

The State Secretary is in receipt of a year book of Oak Grange, and also a



OAK GRANGE NO. 665, ESTABLISHED IN 1873.—OWNS ONE ACRE OF GROVE SEVEN MILES SOUTHWEST OF TOPEKA.—FARMERS' INSTITUTES HAVE BEEN HELD IN THIS BUILDING FOR THIRTY YEARS.

program of the annual session of the Berryton Farmers' Institute, for which he is grateful.

The Berryton Farmers' Institute was held at Berryton hall, February 20 and 21, 1913. Following are some of the subjects discussed: Selection of Fruits and Grains for Grange Fair; Conservation of Rural Health; The Advantage of a Market House in Topeka to the Producers of Shawnee County; The Farmer—Past, Present and Future; Co-operation Among the Farmers, from the City Man's Standpoint; Schools; Silage and Silo; The Newspapers and the People; Single Tax; Co-operation and Home Adornment.

The State Secretary has received inquiries about the Patrons' Fire and Tornado Association, and judging from the trend of the inquiries a great many policy holders never read their policies. I wish every policy holder would read pages 34, 35 and 36 in the Journal of Proceedings and then attend his or her Grange at least 12 times during 1913, and under the head, "Good of the Order," ask some question or make a motion that will cause a discussion among the members, and at the end of the year you will be surprised at the good you have received. The State Secretary will endeavor to place two copies of the Journal with the small Granges, and more with the larger ones, so if any Grange fails to receive its copies please notify the secretary.—A. E. WEDD.

Oak Grange No. 665 in Shawnee County was organized in 1873 and has a membership of 181. They built their own hall in 1884 and hold their meetings twice a month, part of the time at 2 P. M. and part of the time at 8 P. M. They have table committees, so of course have something to eat. Besides the regular Grange work and music, dialogues and readings, the following subjects are to be discussed during the year: "Fattening a Carload of Cattle." "Do it for Home, Sweet Home." "Duties of the Young Generation to the State." "Good Literature for Farmer's Library." "Evening with Lincoln." "What the Legislature is

concerned about themselves? Where is the spirit of co-operation? Brother, will you kindly lend us a hand? Take this matter up with your Grange at your next regular meeting and discuss it under head of "Good of the Order," and ask your Grange to select a live correspondent and whenever any of your members have anything new and educational to read or recite or any new plans to promote the growth and welfare of the order, have your correspondent send in a copy to KANSAS FARMER for publication so that the other Granges might be benefited thereby. Just think what a large amount of good would come to all patrons if they could read some of the papers, essays, and practical plans in making improvements, producing, marketing, etc. It would be of untold good to all. Let us place our light where others can see it.—E. LEUBENBERGER, Secretary Highland Park Grange No. 1507, Topeka, Kan.

Grange Women's Work Committee March Program.

Opening song.
 Foll call: Funny short stories.
 Every member be prepared to name county officers and state officers and principal duties of each.
 Chairman call on members at random. Recitation, humorous preferred.
 What is direct taxation?
 What is indirect taxation?
 Question: Resolved, that the present system of listing property for taxation is just. Affirmative and negative. Winning leader keeps loving cup till next debate.—A. B. H.

Observations.
 Always sow your seed before you begin to sharpen your sickle.

It takes three to successfully run a farm: the farmer, the farmer's wife, and the hen.

If the Golden Rule were harnessed and set to work for humanity, it would do more good than all the creeds in Christendom.

There is a victory in sight for the man who will work toward one point to the exclusion of all others.—A. B. H.

Stop Guessing Weights

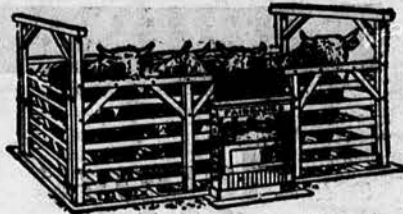
It's too costly. The profitable business-like policy is to weigh all you buy and sell on an accurate, reliable

Fairbanks Scale

High prices for crops and live stock make scales of greater value to you than ever before. A scale should easily pay for itself in a year, then what you save the rest of its life is clear gain.

You Should Buy a Fairbanks Scale BECAUSE *Its weights are never questioned. It is easily kept in adjustment. It will last a lifetime.*

The features of Fairbanks Scales that place them above competition are given in Catalog No. SD899 Write for a copy.
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 Oil and Gasoline Engines, Oil Traction Engines, Pumps, Water Systems, Electric Light Plants, Windmills, Feed Grinders.

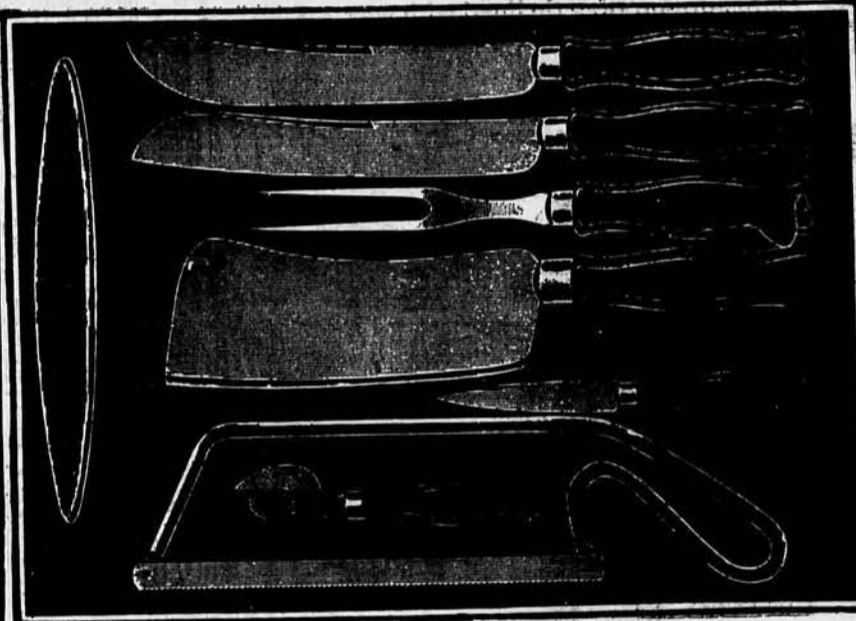


IS YOUR VALUABLE ANIMAL INSURED AGAINST DEATH FROM DISEASE OR ACCIDENT?

NORTHWESTERN LIVE STOCK INSURANCE COMPANY, DES MOINES, IOWA

WHAT THE PARCEL POST WILL DO FOR YOU

THE PARCEL POST, which went into effect January 1, 1913, enables us to give our subscribers the benefit of some larger and better premiums than we have heretofore been able to use. We have just purchased from the manufacturers a large order of the Excelsior Kitchen Sets, illustrated herewith. The set consists of eight pieces, as follows:



- 1 Eight-inch Carving Knife.
- 1 Eight-inch Bread and Cake Knife
- 1 Meat Fork
- 1 Kitchen Cleaver
- 1 Meat Saw
- 1 Paring Knife
- 1 Can Opener
- 1 Aluminum Sharpening Stone

Every article in this set is fully guaranteed to us by the manufacturers and we will make good any defective piece. They are made of the finest quality crucible steel, carefully tempered, ground and polished. The handles are hard wood, rubberoid finish, with nickel plated ferrules. Each set packed in a neat pasteboard box.

HERE IS OUR OFFER: We will send this complete outfit by parcel post, prepaid, to any reader of KANSAS FARMER sending us three new yearly subscriptions to KANSAS FARMER at the regular subscription price of \$1.00 each; or we will send it to any present subscriber sending \$1.00 for another year's subscription and 75 cents to partly cover cost of set and shipment.

ADDRESS ALL ORDERS TO
 Subscription Department, Kansas Farmer, Topeka, Kan.

Use A KANSAS FARMER SAFETY RAZOR



This Razor is not silver or gold plated. It IS heavily nickle plated and will not rust. It will not clog up, as many safety razors do. It is made for every day use. No delicate parts to get out of order.

Guaranteed unconditionally to shave as good as any razor made, none excepted at any price.

Packed in a neat box. An embossed, plush lined, leather case does not improve the cutting edge of a razor. Sent free to any subscriber, new or old, sending \$1.00 for a year's subscription and 15 cents extra for shipping. If extra blades are desired, add 10 cents for each three or 35 cents for one dozen. Throw away your old razor and enjoy a clean, easy shave, and no chance of cutting your face. Address,

KANSAS FARMER, Topeka, Kan.

When You Write Advertisers Be sure to mention this paper. Our advertisers like to know where their replies come from.

Happy as a King

Contentment is better than riches, they say, and one way to be contented is to smoke Velvet—the smoothest tobacco.

It's the most satisfying tobacco you ever put into your pipe. A smoke you can really rejoice in. It's so good that it seems to make everything run smoothly.

You want the best tobacco—something you can get real pleasure from—something that won't bite your tongue. That's Velvet.

Get a tin of Velvet today and you'll never again be without it—for no other tobacco can take its place.

Moisture-proof, a tin lined with wax paper keeps Velvet always in prime condition.

