

KANSAS FARMER

For the improvement  of the Farm and Home

Volume 54, Number 13.

TOPEKA, KANSAS, MARCH 25, 1916.

Established 1863. \$1 a Year

KANSAS has spent twenty-five millions of dollars on roads and bridges during the past five years. Massachusetts with the same yearly expenditure has built nine thousand miles of hard surfaced roads, while Kansas has but four hundred and ten.

Only fourteen states spend more money on highways than Kansas, but forty-one have more miles of surfaced roads.

Only six states have a less mileage of surfaced roads, and only two have more miles of roads to surface.

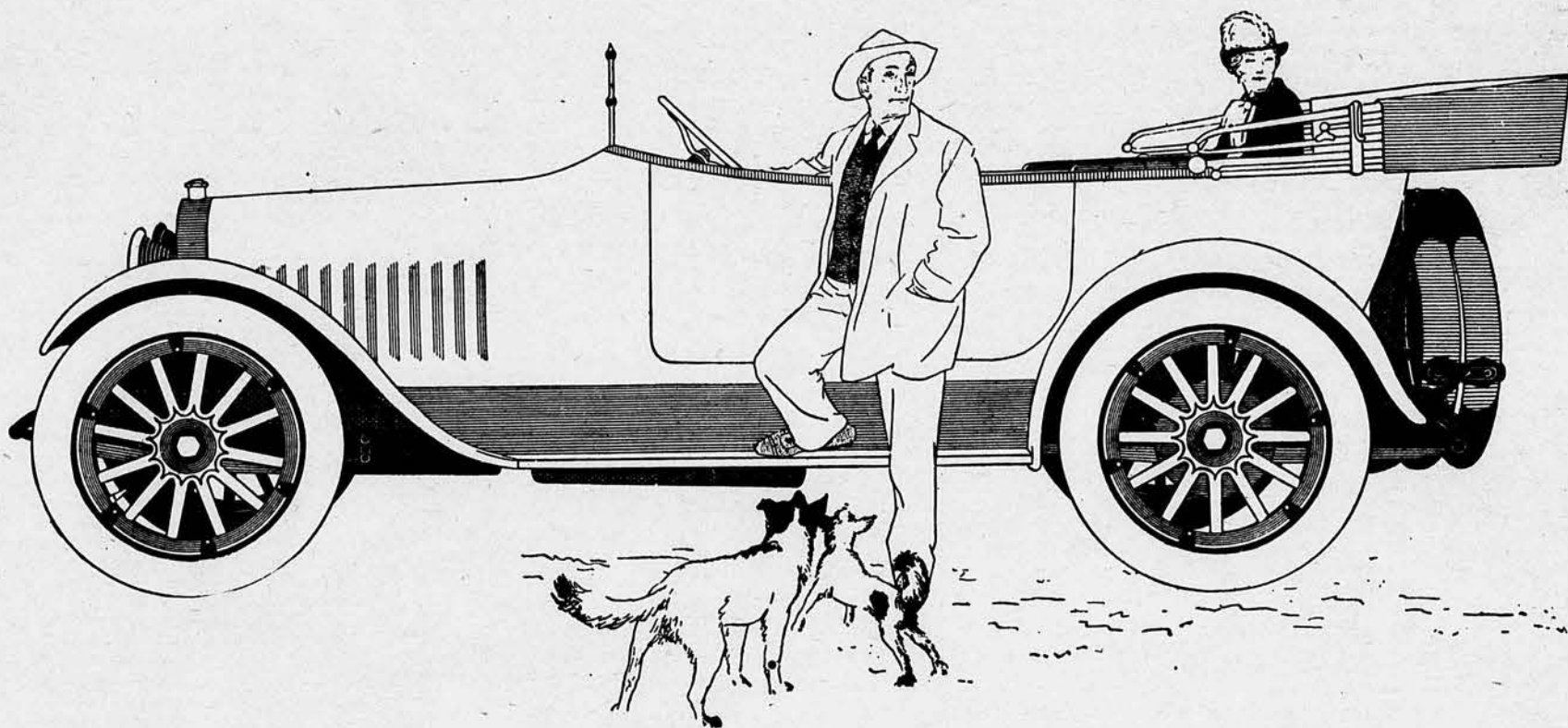
Shall we continue to dig up five or six million dollars each year for roads and bridges, and then bury it in the rich Kansas mud from whence it came?



**W. S. Gearhart, State Highway Engineer,
Makes Some Pointed Statements on Roads**



Quality First



A Sensible Car that Economizes and Endures---the 3400 R. P. M. Chalmers---\$1050

The back-bone and mettle of a motor car, after all can only be shown up on a country road.

The new 3400 r. p. m. Chalmers, by facing all kinds of conditions on all kinds of roads without whimper, apology, or flinching, has proved that she's got the stuff in her.

She has proved that she is no mere citified, boulevard performer; for no car on earth of her price or size has ever gone about its business everywhere with her energy, endurance, strength and spirit.

Her conquest of hills and rut-riven roads is the talk of every county seat. She has climbed hills on high gear and pulled through country roads on "high," where conditions were so bad that the running board dragged.

These are two of the reasons why the 3400 r. p. m. Chalmers is such a sensible car for the farmer to buy. She does not boast of fantastic records of performance made by a tuned-up, doctored-up professional-driven car on the race track. Her achievements have all been recorded with ordinary drivers at the wheel and ordinary roads beneath her tires.

Owners throughout the country have driven her over roads on which they admitted it was a shame to drive any car, and she has made amazingly good.

The 3400 revolutions per minute of her engine, recorded without skipping and with absolute safety, prove tremendous engine strength and precision.

Long engine-life and high engine-speed have always been twin features of the most successful engines of all kinds. 3400 r. p. m. means long life because it reduces side-thrust of the crankshaft to the minimum. And side-thrust means wear and tear.

The 3400 r. p. m. Chalmers is a sturdy, long-lived piece of machinery, built not only to endure, but to economize.

You get 18 miles of light-footed going out of every gallon of gas. You add 1000 miles to the life of your tires because of the smooth velocity with which her engine delivers might.

The same throbless, fretless engine-action, whether you travel at the rate of 3 or 60 miles an hour, whether one or five are aboard, means riding comfort that springs, good leather and 9-inch cushions only partially explain—riding comfort that has never been dreamed of before in a \$1050 car.

Her pick-up responds with the same velvety obedience in the Dakotas as on Michigan Boulevard. She economizes with fuel over Kansas gumbo, just as on Fifth Avenue.

From every angle, you'll find the 3400 r. p. m. Chalmers a sensible, practical, value-delivering car to own and drive.

Drop in and see her at your Chalmers dealer's the next time you go to town.

One look—one ride—and you'll realize why she's cast her spell over 100,000,000 Americans.



KANSAS FARMER

The Standard Farm Paper of Kansas

ALBERT T. REID, President
T. A. BORMAN, Editor-in-Chief

C. C. YOUNGGREEN, Advertising Manager
G. C. WHEELER, Live Stock Editor

Editorial, Advertising and Business Offices—Topeka, Kansas
New York Office, 41 Park Row, Wallace C. Richardson, Inc., Manager
Chicago Office, Advertising Building, Geo. W. Herbert, Inc., Manager

Entered at the Topeka post office as second class matter



PLANT A TREE.

People generally are not happy or contented where there are no trees. Kansas needs millions of trees for this, if for no other reason. A wonderful transformation has been brought about in the state as a result of tree planting in the years that have gone by, but there yet remains much to be done. The state forester, C. A. Scott, is urging that people generally all over the state, and especially school children, interest themselves in setting out trees during the next three weeks.

Trees are among our greatest blessings. They not only minister to the happiness and contentment of those who set them and watch them grow, but will serve in even greater measure those of the generations to come. If you plant a tree and give it suitable care, you have fulfilled an obligation that all should accept—the rendering of a service to others. We not only add to the value of our own property, but the passer-by looks with appreciation and enjoyment on the outdoor picture we have made. Let us not neglect this opportunity to do something that will so effectively serve the whole community.

Tree-planting should not be done in a wave of Arbor-Day enthusiasm, but conscientiously and systematically. The successful tree planter must have not only an appreciation of the value of trees, but a knowledge of their requirements, the varieties adapted to certain conditions, the kind of soil preparation necessary, cultivation, and the general care that must be given if they are to become permanently established. All this information can be had. We have a state forester at Manhattan who is willing and anxious to send to all who may ask, the most complete instructions on the planting of trees and their care. Plans for schoolyard plantings will be furnished, and nowhere is there greater need for beautifying the surroundings than around our rural schoolhouses.

"Plant a tree" is Professor Scott's slogan for the next three weeks. Make it yours in a way that will count in the results secured in the years to come.

ROADS AND FARMING RELATED.

Roads have a very close connection with agricultural progress. In a community where roads are poor, the farms are likely to be poorly improved and agricultural conditions generally at a low ebb. There is a reason for this. Poor roads are a serious handicap to profitable farming because of the extra expense necessary in hauling products to market. It is hard sometimes to figure out this extra cost. There are times when roads are impassable. Wheat or other farm products may be at the top notch in price but they cannot be hauled to market because of the condition of the roads.

It can readily be seen that from an economic standpoint good roads are of the greatest importance. "You cannot build up good agriculture on poor roads," said President Waters recently, in addressing those in attendance at the road conference held in Manhattan. It is a significant fact that in the dairy districts of Wisconsin and Illinois, over 60 percent of the roads are improved. It is absolutely necessary that these dairymen have good roads in order to get their milk to market each day, rain or shine. A fair weather road will not do.

In addition to the importance of good roads from a strictly business standpoint, they are a social necessity. People cannot and will not live under conditions which compel them to stay at home for weeks at a time. There is nothing more depressing than to look out each day on a road that is a sea of mud.

A developing agriculture demands a system of highways that will make it possible to market farm products economically. It is costing entirely too much to haul our products to market here in Kansas. The sooner we come to a realization of the vital connection between agricultural development and good roads, the better. If even half of the money we now spend in keeping our earth roads passable, could be put into roads of more permanent character, there would be a great improvement in a few years. It is time we were seriously taking up this matter of road building. We have reached the stage in our agri-

cultural development where we can afford to do this. In fact we cannot afford to do otherwise.

A banker who is co-operating in the Kansas Farmer Dairy Club has just asked if any particular kind of cow is required. We wish to have it understood that there are no restrictions as to breed. Members of the club should get good cows, but it is up to them to make their own selections, with such help as they can get.

PRACTICAL HIGH SCHOOL WORK.

A high school should by all means serve the community in which it is located. In visiting the Dickinson County High School some years ago, our attention was specially attracted by the practical nature of the manual training work being done. We noticed such articles as farm gates, wagon tongues, double-trees, and single-trees which had been made by the boys. Many of those in attendance at such schools go back to the farms, and this sort of training cannot help being of great value to them.

We have just received a copy of the quarterly bulletin of this high school, and we note that this practical work is still being carried on. In the last bulletin the farm mechanics class offered to repair pieces of farm machinery for farmers who wished to take advantage of this opportunity. This last issue of the bulletin states that a farmer brought in a large gasoline tractor which the boys cleaned and repaired. A gasoline engine was also re-babbited.

Recently an apple orchard was leased for the class in orcharding. This orchard was seriously in need of cultivation and proper pruning and spraying. The members of the class will put this orchard in as nearly ideal condition as possible. Five acres of land adjoining the orchard was also leased, and this will be used by the students in agriculture for experimental and demonstration work.

EARLY VARIETIES OF CORN.

On nearly every farm where live stock is kept it will pay to plant some early variety of corn for early feed. This, of course, applies where corn is commonly grown. In some sections some other quick-maturing grain would be better, such as feterita. These small early varieties of corn will mature grain three to five weeks earlier than will standard varieties. Even though last year was an exceptionally good corn year in Kansas, without doubt there are many farms where corn for feeding will be scarce before the regular crop is harvested.

New corn cannot be fed to work horses, but for hogs a little new corn coming early in the season is most acceptable.

DAIRY CLUB TIME EXTENDED.

Boys and girls wishing to enroll in the Kansas Farmer Dairy Club have until June 1 to make their application and complete the necessary arrangements with the co-operating bank. This extension of time is given because enrolling in this club is not simply a matter of sending in the name. The plan must be talked over with the banker and the necessary details worked out before the boy or girl actually becomes a member. All this takes time.

All records must begin on or before September 1. After closing the arrangements with the co-operating bank, the important task of securing a cow or heifer should be taken up at once. In this issue some instructions are given that will be helpful in the buying of the cow. There is opportunity for acquiring much valuable experience in making the selection of the cow that is to be used in the work of the club.

DEATH OF HENRY AVERY.

Henry Avery, who died March 12, was one of the pioneers of Kansas. He came to the state in 1861, and for two years freighted with an ox team between Leavenworth and Denver. He enlisted during the war and after two years' service married and settled on the farm near Wakefield, where he has since lived.

Mr. Avery was always an enthusiastic believer in pure-bred live stock, and in 1876 brought to Kansas some registered

Percheron horses—the first to come to the state. For many years following, the Avery farm was the most extensive Percheron breeding farm in Kansas or in the entire West. There are few counties in the state where the Avery stock of horses is not known. The records of the Percheron Society of America gave evidence of his unusually good judgment in making selections from some of the best strains of the Percheron breed.

The business methods of Mr. Avery were of a high type, and his reputation for fair dealing did much to increase the popularity of heavy horses in Kansas.