Liggett & Myers Tobacco Co.

Full size 2-ounce tin 10c
Also in one-pound glass humidor jars.



WHY INCUBATOR CHICKS DIE

The book entitled "The History of White Diarrhoea, or Why Incubator Chicks Die," will be sent absolutely free by return mail, to anyone sending us the names of 7 to 10 of their friends that use incubators. This book can save you \$100 this summer. It describes white diarrhoea or bowel trouble, the cause, and tells the cure. BOOK ABSOLUTELY FREE FOR THE NAMES.

RAISALL REMEDY COMPANY, BLACKWELL, OKLA.

\$10 Buys 165 Egg National Incubator And Brooder

\$9.00 Incubator & \$4. Brooder for \$10. FREIGHT PREPAID East of Rockies. 165 Chick Brooder Alone \$4.00

High, roomy nursery, Automatic heat regulator, Hot water heating system, Double Glass Doors, Brooder has safety lamp. Is roomy and easy to clean.

Strong, fireproof, metal case, Reliable non-breakable lamp, Cold-rolled copper water tank, Has made many 100% hatches, Very sensitive thermometer, Wide dead air space, Spacious egg chamber, easy to clean.

Order direct from this advertisement. We guarantee satisfaction or you get all your money back quick. Brand new Poultry Book free. Order Now.

NATIONAL INCUBATOR COMPANY, 1340 19th St., Racine, Wis.

When writing our advertisers say you saw the advertisement in KANSAS FARMER. That insures to you the full benefit of the publishers' guarantee. See top of editorial page.

POULTRY



An inquiry comes for Toulouse Geese eggs. Are there no breeders of geese that wish to sell eggs through the advertising columns of KANSAS FARMER?

Why not raise more geese on the farm? They are hardy and healthy, free from diseases incident to chickens. They can live by foraging on grass, so that their feed costs but little. There is always a good market for them, for there is no finer eating than a nice, young goose.

If eggs are intended for hatching purposes they should be gathered several times a day during a cold spell, or they are apt to get so chilled as to be unfit for incubating purposes.

A warm mash of boiled potatoes, beets or turnips, mixed with corn meal and a few beef scraps, will be appreciated by the fowls on a cold morning. It will certainly help to keep up the egg supply.

A mistake often made by persons that hatch chicks in an incubator, is in having the brooder too cold. The heat in an incubator is 103 degrees and when chicks are removed to the brooder the heat is only 60 to 70 degrees. This is much too low, and is often the cause of violent bowel trouble, which with the results of the chilling will generally cause them to die. The heat in the brooder should be 90 degrees for the first day or two, then gradually have it lower as the chicks get older and stronger.

A change of feed to young and old stock is very desirous at times and in order to intelligently know which kind to feed it is well to know the qualities of some of less used poultry feed. Pea meal will be found very nutritious, rice very easily digester, linseed meal cathartic, potato starch digestible, barley nutritious but laxative, corn fattening and oatmeal more nutritious than either wheat or barley.

There are many methods of feeding, some of them are good and many bad. The main thing is to have a well-balanced ration and to feed in right quantities. Have plenty of exercise for the birds, fresh water and full hoppers, of grit, shell and charcoal. The idea that there is but one possible method of feeding is wrong. There are many methods of feeding that are excellent and are successful. However, if you find that the method you are using is not giving the results you wish, find some other way and try it out. Give the new method a thorough trial before condemning it. A good system of feeding is a valuable thing, and the man or woman who is getting good results with their present method of feeding should keep right on without trying something radically different.

A subscriber already reports the loss of quite a number of young chicks by diarrhoea, and asks for a remedy. There is more efficacy in preventive precautions than in remedies after the disease has appeared. The subscriber does not say whether it is white diarrhoea, but we presume it is, as that is what kills the chicks in great numbers. Scientific experts claim it is caused by bacteria and has been found in the ovaries of the hen and in the yolk of the eggs. The bacteria may also be derived from the litter in the nest and also from soil contamination by affected fowls. The best remedy or preventive is thorough cleanliness and disinfection. Disinfect the eggs before placing in the incubator, also the incubators and brooders that are used. Diarrhoea in young chicks often comes from acute indigestion on account of being fed too young. Nature has provided that a portion of the yolk of the egg should be inclosed in the abdomen, which furnishes the young chick with food, by absorption, for from two to four days. At this period of their lives they must have rest and warmth but no food. Thousands of chicks are killed every year by the overindulgence of their owners. Chicks that have been dissected were found to have their craws partially filled with food and a fair quantity of unabsorbed yolk in their abdomens. All the conditions gave evidence that they had died of acute indigestion. Therefore

give no feed whatever to newly hatched chicks for at least forty-eight hours. Another good preventive is to have the floor of the brooder covered with fresh earth, so that the chicks may exercise thereon as if they were on the ground out of doors. Feed them in vessels or trays so that the food may not be contaminated with filth. Even the sand, grit and charcoal that you give them, should be in hoppers so as to be free from dirt.

Fertility of Eggs.

How long before eggs will be fertile after mating chickens? Also how long after separating roosters from hens will eggs be fertile? Will you kindly answer these questions as soon as possible.—J. H. ALBERS.

Answer—1st. From three to ten days. 2nd. Till the ninth or tenth day. To be more definite on these questions, would state that experiments were made in Canada to determine how long eggs would remain fertile after the male had been removed from his mates. Ten hens were separated from the male. The eggs laid each day were placed in an incubator and tested. Of the eggs laid the first four days after the male was taken away 70 per cent. were fertile; of those laid the fifth day 60 per cent.; the seventh 49 per cent.; the eighth, 12 per cent.; the ninth 2 per cent.; the tenth none. A test was made with six hens to determine how soon the eggs became fertile after the males were placed with them. On the third day 30 per cent. were fertile; on the fourth 42 per cent.; on the fifth 50 per cent.; on the sixth 60 per cent.; on the seventh 70 per cent.; on the eighth 68 per cent.; on the ninth 70 per cent., and on the tenth 74 per cent. As rarely more than 75 per cent. of the eggs produced under average conditions are fertile, this goes to show that mating a hen ten days before the eggs are needed for hatching is sufficient.

Some poultrymen believe that the whole clutch of eggs is affected. Mr. Henry Hales says: "From many experiments which I have seen reported, and from my own experience, it seems that if a hen is with the male at the right time, a whole clutch of eggs is impregnated, for the eggs will show the effects of a certain bird from two to three weeks after separation, so that before that time it would not be safe to calculate on the eggs from a new sire." Poultry experts are practically unanimous in their opinion that a previous sire has no contaminating influence on the dam after being removed for three weeks.

Campines.

An inquirer wishes us to describe the characteristics of the Campines, and asks if the boom on them is liable to continue. There are two varieties of Campines, Silver and Golden, though in speaking of Campines the Silvers are generally the ones spoken of. They are a Belgian breed of fowls, the hens weighing about 4½ pounds and laying a large white egg. The hen has a penciled gray body, with a white hackle, and is a very showy bird. The Campines are an old breed and used to be in the Standard of Perfection about 15 years ago, and then were dropped out for some unknown reason. Mr. Theo. Sternberg of Ellsworth had some imported birds about that time, and thought them the coming breed, but people did not seem to take hold of them. Whether the present boom will continue or not we could not say. It all depends upon the men and the amount of money that is behind them. There is no doubt of their being a meritorious breed of fowls, for they are extraordinary layers of large white eggs. The present show Campines are different in color from the older breed, and are said to be an improvement on the original Belgian breed produced by English fanciers. Some experts think that the Silver Penciled Hamburgs have been used to improve the color markings of the Campines. The Braekel is another Belgian breed of fowls noted for its great egg laying qualities, and about a third larger than the Campines. A Belgian poultry expert claims that the Campines are a modified Braekel. Anyhow both breeds have been famous in Belgium since the time of Charles V. several hundred years ago. The people who make money on these new breeds

HOME CIRCLE



BRAD'S BIT O' VERSE.

Cut It Short.

The man that's busted, down and out, hard pressed by gloom fiends fierce and stout, is scarcely in the proper mood for tough, unseasoned mental food. Don't go to him with maxims wise and modulated tones that rise and fall according to the rule of prize orations at the school. Don't preach to him three solid hours of Adam's fall or Babel's towers; don't prove to him your speaking gift—what that chap needs is just a lift. The peroration is a thing that makes the people whoop and sing; it is a daisy and a chime when spoken at the proper time. But when a chap is down and out, he doesn't care to sing and shout; he wants a sandwich and a roost—what he most needs is just a boost. The discourse is a noble theme, a thing of beauty, and a dream; it's something that is good to hear when given in its proper sphere. But when a chap is in the ditch, the why and wherefore of the which don't seem to carry much appeal—what he most needs is just a meal.

Hanging the clothes on the line neatly and smoothly saves much time ironing.

A very little bit of butter is often an improvement to cake frostings, especially chocolate or caramel.

Kerosene will soften boots and shoes that have hardened from being wet, and makes them as pliable as new.

If the stove pipe seems choked, try burning a few small pieces of zinc in the coals. Usually this will dispel the soot.

Each housewife must work out her own salvation, but there is one little word that will fit each case—system.

Always remove the fat which settles on the top of cold soups; if allowed to remain the soup will turn sour more quickly than it would otherwise.

Southern cooks sometimes add a teaspoonful of Orleans molasses to the frying bacon. It makes the meat more delicate.

When obliged to go out against a sharp, piercing wind, tie a silk handkerchief over the face.

When a man becomes engaged or is married the first thing we think about is whether he can support a wife. Rarely do we wonder whether the bride has ability to spend the man's income wisely. Yet investigations are beginning to show that more families are poor because the wife is untrained to housekeeping and wasteful of the income than because the husband does not earn enough. Of forty divorce cases recently investigated, where the wives applied for divorce on account of the husband's desertion, it was found that in twenty-two cases the husbands left their firesides because the wives made a mess of homes and incomes. Eighteen of these wives claimed that they had not been properly supported when, as a matter of fact, the probation officers of the court found that their incomes were amply sufficient. More and more the unpleasant fact of woman's incompetence as a wise spender of the home income is coming to the surface, particularly through the newly established Courts of Domestic Relations. It is high time that, coupled with our wonder about the bridegroom's income, we were beginning to ask of the young bride what she knows about the wise spending of that income. For that is going to be the question of the future and we are headed straight for it.

Care of Patent Leather Shoes.

Here is a tip one shoemaker gave for the care of patent leather shoes:

"If men and women before wearing their shoes would rub them all over with a little leaf lard or vaseline, put on a soft chamouis or piece of flannel and rub to a high polish, we shoemakers would have to endure less reviling because of shoes going bad on the first wearing."

"Care must be taken not to use too much of the grease, and above all not to let it stand on the leather unabsorbed, or dust will accumulate in it, which will be worse than the cracks."

"Another thing about patent leathers is that they must always be kept in a warm, dry place. Many women do not know this, and often let their shoes stand around in the room on cold or rainy nights. Dampness will ruin any patent leather and one should always guard against it.

"Always avoid wearing these leathers for the first time on cold days, as cracking is inevitable."—Chicago Inter Ocean.

The Wonderful Bee.

Maurice Maeterlinck, the eminent Belgian student and author, writing on comb honey, says that it is an article "to which we can add nothing, from which we can take nothing, an article that unites in equal perfection the science of the chemist, the geometrician, the architect and the engineer. Its masterpiece, the hexagonal cell, touches absolute perfection, a perfection that all the geniuses in the world, were they to meet in conclave, could in no way enhance; no living creature, not even man, has achieved, in the center of his sphere, what the bee has achieved in her own; and were some one from another world to descend and ask of the earth the most perfect creation we need but offer the humble comb of honey."

Health Notes.

We all know that an overheated, stuffy room where a number of people are gathered, is likely to give us what we call a cold. The lungs are obliged to work harder to get a sufficient supply of oxygen, the blood is not purified properly and the impure air loaded with disease germs finds an easier lodgement in the tissues; especially is this the case upon going suddenly into a cold atmosphere, the body is called upon to adjust itself rapidly to the changed conditions, the microbic poison enters the congested lung tissue, and there is not the power of resistance as in normal circumstances. —The Farmer's Wife.

Corn Oysters.

Place a pint of corn (canned or fresh) on the stove, and allow it to simmer for twenty minutes. If too dry, add a little water. Then season with one teaspoonful of salt, one teaspoonful of butter, one-eighth teaspoonful of pepper, and two tablespoonfuls of milk. Allow it to become cool, and then stir in two well-beaten eggs and about a cupful of cracker crumbs. The crackers must be fresh and crisp. Dry them in the oven, if necessary, before rolling them. Put a tablespoonful of bacon grease in the frying pan, and when it has become smoking hot, drop in the corn batter by spoonfuls. When a delicate brown, turn over, and brown the other side. These "oysters" should be served as soon as cooked. The use of cracker crumbs seems to add to the oyster flavor, and frying them in bacon drippings makes them indescribably delicious.



6052

No. 6052—Ladies' Panier Skirt. This model represents a pleasing skirt made in the latest fashion with panier. It may be used for separate wear or as part of a complete costume, and may be carried out in serge, voile, messaline or other fabric that drapes nicely. The pattern, No. 6052, is cut in sizes 22 to 30 inches waist measure. Medium size will require for panier and skirt, 2 1/2 yards of 54-inch goods, and for skirt, 1 1/2 yards of 36-inch lining. Price of pattern, 10 cents.



A Good Time Coming
It's coming to every Cook who uses Calumet Baking Powder and to every one who tastes the delicious food resulting from its use.

Calumet is a revelation in its purity—in its leavening qualities and in its economy in both cost and use.

Why not try

CALUMET BAKING POWDER

Just once? That once will mean everlasting satisfaction. We guarantee it—Demand Calumet from your grocer—

RECEIVED HIGHEST AWARDS
World's Pure Food Exposition, Chicago, Illinois. Paris Exposition, France, March, 1912



You don't save money when you buy cheap or big-can baking powder. Don't be misled. Buy Calumet. It's more economical—more wholesome—gives best results. Calumet is far superior to sour milk and soda.

SILK REMNANTS

Wonderful Bargains in Pound Boxes of beautiful Large Silk Remnants for fancy work, quilts, portieres, pillows, etc. One pound will make a grand bedspread. Send 10 cents for a big package of lovely samples. If not delighted, return them and get 25 cents for your trouble. AGENTS WANTED. HAMMOND SILK CO., Box 36, Spangler, Pa.

4 RINGS GIVEN
Sell 10 packs Smith's Hair Tonic & Dandruff Remedy at 5c each. WE TRUST YOU When sold send money and we'll send 4 rings or choice from our premium list. ROSSBUD PERFUME CO. BOX 42, WOODSBORO, MD.

SEEDS Fire dried SEED CORN, husked before the frost, dried on independent ear seed racks with air and steam heat. Sure to grow because germ is preserved. Also Clover, Alfalfa, Oats, Rye and Garden Seeds. Write at once for FREE catalog, and also receive free useful souvenir. **FRED ECHTENKAMP.** Box A. Arlington, Neb.

Pure Bred Yellow Seed Corn
Mammoth Drouth Proof, Early Monroe, Sunflower, Hildreth, Hiawatha. Big yields, grown by me, successfully, in central Kansas for past 6 years. Write for catalog. **A. E. WHITZEL, Route 7, Sterling, Kan.**

For Choice Pure-Bred Seed Corn
and all kinds of farm seeds in bulk, also garden seeds, send to the Lawndale Seed Farm. Catalog free. **JOHN D. ZILLER, The Farmer Seedsman, Hiawatha, Kansas.**

FANCY SEED CORN
Boone County White, Reid's Yellow Dent and Hiawatha Yellow Dent. Catalog free. **J. F. HAYNES, Farmer Seed Corn Grower, Grantville, Kan.**

You Will Like CALIFORNIA

Because there you will have a chance to succeed. There climate, soil and water, in conjunction with intelligent labor, work wonders. Alfalfa, fruits, garden truck, poultry and dairy products point the way to more than a mere living.

Colonist Excursion March 15 to April 15

1913. Then one-way second-class tickets from Kansas City to Los Angeles, San Francisco, San Diego and to many other points in California will be sold for \$30. Corresponding fare from points on other lines in connection with the Santa Fe. Liberal stopover privileges. Three fast trains daily from Kansas City carry tourist sleepers and free chair cars. Harvey meals.



For tickets, reservations, information and copy of "San Joaquin Valley" folder, apply to **J. M. CONNELL, Gen. Pass. Agt., Topeka, Kansas.**

TREES GET OUR FREE GREAT BOOK FREE

If you are thinking of planting trees or shrubbery this spring, be sure to send for this book.

We have been right here 35 years supplying the farmers of the middle west with the best trees that skill and experience can produce. Recently we published a little book on "Transplanting and Managing Trees, Shrubs and Vines," giving much valuable information and instructions as to the proper methods of planting and caring for trees, also formulas for spraying and the proper time to spray.

This book will be mailed to you absolutely free if you will send us the names of five reliable farm owners who are interested in fruit. Salesmen Wanted.

F. H. STANNARD & CO., Proprietors
Ottawa Star Nurseries, Ottawa, Kan.

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I X L SEEDS

Are good, honest seeds and will prove their worth at harvest time. Our big seed catalog of farm and garden seed with low special delivered prices without extra charge is free. Write today.

MARLOW SEED CO.,
Station B, Wichita, Kan.

PURE SEED CORN

Boone County White, Commercial White, Missouri Valley White, Hildreth Yellow Dent, Kansas Sunflower Yellow. Write for circular and prices.

J. M. McCRAY, Manhattan, Kan.
Member Kansas Crop Improvement Association.

SEED CORN

High yield and fine quality. Grand sweepstakes and seven first premiums at Hutchinson State fair. Nine first premiums at Topeka State Fair in 1912. Three times state Champion in Capper Contest. Over 100 first prizes in past five years. Send for circular.

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Route 1. Leavenworth, Kan.

Belott Seed House White Cap, Boone County, and all leading varieties seed corn. Alfalfa, millet, and full line of garden seeds. Write for catalog.