A widow and two sons survive Mr. Avery. One son, H. W. Avery, lives on the home farm near Wakefield, the other, Herbert F., is in the employ of the federal government at Rock Island, Ill.

GUARD AGAINST FIRES.

Someone touched a match to a straw stack north of Garden City a couple of weeks ago, burning being an easier way of getting rid of the straw than scattering it on the fields. From this burning straw pile was started the most destructive prairie fire that has ever raged over that section. It burned over parts of several counties, a great deal of live stock was destroyed, feed burned, and much other property was destroyed and damaged. One 15-year-old boy in Lane County was burned to death, and a number of men were injured while trying to save their buildings and improvements.

Fire is an awful engine of destruction when it gets beyond control. Where such conditions exist as made this great fire in Western Kansas possible, fire cannot be handled too carefully. If a fire guard had been plowed around this straw stack this disaster would have been avoided. Most fires of this sort are the result of someone's carelessness, and no amount of regret on the part of the one responsible can restore the lost life and the destroyed property.

PARCEL POST LEGISLATION.

A bill recently passed the national House of Representatives in the form of an amendment to the postoffice bill, that takes from the postoffice department the administrative control of the parcel post system. It also places a definite limit on the weight of parcel post packages.

Friends of the parcel post see in this bill an attempt to destroy its usefulness, and they are up in arms against it. If you believe in improving and extending the system, you have no time to lose making your convictions known. This bill has now gone to the Senate postoffice committee, where it will be considered and reported to the Senate.

South of Great Bend is a stretch of one and one-half miles of sand road that puts a heavy burden on every farmer living south of the Arkansas River. All the traffic in and out of Great Bend must go over this road. It is never good and the people concerned have come to the conclusion that the only way to overcome the heavy tax this poor stretch of road imposes is to put down a brick or concrete roadway. It probably will cost \$20,000, but so many will be benefited that the burden will not be heavy when it is properly distributed. A meeting was held this week in Great Bend to discuss this plan, and W. S. Gearhart, the state highway engineer, was present and took up the technical points involved. The building of such roadway will settle for a good many years to come this problem of the sand road.

Road oil makes good roads by preventing dust and mud. The asphalt contained in road oil is very sticky and adhesive. It sticks the dust particles firmly together and makes a solid surface, effectively preventing their blowing about. This same asphalt is waterproof. It is the foundation of all rubberoid or prepared roofing and of waterproof paint for concrete. The asphalt forms a waterproof covering over the road surface and sheds rain readily.

Select eggs for hatching uniform in size. Extremely small eggs or exceptionally large eggs should not be used.

GRADE COW ENCOURAGED.

Breeders of pure-bred cattle, or many of them at least, seem to have the idea that the breeding and handling of grade cattle should not be encouraged. They seem to have a feeling that the grade animal should receive no recognition, that all should be urged to raise nothing but pure-bred stock.

The breeder of pure-bred cattle should give every encouragement possible to the grade. All the merit the grade possesses comes to it through the pure-bred sire. The more encouragement given to grades, the more will the value of the pure-bred animal be demonstrated as an improver. The fight should be made against the use of the grade or "scrub" bull.

The great demand that now exists for grade dairy cows depends upon the fact that these cows have inherited to a considerable degree the high producing characteristics of their pure-bred sires. Every producer of dairy cattle who is selling stock to meet the demand is anxious to use the very best sires possible. He knows that there will not be enough pure-bred cattle to supply the demand in years to come, and that through this use of the prepotent powers of the pure-bred sire the commercial stock can be cheaply produced in large numbers.

In order to encourage the development of grades, there has recently been established in Minnesota a production registry for grade Guernseys. Its purpose is to stimulate improvement among the Guernsey herds of that section by placing a premium on the registered bull. The only animals that will be eligible for registry in this association will be those sired by registered males. It is a registry of production and not of pedigree, and a certain production record must be made before the animal is eligible. The aim of this association for recording the production records of grade cows, is the elimination of the scrub sires that are responsible for lack of progress in dairy cattle improvement. It will tend to standardize values of grade cows because their production records will be available for study. Both buyers and sellers will be protected.

The records made must be vouched for by some regularly organized testing association or farmers' club, or through a special committee. This movement to encourage the grade cow is a worthy one, and could profitably be put into operation in many sections where dairy cattle are raised.

PURE-BRED OR "SCRUB."

There are still 1,151 scrub stallions listed for public service in Kansas, according to the last report of the State Live Stock Registry Board. We sometimes wonder how these scrub stallions can be made to pay. They must be patronized, for if they were not, their owners would not list them with the registry board. These scrubs are absolutely worthless from the standpoint of bringing about any improvement in the horse stock of a community where they are used. Each year the market demands for scrub horses are becoming less, and that is the only kind such stallions can sire.

In addition to these scrubs, there are 1,360 grade stallions listed. These in some instances are exceptionally good as individuals, but they are uncertain as breeders. They lack the prepotent powers of the pure-bred sire.

If you are going to raise horses, why not try to raise as good ones as possible? The first step is to select carefully the sire that is to be used. A pure bred horse, sound, and of proper type, will sire colts that will be worth enough more to several times make up for the difference in fees. The cards used in advertising must state whether the horse in a pure-bred, a grade, or a scrub. The mare owner is absolutely protected. If he uses a grade or a scrub, it is with full knowledge of the fact.

There are 3,224 pure bred stallions in the list—a considerably larger percentage number than when the stallion license law first went into effect. This is an indication that some progress is being made.

FINANCING ROAD BUILDING

Permanent. Construction. Requires Equitable Distribution of Expense Among Those Benefited Both in the Present and in the Years to Come



SAND ROAD IN RILEY COUNTY COVERED WITH STRAW



SAME ROAD GRAVELLED—AFTER THREE YEARS' USE

DURING the past five years the counties and townships of Kansas have spent about \$25,000,000 for roads and bridges and at the present time there are only about 160 miles of gravel, 240 miles of macadam, 3½ miles of concrete, and 4 miles of brick road, or a total of about 410 miles of hard surfaced road in the state. This is only .4 of 1 per cent of the total road mileage.

Fourteen states spend more money than Kansas for roads, but forty-one have more miles of surfaced roads. In other words, Kansas stands fifteenth among the states of the Union in expenditures for highway improvements, and forty-second in the amount of roads surfaced. Only six states have a less mileage of surfaced highways than Kansas and only two states have more miles of road to surface. We spend as much money for roads every year as Massachusetts, but while she has built 9,000 miles of high class roads, we have constructed only about 410 miles.

INCREASED USE OF HIGHWAYS.