BELOTT, KANSAS.

90 CONCORD GRAPES \$1 NURSERY SNAPS \$1 10 BOWEN CHERRIES \$1

Hardy, vigorous, guaranteed stock. Low price and square deal on all nursery stock. Send for Catalog and 25c Due Bill, Free. FAIRBURY NURSERY, BOX 1, FAIRBURY, IOWA.

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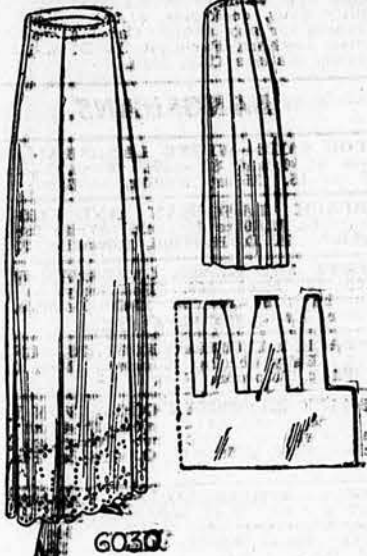
When the drinking water is not above suspicion add a few drops of lemon juice to discourage typhoid germs.



No. 6050—Ladies' Overblouse. A delightful overblouse is given in this model. The garment closes at the left side and is very easy to make. It transforms an ordinary plain frock into a very stylish garment and may be made of silk, lace or any desired fabric. The pattern, No. 6050, is cut in sizes 34 to 42-inch bust measure. Medium size will require 1 1/2 yards of 36-inch material and 3/4 yard of 24-inch satin for girdle. Price of pattern, 10 cents.



No. 6051—Misses' and Small Women's Dress. This attractive frock is nice for a party dress for the young girl and is just the thing for this time of the year when there are so many social affairs. The frock closes at the back and the three-gored skirt has a panier. The garment is delightful carried out in satin and chiffon, or it may be made of one material if desired. The pattern, No. 6051, is cut in sizes 14, 16 and 18 years. Medium size requires 3 1/2 yards of 40-inch figured goods and 2 1/4 yards of 40-inch chiffon. Price of pattern, 10 cents.



No. 6030—Ladies' One-Piece Petticoat. This design gives an attractive petticoat and one especially desirable for embroidery. It has straight lower edge and at the lower part of each seam there is a plait. This petticoat is just the thing for wear under the new style clinging gowns, and if embroidery is so desired, any of the popular petticoat fabrics may be used. The pattern, No. 6030, is cut in sizes 22 to 30-inch bust measure. Medium size requires 2 1/2 yards of 46-inch flouncing. Price of pattern, 10 cents.

Marshmallows Give Flavor.

The housekeeper who has not tested the culinary possibilities of marshmallows has little idea of their many uses. For emergencies a tin box of these inexpensive confections is a good asset for the supply closet.

Should the supply of eggs give out when filling or frosting is wanted for a dark layer cake, marshmallows may be substituted. While the cake is still hot place marshmallows torn in halves between the two layers and also on top of the cake. Replace the cake in the oven for a few moments until there is an even layer of partially melted marshmallows over the cake.

Finely chopped nuts, grated sweet chocolate or coconut may be sprinkled over the yielding surface, and candied cherries, bits of citron or angelica, shreds of almonds or halves of English walnuts are easily embedded in ornamental fashion.

For the afternoon tea table the plainest of little cakes topped with marshmallows and placed for a moment in a slow oven are transformed into French confections, says the New York Sun. Spice cake baked in a thin sheet and cut in small rounds of the size of a marshmallow is an inexpensive substitute for the small fancy cakes of the caterer. Top each little circle with a half marshmallow and partially melt in a slow oven. Decorate with a single nut meat, half a cherry or a cross marking of chocolate or colored frosting.

If the material for a fruit salad is scant, cut marshmallows in quarters, using a well-floured pair of scissors. Equal parts of grape fruit, English walnuts and marshmallows mixed with half the quantity of diced pineapple make a good salad combination.

Ordinary chocolate ice cream is easily transformed into an apparently expensive novelty by adding a plentiful supply of quartered marshmallows when the cream is half frozen. If the chocolate is rich and dark these dull white particles make an effective showing and also add an unusual flavoring.

The same addition may be made to a cold chocolate pudding, the marshmallows furnishing an attractive bit of coloring and contributing to a deliciously flavored dessert.

How To Tell Tire Quality

Tire Quality is the well from which Tire Mileage springs and nothing you or anyone else can do will get out of that well more than goes into it.

Ajax "built in" Quality makes possible a written guarantee of 5000 miles. For eight years we have made quality of product rather than quantity of output our aim. That is why we have not only been able to advertise quality but to guarantee it.

Thousands of motorists have learned that the bonus of 1500 miles with Ajax Tires means a 30% saving in tire costs.

Guaranteed In Writing for 5000 MILES



Guaranteed In Writing for 5000 MILES

There's an Ajax Dealer near you. Send us a postal for his name. We will also mail free of cost an interesting booklet entitled "Figures That Don't Lie."

AJAX-GRIEB RUBBER COMPANY

1787 Broadway

New York City

Factories: Trenton, N. J.

BILL BROOKS FARM SEED CORN

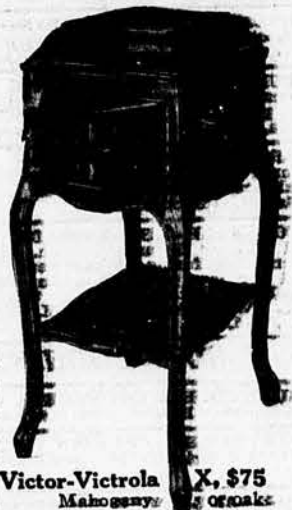
Boone County White and Gold Yellow Dent Well matured and well selected. Shelled and graded, \$2.25; in cask, crated, \$2.75. H. O. TUDOR, HOLTON, KAN.

TRENPS Seed Corn

What price six consecutive years at Manhattan State-Gain Show proves I have best strain Seed Corn in the West. Reid's Yellow Dent, Boone Co. White, fine dried, tested and guaranteed. Pure Seed. Write for free catalog. S. G. TRENPS, Box 1, Hiawatha, Kansas.



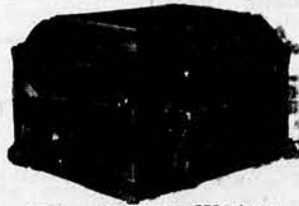
Victor-Victrola XVI \$200 Mahogany or quartered oak



Victor-Victrola X, \$75 Mahogany or oak



Victor-Victrola VI, \$25 Oak Other styles \$15; \$20; \$30; \$50. Victors \$10 to \$100



Victor-Victrola IX, \$50 Mahogany or oak

If there is any place where a Victor-Victrola is needed and sure to be appreciated, it is in the homes of the farmers in your home.

You haven't the opportunities city people have for attending the theatre, opera, and musical concerts—and yet you have real need of such entertainment to rest body and mind after your day of toil.

And you can have it with a Victor-Victrola in your home. You can enjoy the world's best music, sung and played by the same great artists who entertain the large city audiences.

You can hear whatever kind of music you like right now. You don't have to wait until you feel you can afford a \$100 or \$200 instrument—any Victor-Victrola you choose as the instrument for your home will play every record in the Victor catalog, and will give you almost as perfect music as the Victor-Victrola XVI, the instrument by which the value of all musical instruments is measured.

Any Victor dealer in any city in the world will gladly demonstrate the Victor-Victrola to you and play any music you wish to hear. Write us for the handsome illustrated Victor catalogs.

Victor Talking Machine Co., Camden, N. J. Distributors: Gramophone Co., Montreal; Canadian Distributors

KANSAS STATE UNIVERSITY LIBRARY

CLARY & SONS
Sixteenth Annual Jack Sale
at Sheridan, Missouri
Wed. March 12, 1913
25 Big High Class 25
Jacks and Jennets

The jacks range in age from yearlings to four-year-olds. They are a lot of big-boned jacks with quality, black with white points, and right in every way. An extra good lot of jennets ranging in age from four to eight years old and all bred to the great jack, Ben Hur.

Will also sell a select lot of horses and mules, including extra good road and draft mares. Twenty head of choice cows, some with calves by side. Ten head extra good brood sows. Sheridan is 55 miles north of St. Joseph, on Great Western Railroad. Good train service. This will be one of our biggest and best offerings.

R. L. HARRIMAN, Auctioneer.
 W. J. CODY, Fieldman.

J. E. Clary & Sons, Sheridan, Mo.



SUNFLOWER HERD
HOLSTEIN-FRIESIANS

Never before have we had as choice a lot of young cows and helpers to pick from, in lots of one to a carload. Some twenty head to calve within next 90 days by sires of the best A. R. O. backing. A clean, straight, sound lot, all tuberculin tested. The calves from these cows should be worth half the purchase price. Come see the herd, or write for breeding and prices. Herd numbers nearly 50 head, all registered.

F. J. SEARLE, Prop. Oskaloosa, Kans.

The West's Largest Importing and Breeding Establishment.

IMPORTERS AND BREEDERS OF

Percheron Belgians and Shire Stallions and Mares.

120 Head to Select From.

Our stallions and mares are strong and massive, with great quality, style and conformation, with splendid color and dispositions. They are selected with an eye single to the wants of the most critical American buyers, and we can sell them for less money than any one in the business, quality considered. The stallions will go into any community and command the best mares, command the men who are the best pay and who take the best care of their stock. Let us know your wants. We can suit you in both price and quality.

L. R. WILEY, EMPORIA, KANSAS

LaFAYETTE JACK FARM

HIGGINSVILLE, MISSOURI

MAMMOTH JACKS AND PERCHERON STALLIONS



TWENTY JACKS—Three to six years old; 14½ to 16 hands high. All black; all broke and guaranteed.

TEN PERCHERON STALLIONS—Two to eight years. Mostly imported. All guaranteed breeders.

Will Exchange Stallions for Good Jacks. One German Coach stallion eleven years old. One Belgian stallion five years old. Both sound.

Twenty jennets in foal to my champion jack, Dr. McCord.

ALL FOR SALE PRIVATELY—NO PUBLIC SALE THIS SPRING.

Visit or Write.

W. J. FINLEY HIGGINSVILLE, MO.

Fifty-five Miles East of Kansas City on C. & A. R. R.



IMPORTED PERCHERON STALLIONS, JACKS AND JENNETS.

FOR SALE—5 imported black Percheron stallions, 4 to 6 years old; all tried and regular breeders; can show colts; weigh 1,800 to 2,200 pounds. One Morgan stallion, 7 years old. 10 large black jacks, 2 to 7 years old, all broke; good performers; can show colts and mares in foal. 10 head big black jennets, all bred to our imported jack. Prices reasonable. Write or come to farm 4 miles from Raymond or Chase. Our horses and jacks were shown at the Kansas State Fair at Hutchinson, September, 1912, in six different classes, and won in every class. Come and see us. J. P. and M. H. MALONE, CHASE, KAN.



DEIERLING & OTTO'S PRIZE WINNING JACKS

50 — Mammoth Jacks and Jennets — 50

From 2 to 5 years old, big-boned, big black kind with white points; 15 to 16 hands high. We are offering our prize winners at Missouri, Iowa and Illinois State Fairs, 1912. Every jack and jennet guaranteed just as represented.

DEIERLING & OTTO, QUEEN CITY, MO.

For Sale at Riverside Stock Farm—Registered Percherons.

10 head of young stallions from 2 to 3 years old. 4 head coming 3 years old that weigh from 1650 pounds to 1800 pounds. 4 head coming 2 years old that weigh from 1500 to 1600 pounds, blacks and dark greys. They are the big bone kind. 2 head standard bred and weigh from 1250 to 1280 pounds. 3 head of large young jacks, Mammoth bred, from 15 to 15½, well broke. A warrantee goes with every animal as to soundness and breeding.

O. L. THISLEE & SONS, Chapman, Kan.

On the main line of the Union Pacific R. R., 150 miles west of Kansas City, Mo.

Lamer's Percheron Sale

Thursday, March 13, 1913

50 MARES and 50 STALLIONS

Consisting of

Twelve Stallions, 3 years old (imported), weighing from 1,900 to 2,100 pounds.

Eight Stallions, 1 to 5 years old (home bred).

Thirty Mares and Fillies.

ONE JACK

The horses in the above consignment were all carefully selected and bought by me and I can assure you that no prospective purchaser will be disappointed if he attends this sale.

My stallions weigh from 1,500 to 2,100 pounds; mares weigh from 1,500 to 2,000 pounds, and most of them are heavy in foal.

COME ONE DAY BEFORE SALE AND LOOK THIS STOCK OVER.

WRITE FOR CATALOG.

C. W. Lamer & Co.

Salina, Kansas

P. S.—On Wednesday, March 12, we sell 100 head Brood Mares, Work Horses and Mules.

Shorthorn Cattle (70 head) of C. G. Cochran & Sons will be sold here on Friday, March 14.

A Well Improved Stock Farm at Auction
March 12, 1913



2½ Miles from Louisburg, Kan.; 30 Miles South of Kansas City, Mo.

On rural route, telephone, close to good school. Large new modern house, good outbuildings, plenty good water, new orchard with all standard varieties of fruit, good barn 32 x 54, good sheds, plenty of spring water at barn, good hog houses and other buildings. A good six-room tenant house with other buildings. Ten acres prairie, 60 acres bluegrass and timber pasture, three springs and never-failing water in pasture, 14 acres alfalfa, fine stand; 40 acres good meadow, 12 acres rye; 210 acres under cultivation; about 40 acres extra good bottom land; 50 acres fenced hog-tight.

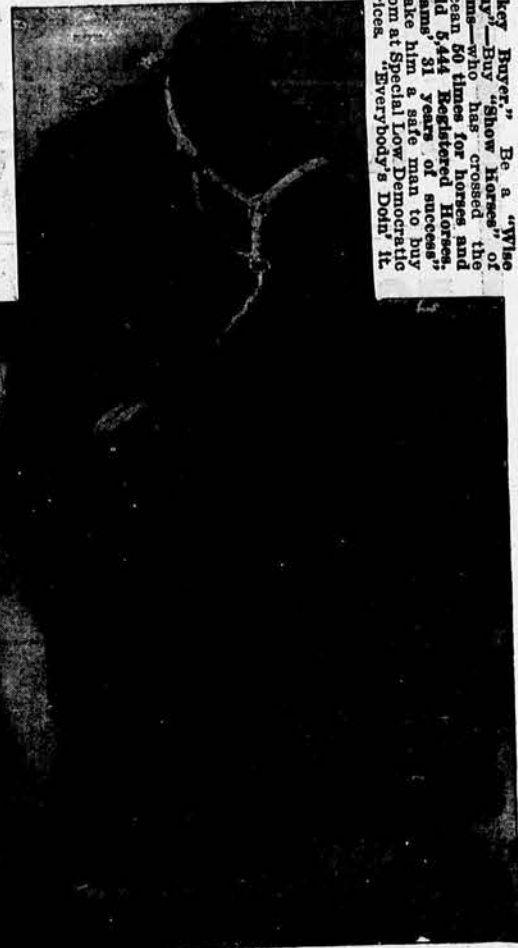
This farm will be sold to the highest bidder on March 12, 1913. Louisburg, Miami County, Kansas, is a beautiful little town; good stores, good schools and six churches, including one Catholic. Very liberal terms can be made to purchaser. Free transportation from Louisburg on sale day. For further information write or wire

W. C. McDOWELL, Clerk, Louisburg, Kansas.
Andy Weir, Auctioneer.

FRANK IAM'S DRAFT STALLIONS AND MARES

are "up to the minute." They are the "drafty, big-boned type"—"nifty, big black boys"—the real "medal winners"—sensational "show and business horses" of note, "ripe peaches." Big, classy "peaches and cream" black boys. The "Iams brand" of "top notchers." Iams' importation of Percheron and Belgian stallions and mares are in the "pink of condition" and ready for a "good selling." "Ikey boy," smile sweetly, and hundreds of Iams' satisfied customers "will sit up and take notice" that Iams, the "king pin" horse importer, is still "doing business" at the "old stand." Iams is "pushing" his horses to the front. The big "peaches and cream" "boys and girls" are attractions that can't be overlooked. Iams mesmerizes buyers with "real drafters" at "bargain prices" and having the "horses as advertised." Iams' "competitors" and "hammer knockers" are "boosting Iams" by their "knocks," until now he is known as the "millionaire horseman," and on "Easy Street," and growing fast. Ikey, buzz around" and sing Iams' song. He is selling these "aristocratic," fancy "black boys" cheaper than ever—or better horses for less money—\$1,000 and \$1,400 (few little higher.) Iams has

"Ikey" "Buyer" Be a "Tie" Guy—Buy "Show Horses" of Iams—No times for horses and Ogen 444 Registered Horses, "Iams" 31 years of success, make him a safe man to buy from at Special Low Democratic Prices. "Everybody's Doing It."



80 PERCHERON AND BELGIAN STALLIONS AND MARES 80

They are "models"—"drafters." They are 2 to 5 years old, weigh 1,700 to 2,500 pounds, 80 per cent blacks, 50 per cent. ton horses. All "registered," "approved and inspected by governments of France and U. S. and certificates "stamped O. K." Iams gives a certificate of "soundness and health" with each horse—signed and sworn to by a "Nebr. state V.S." Many Paris "prize winners" and "gold medal horses." Big, drafty "topnotchers," with big bone, quality, style, finish and action to burn. They are "eye openers"—larger and better horses than seen elsewhere. Big "business propositions" that make "the wheels work fast" under a "buyer's hat." "Georgie, dear," Iams made a "big killing" by buying his horses in Europe. "War scare," "bad crops," "close money" and "Iams' cash" caused the "prize winners" and "tops" to be thrown on the market for a "good selling"—Iams cut the melon" and bought the "rippers" at "knock-out prices." Iams will give his customers the benefit of his "good buy." "Ikey boy," "come on along"—see Iams—"Everybody is Doing it."