The daily use of our public highways has developed more rapidly than any other single activity within the state. Ten years ago there were practically no automobiles in Kansas and all the traffic was horse drawn. Today we have about 80,000 cars, or one for each two and a quarter farms, and one for every twenty persons in the state. Pawnee County has one car for every nine persons. More than 65 per cent of all the cars in the state are owned by farmers. There are enough cars in Kansas to take every man, woman and child for a twenty-minute joy ride each evening after supper, or to move the whole population twenty-five miles every day. These automobiles represent an expenditure of about \$75,000,000.

These new methods of transportation require new and adequate systems of highway construction and maintenance. The system of earth roads which the counties and townships of Kansas built up and were maintaining during the past six years was probably the best and on the largest scale the world had ever seen, but the rains, snow and frost during the past year have given them the appearance now of European battlefields. Until recently many Kansans had begun to believe that properly graded and constantly dragged earth roads would answer every purpose. However, it is now clearly evident that if the main roads, those highways radiating out from the market centers and connecting the cities, constituting about 10 to 15 per cent of the total road mileage, are to be maintained in the eastern third of the state as 365-day highways which will carry modern traffic at all seasons, it will be necessary to surface them with more permanent material than puddled earth secured by dragging the roads while they are wet.

STATE COULD BUILD ROADS.

The assessed valuation of Kansas is \$2,884,337,535, distributed as follows: Farm lands, 48.3 per cent; city real estate, 15.6 per cent; personal property, 21.1 per cent; public utilities, 15 per cent. Only eleven states have a greater assessed valuation than Kansas.

Are we going to continue as we have in the past to dig up \$6,000,000 per year for roads and bridges and then promptly bury it in the rich Kansas mud from whence it came?

The State of Kansas has never appro-

riated a dollar for the construction and maintenance of highways, but is there any really good reason why the state should not assume a generous part of the expense and responsibility in constructing and maintaining the principal highways as is now being done by most of the other states. Our people were never more prosperous than now. Our per capita wealth is \$1,725, the largest of any state in the Union excepting Iowa; our bank deposits are about \$134 for each man, woman and child, and the state is entirely free from debt. The financial condition of Kansas could scarcely be better to start a system of improved highways, so why should the state not assist in building some good roads and do it now, so that this generation will get the benefit of them? If the state were to appropriate, say about 35 per cent of the cost, the county 30 per cent, the township 20 per cent, and the abutting property owners 15 per cent, I believe the benefits would be the same as in other states where state aid has been granted, viz: increased road construction, more continuous construction, better construction than former local work, and an increased efficiency of local construction on other than state funds.

The state constitution of Kansas prohibits the appropriation of state funds for highway improvements and limits state bond issues for any purpose to a total of one million dollars, so that in order to provide state aid for road building two constitutional amendments will probably be necessary. The minimum time in which these changes could be made and laws enacted to put them into effect would be about five years.

ROAD BUILDING LIMITED BY LAWS.

In the matter of cheap good road building materials Kansas is unfortunately situated, for much of our limestone is too soft for road purposes and there is little gravel to be found west of a north and south line through Solomon. The few places where gravel has been used indicate that it is the best cheap road we can build. We do have, however, an abundance of good sand, a large number of cement plants, and our numerous brick plants turn out paving bricks of an excellent quality, but our present system of road financing will not permit the use of these first class road surfacing materials on the country highways. Now only our cities can build high class surfaced roads.

Our statutes do not permit the townships, counties, or the state to vote improvement bonds for road purposes. The townships and counties, however, are authorized to vote bonds for county buildings, bridges, and even pay a bridge company or to aid in the construction of a railroad, but they cannot build highways and pull themselves out of the mud.

BENEFIT DISTRICTS BY SPECIAL ACT.

About ten years ago the city of Fort Scott and Fort Scott Township, by special act of the legislature, were designated a special good roads benefit district. A system of radiating roads from Fort Scott was laid out, and at the present time Bourbon County has more than forty miles of the finest macadam roads in the state, and with one exception

more of such paved highways than any other county in the state. Further than this, the average expenditure in Bourbon County for roads and bridges during the past four years has been only \$44.51 per mile per year, as against an average expenditure of \$44.76 per mile per year for the whole state during the same period.

The fifty-six miles of macadam road in Wyandotte County, five miles in Atchison, and six miles in Neosho County, were all built by forming benefit districts, authorized by special act of the legislature.

The townships of Kansas were entirely responsible for all the roads in the state until 1911, and not more than a half dozen out of the 1,492 townships in the state ever had enough money at any one time to build a mile of macadam road, after the other necessary township expenses were paid, and we had no general good roads benefit district law until 1909, such as had been used so extensively in Ohio, Indiana, Illinois, Minnesota, and other states.

From this it is easy to understand why so small a percentage of the highways have been surfaced, but no good reason has ever appeared why the legislatures during the past twenty years have been so niggardly in the matter of providing adequate highway statutes.

METHODS OF FINANCING HARD ROADS.

At the present time we have two methods of financing the construction of surfaced roads. One is by the use of the annual levies, and the other by forming good roads benefit districts. Any township board may appropriate the township road funds for surfacing any road designated as a mail route or township road and the county board of any county appropriate the county road fund for the surfacing of any road designated as a county road or state road. Geary, Cowley and Shawnee counties have done considerable road surfacing work by this method.

What is known as the Hodges Rock Road Law was enacted in 1909, and it applies to any road and provides that when 60 per cent of the land owners who own 50 per cent of the land in any benefit district petition the county board for the improvement of any road within the district costing more than \$500 per mile, and the county commissioners deem the improvement a public utility, they must allow the petition. The county board is required to have surveys made, prepare plans and specifications, let the contract, and supervise the work. The county must pay for the engineering supervision, and for all bridges and culverts costing over \$200. The township through which the road passes is required to pay 25 per cent of the remaining cost and the abutting property the remaining 75 per cent. The assessments are made against the property by a special board of appraisers according to the benefits that accrue. The assessments may be paid at the time the work is completed or in not to exceed ten annual installments.

DISTRIBUTION OF EXPENSE.

In forming the district the petitioners are authorized to include all of the property benefited, and to make the district in any form desired. It is of course

advisable to take in as much property as possible and still get 60 per cent of the land owners who own 50 per cent of the land to sign the petition in order to reduce the cost per acre for the improvement to a minimum.

The distribution of the expense among the people near the road and those farther away according to the benefits they receive is a big problem in road financing and there is no exact method of determining these benefits. The man who lives on an improved road does, however, receive a special benefit, and his land should pay a special tax. Minnesota and Utah have fixed this benefit at one-fourth and Wisconsin at one-third the cost of the road. The value of the land next to the road is increased most and it receives the highest benefit. Back of this farm the next neighbor stands next in benefits received and so the variable of special benefits diminishes until it reaches a point midway between the highway improved and the next main traveled highway. The Utah system recognizes this fact and assesses for special benefits all land which lies nearer the main road improved than to any other main road. This zone if special benefits is then divided into three parts on either side of the road and 50 per cent is assessed against the third next to the road, 30 per cent against the next third, and 20 per cent against the third farthest from the road.