Get into Iams' "get rich wagon" and save \$1,000 on a "top stallion"

(and you wear the diamonds.) Iams is a "big fly in the jelly" in the horse world. "He keeps the gang guessing." Iams sells "imported horses only." They win 90 per cent. of prizes at big horse shows). No "American-bred full-bloods"—no "auction stuff" or "peddler's horses"—only "choice drafters" of big size, bone, quality and finish. Iams has the "crack stallions and mares" you "read about." Buy horses of Iams and you won't "get stung" in horse or price. "Dolly D." waltz me around once again, "Ikey," land me at Iams' box office and importing barns. Full to "the roof" with "black boys" (and all must be sold). Reduced prices. All the world knows Iams and his "peaches and cream" horses. 1913 promises to be a bumper year to Iams and his customers. He saved \$300,000 to stallion buyers in 1912. Watch "Iams' smoke." Iams' 31 years of successful business make him a safe man to do business with. Iams sells horses "on honor." A boy or a lady can buy as cheap as a man. Iams' 1913 horse

Catalog is an "eye opener." It has a "laugh" and a \$1,000

bargain in every line. A "bunch of gold" to stallion and mare buyers. It is full of real "peaches and cream" stallions. It is the finest, most elaborate and original up-to-date horse book in the world. Iams, the "square deal" horseman, makes every statement in ad or catalog good—or you get the \$500 he hangs up. Iams guarantees to sell you a better

IMPORTED STALLION AT \$1,000 AND \$1,400

(few higher) than are sold to stock companies for \$4,000. Imported mares, \$700 and \$1,000. Iams gives 60 per cent breeding guarantee; pays freight on horse and fare of one buyer. He can furnish \$1,500 insurance. Iams buys and sells every stallion himself. Saves buyers \$1,000 in middlemen's profits. He buys stallions by "train load." He speaks languages—(saving 20 per cent). He is not in the "stallion trust." No partners to share profits. He "pays cash" for his horses—and sells "top notchers" by "hot advertising" and having "the goods." "Big Ikey," leave your "happy" home and buy a "top" stallion or pair of imported mares (of Iams) that bring colts that sell at \$500 each. "Papa," don't let those "auction men" "hand you a lemon" in one of those "so-called" "American full-bloods" of questionable breeding. Buy an imported horse of Iams, the "reliable horseman." (Then we will "all wear diamonds.") Iams' "selling clothes" fit all buyers. Write for Iams' million-dollar horse catalog. Iams not let you go without a peaches and cream stallion or mare. "He sells the tails off them." Iams' guarantees are backed by "half million dollars." References—1st Nat'l and Omaha Nat'l. Banks, Omaha; Packers Nat'l. Bank, So. Omaha; Citizens State, 1st State and St. Paul State Banks, St. Paul, Neb. Iams buys big ad space because it is cheaper than flannel-mouthed horse salesmen.

ST. PAUL, NEBRASKA

J. F. RICHARDS & SONS

Sale of Short-horns and Poland Chinas at Bevier, Missouri

Wednesday, March 19, 1913

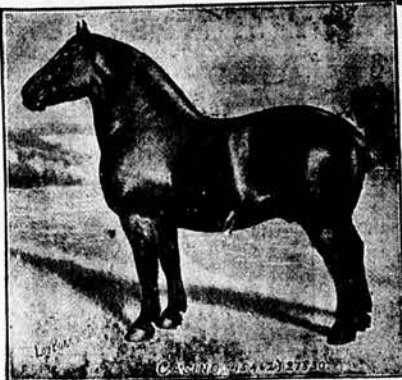
20 Head, High Class Scotch and Scotch Topped Short-horn Cattle

Six bulls sired by the great Lord Collynie, by Imported Collynie. A number of choice yearling heifers sired by this bull, and a high-class lot of two and three-year-old heifers and cows, all of breeding age and safe in calf to Lord Collynie.

Also thirty head of tried sows and gilts, including daughters of our great herd boar, Pawnee Price, by Big Price. Tried sows that are right for size and quality. A number of young boars sired by Pawnee Price, tried sows and fall yearlings bred to Pawnee Price, and others to one of the best sons of Big Wonder. We have the size with quality, the easy feeding kind. Bids sent to fieldman or auctioneers in our care will receive careful attention. Write for catalog at once. We have no mailing list.

AUCTIONEERS—COLS. HARRIMAN AND COTTINGHAM.
W. J. CODY, FIELDMAN.

J. F. RICHARDS & SONS, Bevier, Missouri



ROBISON'S PERCHERONS

One hundred fifty percheron stallions, mares and colts. Fifty imported. All for sale.

J. C. Robison, Towanda, Ks.

IMPORTED DRAFT HORSES



I have now for sale a lot of personally selected coming 2 and 4-year-olds as good as France and Belgium can produce. Good heavy bone. Straight draft type with quality and the best of breeding. I give a gilt-edge guarantee, good for two years, with each horse sold. All in just good breeding condition and will be a good investment to the purchaser. I can save you some money on a stallion. Barns four blocks from the A. T. & S. F. depot.

W. H. RICHARDS, - - EMPORIA, KANSAS

Imported Stallions: Percheron, Shire, Belgian

Each year we show our new importation the same month they land. Each year they win more than all other exhibitors combined. At the American Royal this year they won second on 4-year-old Percheron; first, third and fourth on 3-year-old; first and third on 2-year-old, and first and champion group of five stallions. Our horses are handsome and the best to buy; our guarantee and insurance the very best. PERCHERON IMPORTING CO., Chas. R. Kirk, South St. Joseph, Missouri.

PARK & FIRKINS' PERCHERONS AND JACKS. Imported and American-bred stallions. All blacks and grays, all registered in P. S. of America. Some ton 3-year-olds. Also Kentucky and Missouri Mammoth Jacks from 15 to 15½ hands high, heavy bone and good performers, registered. Everything sold with safe breeding guarantee. Barns in town, 50 miles north of Kansas City, on Rock Island Railroad, 35 miles east of St. Joseph on Burlington Railroad.
J. E. PARK AND A. A. FIRKINS, CAMERON, MO.

MENTION KANSAS FARMER WHEN YOU WRITE.

COCHRAN'S BIG SHORT-HORN CATTLE SALE

Lamar's Pavilion, Salina, Kansas

FRIDAY, MARCH 14, '13

70 Head, Select Draft from our
Herd Numbering Over 500

FIFTY-FIVE FEMALES
FIFTEEN BULLS



The females consist of choice young cows and heifers, mostly descended from animals that we have purchased out of the best herds in this and other states. Our policy was always to buy the best without much regard to cost if the animal suited. Every female in this sale will be in calf to a bull that has proven his greatness as a sire. The bulls included are good, blocky, thick-fleshed fellows of serviceable age. The offering is Scotch and Scotch topped, and full information can be had by writing at once for catalog. We have raised these cattle under the most natural conditions possible and fed them only such feeds as grow upon Kansas farms in our part of the state, and they will be sold without the big fat, but will be all the more valuable for their new owners.

C. G. COCHRAN & SON, PLAINVILLE, KANSAS

Auctioneers: Cols. Carey M. Jones, J. W. Travis and L. S. Ruggles. Fieldman, Jesse Johnson.
C. W. Lamer & Co. Sell Registered Percherons at the same place the day before. Attend both sales.

DISPERSION DUROC JERSEY SALE—Formoso, Jewell Co., Kansas, Thursday, March 13, 1913

FORTY RICHLY BRED DUROC JERSEY BRED SOWS AND GILTS. FOUR TRIED SOWS. THIRTY-FIVE FALL YEARLINGS AND SPRING GILTS. ONE HERD BOAR.



Sired by such boars as Hebron Wonder, Kansas Special, Nebraska Boy by Bonnie K, Defiance 2d by Defiance, and Triumphs Hero by Bell's Chief. The offering as a whole represents the big, well formed type. Among the attractions will be Kansas Bessie by Kansas Special, and Bessie Mack by Hebron Wonder. Every female in the sale will be safe in pig to one or the other of these great boars: Red Bobbie 135203; B. & C.'s Col. Chief 135709, or Crimson Prince. Send for catalog and if unable to attend send bids to Jesse Johnson or Walter Ward in our care.

Auctioneer, John Brennen. Fieldman, Jesse Johnson. STURTEVANT & McMULLEN, Formoso, Kan.

Holsteins Ninety Head From Which to Make a Choice

GANZDALE HERD.

WE ARE OFFERING ANYTHING IN OUR HERD FOR SALE.

Pure-bred registered Holsteins, nothing else. We are breeders, not jobbers, and do not keep grade stuff. We offer anything in our herd, from one to a carload. We can give you young bulls, some old enough for light service, that combine the blood of several world's champions, and at prices extraordinarily low. If you want blood from the best and at grade prices, come and see us, write, or telephone. We answer promptly every inquiry. We want to sell.