Special benefit districts generally extend back from one-half to two miles from the road. It is not so important how the boundaries of the district are fixed, however, as it is that they shall be fixed so as to include as nearly as possible all of the property benefited, for the farmers who live on neighboring roads are not going to vote to build first class roads if they are taxed the same amount as those who receive the greatest benefit. Special assessments of from one-fourth to one-third the cost of a surfaced highway against the property along the road in the benefit district is not unreasonable, and few farmers would object to paying such an amount, but it is evident that 75 per cent would ordinarily be too high except through suburban property.

COUNTY MAY HELP BENEFIT DISTRICT.

The Hodges law authorizes any donations to be applied to the road and provides that whenever in the judgment of the county commissioners any part of a road is to be improved is of general importance to the county or if the condition of the road will cause an unusual expense, the county board may pay a greater part of the expense than the engineering and supervision and for bridges costing over \$200. In case the road to be improved is a mail route or township road, the county appropriation must be made from the general county fund, but in the case of a state or county road the appropriation should be made from the county road fund. It would seem that on the county road system if about 25 per cent of the cost of the improved road were assessed against the abutting property, 25 per cent against the township, and 50 per cent against the county, it would give, under average conditions, a fairly equitable distribution of the expense, until the state is in position to assume its due proportion of the cost of improving these main highways.

GOOD STALLIONS NEEDED

Sound Draft Geldings of Correct Type in Strong Demand at High Prices

By J. C. ROBISON in Report of Live Stock Registry Board

ONE of the first and most essential things to be considered before purchasing a stallion is, Does the community need a stallion and, if so, can one afford to buy it if for public service only? Buying a stallion for private use and for public service are two entirely different propositions. To illustrate this, I have in mind a man who lived upon a rented farm and, owning a few fairly good high grade mares, concluded he would buy some good stallions and do all the public service for the entire community. He went to an importer and purchased three imported stallions, paying \$1,500 each for them. To do this he had to mortgage almost everything he possessed to raise money for the first payment, and in less than two years, or when the last notes came due, the importer took the stallions, or two of them as one had died, and the renter lost enough to cause him to discontinue farming and to go to work by the day. Had this man purchased one stallion, all he probably would have had use for, and paid a reasonable price for him, bred his own mares and what outside mares he could, he would have been much better off in the end and the proposition would have been a money making one instead of a losing one.

Another instance is of a farmer who purchased a coming three-year-old, breeding a few mares of his own and using him as one of his work horses, thus avoiding the extra cost of keeping. In a little more than two seasons he had earned enough with outside service to pay for the horse, having the service of his own mares free and saving a great deal of time and trouble in taking his mares away from the farm to be bred. He was always able to secure the service of the horse when needed, thus having a much larger per cent of his own mares bringing foals each year than he would otherwise have done. This man had use for one stallion and made money out of him, while the other man did not have use for three but probably could have used one to good advantage. I believe any one having a dozen mares to breed can afford to keep a good stallion.

Some men who have become financially embarrassed in following other pursuits believe there is a gold mine in standing a stallion for public service, and invest in one at a heavy rate of interest and necessarily incur considerable risk. It would be better for such a party to leave the stallion business alone, for as the old Jew who used to live in our town would say, "This world is not all pie." Not only the man who can not afford to buy a stallion makes a mistake in buying, but the seller makes a worse mistake in selling him one, as it only causes trouble in collections, breeds lawsuits, and does damage to the business in general. Every one knows the stallion dealer has troubles enough anyway.

To the man who really needs a stallion I would give the following advice: If the horse is bought for public service, to breed a large number of grade mares and only a few pure-bred mares, a stallion should be selected that is in his prime (from three to five years of age), that can stand a heavy season and that can serve a large number of mares. On the other hand, a man who has a small but select band of pure-bred mares and who does not expect to breed many outside mares, may select a tried sire of considerable age, one that has demonstrated his worth as a sire of unusual merit. This same man, if he cares to take the risk, may select an outstanding colt only old enough to breed the limited number of mares he possesses. Of course he takes some risk as to the get of an untried sire, but if, on the other hand, the stallion proves the proper cross on his band of mares he has his entire usefulness before him.

One can get a stallion for almost any price he is willing to pay. The best cannot be obtained at a low price and sometimes one does not get a good one at a higher price. The day has passed in Kansas when stallions can be taken out and sold on the company plan for about three or four times their value. There are many firms in the state dealing in stallions exclusively, also a great many breeders who must sell their surplus stock, so no one should have trouble in buying a good stallion, if he is a judge of one, at a very reasonable price. By a reasonable price I mean that a stallion good enough for public service in almost any community can be bought for \$700 to \$1,000. A real outstanding good horse would cost a trifle more.

After a stallion has been purchased



M. E. GIDEON, POTTAWATOMIE COUNTY, DOES HIS FARM WORK WITH PURE-BRED MARES.—IT COSTS NO MORE TO KEEP THEM THAN ORDINARY WORK HORSES

and is ready to be advertised for public service, do not make the mistake others have made through fearing a competitor may get more mares for his horse, and put the terms for service so low there is no money in standing him. This will lower a horse in the estimation of the public. Buy a good horse and stand him at a good figure. One will collect many more dollars the following season if his stallion has served a reasonable number of mares at a good price than if he has served a larger number at a smaller price. It is, not the number of mares bred, but the number that produce and save their colts that counts.

The number of mares that stallions of different ages should serve during the breeding season is worthy of consideration. It has been my experience that a good, big, growthy stallion just past two years of age may be used on a limited number of mares with success. Ten or fifteen mares if bred a few days apart will do no harm. A stallion three years old or over can safely be used on forty or fifty mares, but never more than one service a day should be required. I think the same rule will hold in a stallion of mature age, although he may be used to breed nearly one hundred mares with proper care and handling. He should be kept where he can see and be near other horses and not in a stall that is more like a cage built for a wild animal with no light and sunshine. A stallion is not so different from other horses as some suppose, but with kind treatment will respond with good service.

I want to emphasize the fact that a great many when selecting a stallion pay too little regard to the quality of the animal selected. The best they can afford will always be the cheapest. For example, the difference in the value of colts from a good sire and from a poor one will in all probability amount to at least \$50 per head when they are three years old or ready to market. If a good horse sires fifty colts each year that live and come to maturity, it means an increase of \$2,000 or \$2,500 a year, due to the use of a good sire. There are localities where poor and unsound stallions have been used for years and the horse stock in that particular section has decreased instead of increased in quality while in other sections buyers for the eastern markets make regular trips because they have no difficulty in finding the right sort due to the influence of good sires.

It is a mistake to buy a poor stallion at any price. He should be sent down

to the range country where he will do some good and not very much harm, or it would be better to geld him and put him to the plow. I have seen stallions standing for public service, here in Kansas too, that were a disgrace to their breed and to the community in which they stood. They made me think of the story my father used to tell of the old pioneer in Butler County who was using about the worst specimen of a yellow bull that one could imagine. My father asked him why he used such a bull and he replied that he would make the cows give milk as well as any bull. Some of the stallions used for service will make the mares give milk but not give enough, if any, revenue for the money invested or for the feed wasted on their colts.

A good draft stallion must weigh at maturity from 1,800 to 2,000 pounds. In my estimation excessive size does not count for anything in a good sire. One will get a more uniform and sounder lot of colts from a stallion of average size than from one of over size. A good draft stallion should stand at least sixteen hands, three inches, or seventeen hands in height, and his depth through the chest should be equal to one-half his height. His other proportions should be accordingly. Such a stallion crossed on good high grade mares should produce geldings from sixteen and one-half hands to seventeen hands in height, and if they are to command the best prices they should be of good draft conformation having well set legs, large, round, well shaped feet of durable texture, and should weigh from 1,650 pounds to 1,750 pounds in good working condition at five years of age or at full maturity. A stallion that will sire this kind of geldings must necessarily be absolutely sound and possess good style and action. If he is a sire of good geldings he will also sire the right kind of mares.

There is money in raising good horses and there will continue to be in the future. When the automobile and the traction engine came into use the pessimist declared the horse business was ruined, but, on the contrary, never in the history of the country have values been so high nor has the demand been so great for good draft horses. There is always a good market for a good horse of any kind and the shippers say they have never experienced so much difficulty in securing good ones for the market. This condition of affairs is remarkable in view of the fact that the manufacture of automobiles is increasing beyond all expectations. It shows

that the people of the United States are buying automobiles as well as good horses and that one industry is not materially injuring the other. There is great encouragement in this for the farmer, as he can raise a few good colts each year at a very slight cost. In this respect it should be the chief aim of the breeder who would make his business pay the most revenue, to produce the best horses possible for him to breed, as a good horse is more easily sold, brings nearly double the price of the ordinary one, and costs no more to produce. One safe guide to remember in breeding is that like produces like, and if one would raise good colts he must breed to good stallions.

Great care should be used in selecting a stallion suitable for use on the mares in the vicinity in which he is to stand for service. If the mares are light boned and small, no attempt should be made to breed the very largest type of stallions on them the first cross, but instead a medium sized stallion should be used. On the produce resulting, the heavier and larger types of stallions can be used. If the mares to be bred are coarse boned, coarse jointed, sluggish mares, a stallion should be selected to overcome these faults. He should be of fine conformation yet possessing sufficient bone of good quality. He should be of fiery temperament and very energetic to give more ambition and style to the colts. In short, a stallion selected for public service in a community should be selected to overcome the faults most common to the mares of that vicinity. It patrons have a preference as to color, secure what a majority of them want and not what most appeals to one's personal fancy. This will mean dollars and cents at the close of the season.

Not all are probably aware that Kansas stands fourth in the United States in the total number of horses as well as in the total value. It is also fourth in the breeding of pure-bred Percherons. I am glad to state that my county (Butler) stands at the top of the list in this respect, but am sorry to say that less than one-half of the stallions standing for service in Kansas are of pure breed and registered.

The purchaser of a stallion makes a mistake not to buy a thoroughly reliable breeder so that he may have assurance that he is getting what his pedigree calls for. Any animal intended for breeding purposes can be depended upon as to purity only in so far as the breeder himself may be depended upon as to honesty and character.

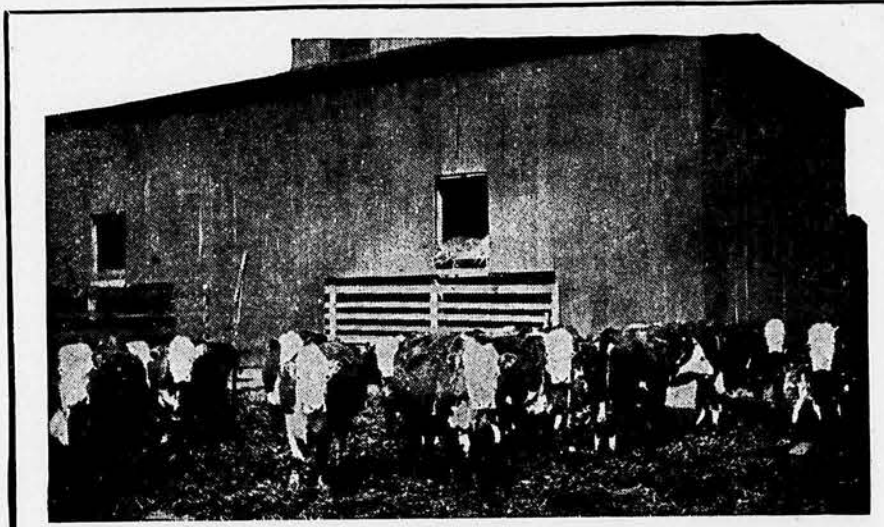
Draft Horses in Strong Demand.

More than 112 million dollars worth of horses, and over 23 million dollars worth of mules, have been exported from the United States in the sixteen months ending January 1, 1916. This is a greater total in cash received than we obtained for all horses and mules exported during the preceding sixteen years, and our shipments show no signs of lessening. Good draft geldings are in keep demand also, and are bringing from \$275 to \$325 on the Chicago market, despite the pessimistic comments of country horse buyers, who generally seek to give, for selfish reasons, the impression that drafters are not wanted. Farmers who cannot secure satisfactory prices at home should club together and ship their draft geldings direct to the large markets. Country horse buyers are doing all they can to hammer down prices on drafters in the country, for their own profit, and are having fair success. The war horse demand keeps business going, and if a big drafter is passed by often enough, the farmer who owns him may take the price offered. For this reason, direct shipments should receive consideration.

The urgent need—more apparent than ever before—is for men to assemble small but select bands of mares, absolutely sound and right in every way, breed them to really high class sires, and develop and show the colts. From such hand picked studs, stallions can be developed fit to head any band of pure-bred mares. This is precisely what American breeders are most urgently in need of now, and the opportunity is a great one.

It is never safe to use coal oil to start a fire. Too much precaution cannot be exercised in the handling of coal oil and gasoline.

A good supply of bolts, screws and nuts will save a great many hours of hard labor later on in the season.