CASPER A. GANTZ, Prop. - King City, Missouri

60 HEAD of solid fawn-colored Jersey cows and helpers of fashionable breeding. Will make special prices on car lots. Most of them in calf to "Blue Boy Baron," sired by half brother to Noble of Oakland. His five nearest dams on mother's side made 192 pounds butter in 7 days. A few light fawn bull calves. S. S. Smith, Clay Center, Kan.

Shorthorns Make Best Gains.

The Florida Experiment Station bred Hereford, Shorthorn and native bulls to native cows. After breeding the cows were kept on range until the calves were weaned at seven and a half months of age. The calves were kept in the same pasture after weaning and were given the run of velvet beans and Japanese cane field.

At birth the calves weighed as follows: Grade Herefords, 47.9 pounds; grade Shorthorns, 56 pounds; natives, 48.6 pounds each. At weaning time the weights for the grade Herefords were 351.6 pounds, the grade Shorthorns 342.5 pounds, and for the natives 305 pounds.

At one year of age the average weight of two animals in each lot were: Grade Herefords, 405 pounds, and grade Shorthorns and natives, 447.5 pounds. When weighing about 700 pounds the six animals were put in a small yard and fed a ration of shelled corn, cottonseed meal and Japanese cane. The average daily gains were 1.25 pounds for the grade Herefords, 1.89 pounds for the grade Shorthorns, and 1.73 pounds for the natives.

Test Front Wheels for Play.

Test the front wheels occasionally for smoothness of running and side play. Jack up each wheel and give it a tug and a push to see if there is any side play. If any is noticed, it should be remedied at once by taking up the bearings. In spinning the wheel listen at the hub. If any sharp clicks are heard it is an indication that there is a split or chipped ball, which should be removed.

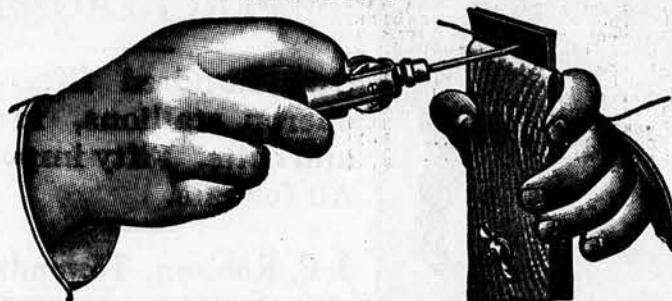
50 HEAD POLAND CHINA SOWS FOR SALE 50

WE WILL not make a public sale and we are offering 50 of the best big-type sows ever listed at private treaty. Among these are prize-winning sows, yearlings, spring gilts and matured sows. These are bred to our 1,024-pound boar, Chief Price Again 2d, and W's Wonder. Bred for January, February, March, April and May farrow. Write us at once.

WIGSTONE BROS. - - - - STANTON, IOWA

Mend Your Own Harness

WITH A KANSAS FARMER SPEEDY STITCHER SEWING AWL.



This Speedy Stitcher Awl is the latest and best hand sewing tool on the market. The regular price is \$1 everywhere. Finished in highly polished rock maple handle and nickel metal parts. Provided with a set of diamond-pointed, grooved needles, including a special needle for tapping shoes. All parts inside the handle. Convenient to carry—always ready to mend a rip or tear. Anyone can operate the Speedy Stitcher. Mends anything made of leather or canvas.

OUR OFFER.

We will send one of these Speedy Stitcher Awls to anyone sending us one new subscription to KANSAS FARMER for one year at our regular subscription price of \$1, or will send it free to any present subscriber sending \$1 for a renewal subscription, and 25 cents extra for shipping.

THE KANSAS FARMER, Topeka, Kansas.

FIELD NOTES

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

PURE BRED STOCK SALES.

Bercherons and Other Draft Breeds.
Percherons and Jacks.
Jacks and Jennets.
Shorthorns.
Holstein Friesians.

Poland Chinas.
Duroc Jerseys.
Hampshire Hogs.

Duroc Sale March 18.
One of the very last chances of the season to buy Duroc Jersey bred sows and gilts...

Harness Direct to Farmer.
This week we start advertising for Inskeep & Schaubel, harness dealers of Merriam, Kan.

Bark & Firkin's Stallions and Jacks.
In the issue of Kansas Farmer for March 1 by mistake a cut of one of J. E. Parks' fine two-year-old jacks was used in a field note...

Dorr's Fall Bigs.
Mr. A. G. Dorr of Orange City, Kan., is advertising ten Duroc Jersey boars and gilts that are an extra fine lot.

Reports Good Demand for Jerseys.
S. S. Smith of Clay Center writes that the demand for registered Jerseys is increasing all the time.

The maker of a strictly high-grade cream separator is advertising direct to the farmer through the columns of Kansas Farmer.

Miller Makes First Sale.
R. R. Miller of Clay Center, Kan., held his first sale of registered Durocs in town on March 1.

M. Gottswiller's Poland Chinas.
M. Gottswiller of Clarinda, Mo., is one of Missouri's progressive Poland China breeders and owns one of the high-class Poland China herds in the corn belt.

the herd is several litters of pigs farrowed in January and February and some extra good fall boars. Mr. Gottswiller also has extra good fall boars.

Isaac C. Lohman's Stallions and Jacks.
Attention is called to the card of Isaac C. Lohman of Turney, Mo., in this issue of Kansas Farmer.

Northwest Missouri Association Holds First Sale.
The first annual sale by the Northwest Missouri Pure-Bred Stock Breeders' Association was held at Cameron, Mo., February 27.

Keep Your Chickens Happy.
Don't allow your poultry to become a prey to vermin. That is poor management when such an efficient lice killer as Zenoleum can be had so readily and so cheaply.

dyke Pontiac Actis, with five high record daughters averaging 18 pounds in their 2-year-old form. His dam, Pontiac Actis, is one of the greatest daughters of Hangerfeld DeKol, with a seven-day record of over 31 pounds and over 1,000 pounds of butter in 35 days.

Shorthorns at Salina.
Farmers and breeders of this and adjoining states will certainly consult their best interests by writing at once for catalog of the big Shorthorn sale to be held at Salina, Kan., Friday, March 14.

Keep Your Chickens Happy.
Don't allow your poultry to become a prey to vermin. That is poor management when such an efficient lice killer as Zenoleum can be had so readily and so cheaply.

- 2-A. N. Drenner, Chapman... 45
4-Amos Shoffner... 42
6-Thomas Dobbins, Chapman... 29
9-A. N. Drenner... 39
10-Oscar Glass, Chapman... 31

- 1-H. A. Berens, Summerfield, Kan. \$185.00
2-H. A. Berens... 75.00
3-G. Yausse, Hiawatha, Kan. 155.00
4-A. C. Dugan, Summerfield, Kan. 95.00
5-J. R. Blackshere, Eldorado, Kan. 89.00
6-A. J. Turinsky, Barnes, Kan. 92.50
7-J. R. Blackshere... 145.00
8-J. R. Blackshere... 140.00
9-J. R. Blackshere... 140.00
10-H. A. Berens... 140.00
11-A. J. Turinsky... 140.00
12-H. A. Berens... 80.00
13-J. R. Blackshere... 132.50
14-Charles Glasgow, Summerfield... 95.00
15-A. J. Turinsky... 127.50
16-A. J. Turinsky, Hamburg... 125.00
17-H. A. Berens... 90.00
18-H. A. Berens... 90.00
19-H. A. Berens... 100.00
20-H. A. Berens... 115.00
21-H. A. Berens... 80.00
22-H. A. Berens... 105.00
23-H. A. Berens... 127.50
24-J. R. Blackshere... 80.00
25-J. R. Blackshere... 127.50
26-J. R. Blackshere... 95.00
27-H. A. Berens... 100.00
28-H. A. Berens... 95.00
29-H. A. Berens... 100.00
30-H. A. Berens... 100.00
31-H. A. Berens... 100.00
32-H. A. Berens... 100.00
33-H. A. Berens... 100.00
34-H. A. Berens... 100.00
35-H. A. Berens... 100.00
36-H. A. Berens... 100.00
37-H. A. Berens... 100.00
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40-H. A. Berens... 100.00
41-H. A. Berens... 100.00
42-H. A. Berens... 100.00
43-H. A. Berens... 100.00
44-H. A. Berens... 100.00
45-H. A. Berens... 100.00
46-H. A. Berens... 100.00
47-H. A. Berens... 100.00
48-H. A. Berens... 100.00
49-H. A. Berens... 100.00
50-H. A. Berens... 100.00

STOCK OR DAIRY FARM FOR RENT
I wish to rent my 470-acre farm adjoining Wellsville, Franklin County, Kansas. Two sets of A-1 buildings, five wells, one-half hog-tight, Kentucky bluegrass. This farm has been an old feeding farm for 40 years.

WENSWORTH, KAN., January 24, 1913.
KANSAS FARMER, Topeka, Kansas.
Please find check for \$38.63, your bill for advertisement.

ABOVE is reproduced the advertisement of J. G. McLain, which appeared in each of four recent issues of KANSAS FARMER. Below this advertisement is Mr. McLain's letter and which letter is unusual.

offering was in every way a high class lot and demonstrated beyond a doubt that the members of that association are breeding as good horses as can be found anywhere and that Missouri breeders do not necessarily have to go outside of their home state to secure breeding stock as good as the best.

can for 25 cents. You can get a whole gallon for \$1.50, and that will make 100 gallons of disinfectant for spraying purposes.