PURE-BRED HEREFORDS ON LIVE STOCK FARM OF C. S. PERKINS, LABETTE COUNTY

LIVE STOCK IMPROVEMENT

More Co-Operation in the Use of Pure-Bred Sires to be Desired

A VERY large proportion of the bulls in use on the farms are not registered animals. The great variety of colors which appear among our common cattle are evidences of this promiscuous system of breeding. There is not only a mixture and variety of colors to be noted, but animals of both dairy and beef type in the same herds. There is probably no one single indication of good blood in animals so quickly noted by the casual observer as that of color. We never hear of a load of cattle of mixed breeding topping the market at our live stock centers. Some certain breed will invariably be found to be winning that distinction, due to their great uniformity in size, color, form and finish.

Improving farm animals by the use of the pure-bred sire is so cheap in comparison with the results accomplished and so easily practiced that it seems strange that every farm producer of live stock or live stock products should not avail himself at once of the use of the pure-bred sire in elevating the character of his domestic animals. It is possible to give every calf in the herd a pure-bred sire at an additional expense of \$2 or \$3 a calf; the colt a registered sire for from \$5 to \$10 per head, and other domestic animals in proportion. The increased value of the stock thus produced is far in excess of the cost.

This kind of breeding has for its purpose the improvement of the herd or home stock of the farm as a whole until it approaches in excellence the pure breeds or strains which have been developed by years of painstaking work by the creative breeder. Its purpose is simply to multiply excellence, taking advantage of the expensive work of the creative breeder by using as sires the individuals which he has produced to elevate the quality of the whole herd. It is a recognized fact that the great droves of steers coming to our central markets owe what excellence they possess to the pure-bred sires used in the breeding herds. The great ranches of the West have been far more progressive in the introduction of high class sires than the small farmers of the corn belt. It is a familiar fact to the buyer of feeding cattle that the steers shipped in from the large ranches are far more uniform and of much higher quality than the steers commonly called "natives."

PLAN FOR IMPROVEMENT.

The first point to be settled in the improvement of any kind of live stock is to decide what types or breeds are best suited to the conditions under which they are to be produced. If one finds that the production of baby beef is the most desirable line to follow in the cattle business and the Hereford suits the conditions as a breed, the first step would be to purchase as good a bull of this breed as the pocketbook will permit. It might be well to look the home cows over carefully and possibly discard a few which are of manifestly undesirable type for the purpose. After this sire has been used until his heifers are of breeding age, another bull of the same breed and type must be selected. Under no considerations should changes be made from one breed or type to another unless for the very best of reasons. After a few top crosses have been made along this line, coupled with a little judicious culling of undesirable females, it will be found that a splendid bunch of breeding animals has been developed suitable to the purpose desired. This is but an illustration of the methods of improvement, but it will be equally successful with all the domestic animals from poultry to horses.

The breeding of pure-bred animals is an expensive business in comparison with the plan outlined above. All forms of breeding which have for their purpose the producing of individuals better than any that have gone before are expensive, and for that reason the breeder of pure-bred stock must receive compensation for what he has put into his productions. The determination of many to pay little, if any, more for a sire of pure breeding than for a market animal is largely responsible for the far too prevalent use of the grade or scrub as a herd header.

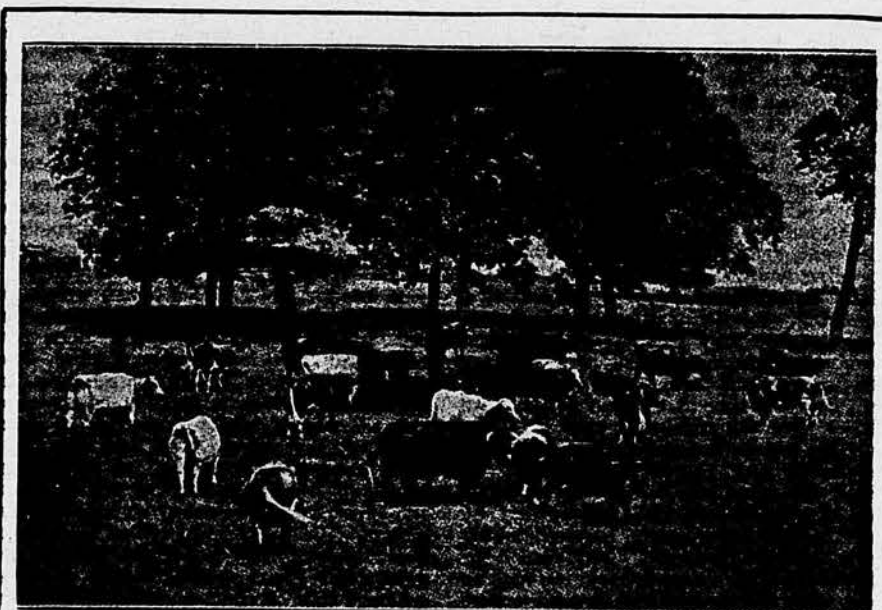
ENCOURAGE ENTERPRISE.

Where an individual farmer introduces a beef or dairy sire of high quality into a community, the animal's usefulness is greatly restricted because of the limited number of females in the herd and the fact that long before he is too old for service he must be disposed of to avoid inbreeding. There is too little encouragement given to the man who has ambition enough to bring a high class sire into the small herd he may possess.

It should be seized upon as a splendid opportunity by his neighbors. They should be glad of the chance to pay a breeding fee of two or three dollars or more, in order to secure the use of such a sire, and so be able to discard the scrub or grade and begin some real live stock improvement. Even the renter, with little or no capital and with but a small amount of live stock, can take advantage of such an opportunity as this. The payment of a reasonable fee is even cheaper than actually owning a high-class sire. Many more high-class sires would be introduced by the owners of small herds if such encouragement and co-operation could be assured. Such sires are sometimes passed by for the scrub because of the saving of two or three dollars in the service fee. Such a community must be educated to appreciate the value of a really high-class sire as an improver of the farm stock. Where the fullest use is made of such a sire in a community, the results will soon be apparent. More pure-bred sires will be introduced, and if these new introductions are of the same breed and type, the locality will soon have a reputation as a center for the

kesha County, has become a famous Guernsey center.

There seems to be no good reasons why more of this same spirit of co-operation and community interest could not be as successfully employed in hastening the more rapid improvement of the farm stock in Kansas. This method has been employed to some extent in the introduction of stallions for breeding purposes. The amount of money required to secure a really good pure-bred horse practically prohibits an individual from owning one for grading up his own stock, and the reluctance of the general public to pay the higher breeding fee necessary has practically forced the organization of companies for the introduction of high class registered stallions. The methods employed in the formation of these companies is largely responsible for the dissatisfaction which has followed in the wake of many of the company horse deals. They have been organized by outside parties, in most cases with no other interests than to get the horse unloaded onto the community at the highest price possible and get their money or bankable notes and leave.



THE OWNER OF A PURE-BRED HERD IS A PUBLIC BENEFACITOR—LIVE STOCK STANDARDS OF WHOLE COMMUNITY RAISED BY PRESENCE OF SUCH STOCK AS SHOWN IN THIS ILLUSTRATION

production of that particular kind of stock. The exchange of sires will be facilitated and a ready market secured for surplus stock.