Searle Buys a Herd.
Frank J. Searle, owner of the Sunflower herd of Holstein cattle at Oklabess, Kan., writes as follows: "I have purchased from F. A. Hornbeck, Kansas City, Mo., his herd of Holstein cattle, which he had to dispose of because of his removal to another state on account of professional duties.

Ganzdale Holsteins.
Casper A. Ganz, owner of the Ganzdale Holsteins at King City, Mo., offers anything in his herd with 30 head of good Holsteins to select from.

Miller Makes First Sale.
R. R. Miller of Clay Center, Kan., held his first sale of registered Durocs in town on March 1.

Shorthorn sale follows:
1-Bull-Gus Flowhard, Wakefield... \$165
2-Cow-Wade Flanagan, Chapman... 120
3-Cow-John Luthin, Junction City... 100
4-Cow-W. M. Myers, Wakefield... 88
5-Cow-Z. E. Schaulis, Wakefield... 100
6-Cow-Jas. Faidley, Wakefield... 70
7-William Chamberlain, Chapman... 84
8-Charles Karmar, Millford... 80
9-Bull-Pat Kelly, Chapman... 106



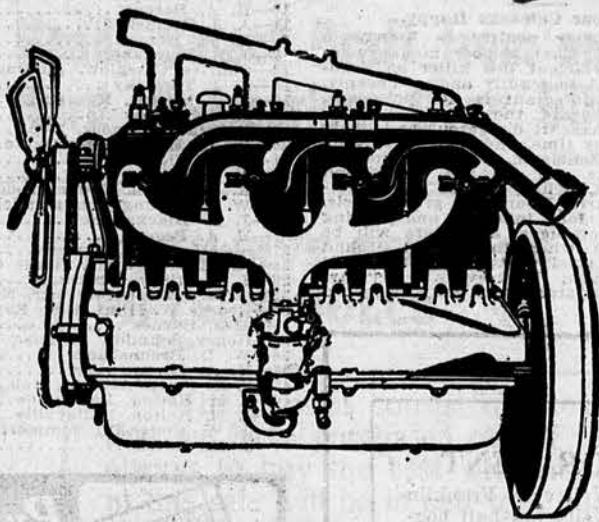
Practical Poultry Manual
A new book that is different and more useful to farm poultry raisers than any yet printed.
The Practical Poultry Manual or Common Sense in the Poultry Yard, by Thomas Owen. Of the author of this book, T. A. Borman says: "Mr. Owen is a practical poultryman - makes his living that way. He is the most experienced poultry writer in Kansas. He has had 40 years' experience on his own farm raising poultry, and as long a time writing about it. He has profited from everything worth while anyone else has written, and from it he has learned how to make poultry raising on Kansas farms pay better."

Farmers' Want Seed Corn
How much have you to sell? What kind is it? What is the price? Where was it grown? Answer these questions in a small advertisement, and have it printed in this paper, where it may be read by more than 60,000 other good farmers.

A subscriber wants to buy a few thoroughbred mares. Owners of thoroughbred mares can do business by using the advertising columns of KANSAS FARMER.
Even think how much good solid cash is lost each winter from lack of proper housing? Loss in condition of animals, loss in flesh, and even loss of animals. The shelter need not be expensive, but it should shelter.

KANSAS STATE UNIVERSITY LIBRARY

Overland



How Overland motors are made

All Overland motors are designed by Overland men—made by Overland men—and made in Overland factories. We will build 40,000 motors this year. No other automobile manufacturer will build as many of this type. That is why we can build them better, and for less cost. We employ the most skilled motor builders in America.

Following are a few of the most important facts about the Overland motor.

Cylinders have large water-jackets and are cast singly, increasing cooling efficiency with the advantage of being able to replace a single cylinder at low cost should an accident occur. The crank shaft and connecting rods and all other forgings are of high carbon manganese steel.

All bearings, cylinders, pistons and rings are ground to accurate and tested smoothness, insuring long life, freedom from wear and positive compression.

All the wearing surfaces of the valves are ground to a one-thousandth part of an inch. Owing to their peculiar design and large size they enable the motor to develop at least fifteen per cent more horsepower than any other motor of the same bore and stroke.

The cam shafts are drop-forged (in our own drop-forge plant, which is the largest in the industry) oil-treated and case-hardened. They are ground and machined automatically, insuring positive accuracy in the relative position of one cam to another.

This is the only car of its class provided with a five-bearing crank shaft. This crank shaft is drop-forged from one piece of carbon manganese steel and rotates in five bearings of unusually liberal size insuring quietness and extreme long life.

The crank cases are cast in two sections, of the finest grade of aluminum alloy attainable—and cast in our own foundry.

No other motor in the world is given a more severe test and thorough inspection. The engine is belted up for two hours, and driven by other than its own power to limber it up so that it will start easily. Then it is put onto the block and run from 8 to 16 hours under its own power.

The Importance of a Powerful Motor

AS the motor is the most important part of a car, it is safe to assume that you can judge a car by the performance of its motor. Therefore, be guided and informed by the following information.

Every practical farmer knows the value of a good motor in an automobile. He knows, too, from experience, what constitutes a good motor and what is expected of it. He wants power, economy and silence.

The motor is the most expensive single unit of the Overland car. It has a 4" bore and a 4½" stroke. It is the most efficient 30 horsepower motor made. We say efficient for it has, by demonstration in tens of thousands of cars, proven to be the best for your specific purposes.

It is exceptionally economical to operate—using less fuel per mile than any other motor of equal size.

It is remarkably powerful, developing forty to fifty miles an hour with ease; and over your kind of roads, without eating up an unnecessary and costly quantity of gasoline.

It is the only motor of its size made with a five bearing crankshaft which makes for real smoothness, silence and ease when in operation. This feature is only found on very high priced cars.

It is remarkably simple. It is practically frictionless. Requires no coaxing or continual adjusting. In fact, you seldom have to lift the hood. Is always obedient.

And the self-starting feature adds the final touch of perfection. Just throw a little lever and you're off. Your daughter can start, operate and drive an Overland as well and as easily as you can. It will always start in bitter cold and freezing weather as quickly as in the summer—by just switching the little lever on the dash.

So we ask you to judge the exceptional value of this car by the exceptional efficiency of its motor.

This big, powerful, comfortable touring car costs you 30% less than any other similar car made.

We have some very interesting books we would like to send you. They are free. Write us for a set today.

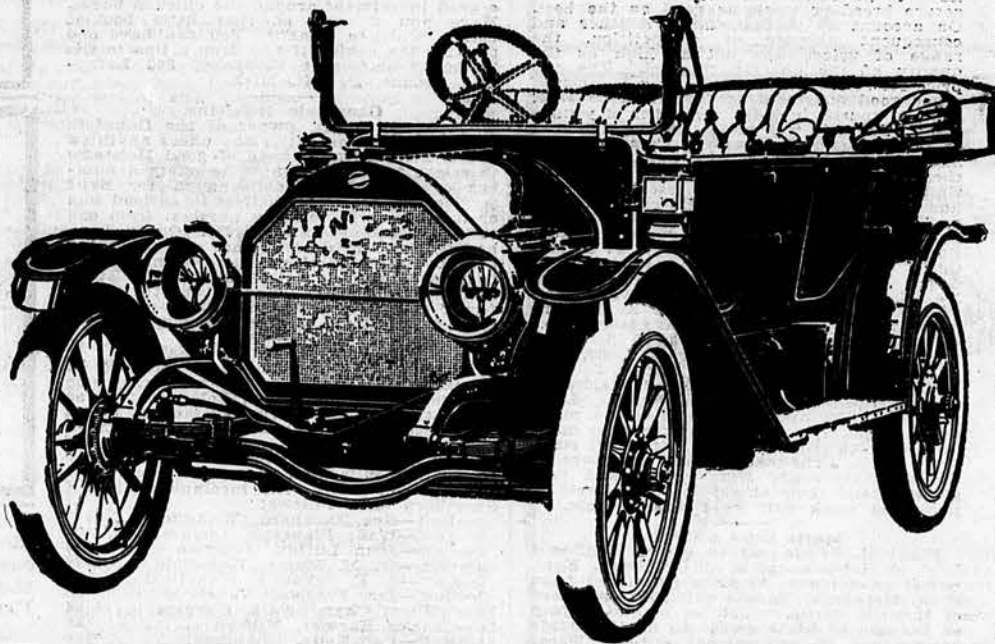
Please address Dept. 83

The Willys-Overland Company, Toledo, Ohio

\$985

F. O. B. Toledo
Completely Equipped

- Self-starter
- 30 Horsepower
- 5-Passenger Touring Car
- 110-inch Wheel Base
- Timken Bearings
- Center Control



\$985

F. O. B. Toledo
Completely Equipped

- Remy Magneto
- Warner Speedometer
- Mohair Top and Boot
- Clear Vision, Rain Vision Wind-Shield
- Presto-O-Lite Tank