COMMUNITY EFFORT.

In bringing about the improvement of our farm live stock, there is probably nothing that would so hasten the results desired as more community of interests and general co-operation between the producers of live stock and live stock products. The great centers of the world for the improvement of live stock stand as monuments to the advantages of these methods of improvement. All our leading breeds of farm animals have been developed under such conditions. Nothing but Jerseys have been bred on the Island of Jersey for generations. The same is true of the Guernseys on the Island of Guernsey, and of the Holstein cattle of Holland. Our great breeds of beef cattle have been developed in the counties, or shires, of England and Scotland by community methods which have practically excluded all other breeds from the respective shire or community. Our leading breeds of horses, sheep and hogs have been developed under similar conditions.

The results of such limiting of breeds in a community has a few notable examples in the United States, the most progressive state along this line being Wisconsin. Already over thirty community breeders' associations have been formed in that state representing dairy breeds of cattle. The results around the small town of Lake Mills are but typical of the prominence of these various organizations in building up the breed represented. This town has become noted as the greatest Holstein center in the Middle West, cattle having been shipped all over the world from this point, as high as \$175,000 having been received in one year from the sales of surplus stock. Similar results have been secured among the other leading dairy breeds in other communities of the state. The Waukesha Guernsey Breeders' Association, which was organized in 1906 in Wau-

There is absolutely no reason why a few reliable farmers in a locality cannot make a success of the purchase of a desirable, high class stallion for use among themselves and their neighbors for breeding purposes. If they will carefully handle the situation and the organization of the company so that all the details are worked out in advance of the purchase of the horse, money will be saved, and, in most cases, a far better animal secured. A company organized in this manner composed of individuals selected with the idea of thorough harmony and co-operation will be far more sure of success than those which have been organized by the parties having the horses for sale.

TEMPTATION TO USE GRADE SIRE.

The wonderful results coming from a few crosses of pure-bred animals of high individuality is often the very cause of the final failure of this system of improvement. It should never be forgotten that, although the half or three-quarter blood animal may look as good as his sire, and perhaps actually be as good for market purposes, he is worthless for breeding purposes if any further improvement is expected. With the use of grade sires for breeding purposes, all improvement ceases except what little may be secured by the slow method of selection. The beginner can hardly resist the temptation to save from the herd some promising grade pig, calf or colt for breeding purposes because of his fine individuality inherited from his pure-bred sire. This is no excuse for his use as a sire. He is but a living example of the great power of the pure-bred animal for improvement. No matter how good he may be as an individual, he is certain to be lacking in that propensity as a breeder which is so essential to the general improvement and upbuilding of the herd or flock. The grade is often used because he is so much cheaper than the pure-bred sire. He is really dearer at any price, for the results in one crop of offspring will often far more than make up the difference in cost.

The use of the grade sire saved from the herd or flock is almost sure to bring about more or less in-breeding, which, in itself, is a very undesirable practice. The great breeders and importers of live stock have, at times, resorted to "in-and-in-breeding," "in-breeding," "line-breeding," or "close breeding," the terms simply referring to different degrees of relationship in animals bred together. While these practices may have been useful in some cases to the creative breeder when carried out with some definite purpose in view, they have no place in the improvement of the general farm stock by the up-grading system. Loss of size and vigor and inferior powers of reproduction are almost sure to follow the practice. It is also true that no amount of care in the use of improved systems of breeding will overcome the results of poor feeding and improper care and management must go hand in hand with good breeding. These facts should never be lost sight of in the work of building up the farm stock.

A MISTAKE OF BREEDERS.

The greatest need at the present time, in order to hasten the improvement of our farm stock in Kansas, is the use of more pure-bred sires among the producers of market stock. The pure-bred breeders could, perhaps, do more to encourage the bringing about of this result. It would seem that at the present time the production of high-class sires for the grading up of our common stock should be the principal business of the pure-bred breeders of the state. There is far too much effort given by many to the setting up of a multitude of small pure-bred breeders with a few females before they have any conception of what it requires to become a successful breeder of pure-bred stock. These small breeders, who have been urged to begin in this way, expect at once to step into the position of prominence occupied by the men of whom their purchases have been made and begin to reap profit from their operations as creative breeders. Through inexperience, the results oftentimes are financial failure, and the man who has failed is bitter against pure-bred stock and, as a result, the whole business of pure-bred stock is given a setback in that community.

GRADES FOR MARKET.

It would be utterly impracticable to attempt to place pure-bred stock upon every farm at once. It is too expensive, and there is not enough pure-bred stock in the country to go around. For market purposes, the high grades are as useful as pedigreed animals, and, while it should be the ambition of every live stock farmer to eventually become the owner of nothing but pure-bred animals, he would be foolish not to take advantage of the cheap and efficient system of grading up by the use of pure-bred sires and thus securing at a nominal cost practically all the excellence of the improved breed as far as market purposes are concerned. While it is true that we have need of far more first-class breeders of pure-bred stock, the average farmer would be far more sure of reaping financial success by sticking to the system of up-grading. The results by the up-grading system are so surely and so cheaply accomplished that even the man who expects to become a breeder of pedigreed stock would far better make his beginning by this method and gradually work up to the pure-bred business.

A rack containing alfalfa should be so placed that the hogs have free access to the hay at all times. In addition they should be supplied with minerals. It is a good plan to dump the wood and coal ashes in the lot where the hogs run. A mixture composed of a basket of charcoal or fine coal, five pounds of salt, five pounds of air-slaked lime, and two pounds of sulphur, will give good returns if kept easily available.

Seed oats brought in from Texas or the South may contain Johnson grass seed. This is a serious pest. If seed oats contain this seed, most of it can be "fanned" out and the small amount left will hardly cause serious damage, especially where the oat stubble is plowed after harvest for wheat. If you know you have Johnson grass, it can be easily destroyed the first year. A severe winter will kill the exposed roots in the northern part of the state. Examine your new seed and clean it.

The rubber tire bill of Kansas is about five million dollars per year, and it is increasing at the rate of one and one-quarter million dollars annually.



ED. H. WITTE
Master Engine Designer and Builder

PREPAREDNESS

It took forty-six years for the French and Germans to prepare for the present great conflict. The efficiency of their armies and navies is the wonder of the world.

On a much smaller scale, forty-eight years of similar careful preparedness has produced the highest efficiency and worth in the Witte Engine Works and their goods.

It is not generally known, perhaps, that this concern, located in Kansas City, is the largest exclusive and most highly equipped and efficient kerosene and gasoline engine factory in the United States.

The Witte Engine Works is not a soulless corporation managed by a board of directors or owned by a trust. It was built up and is personally managed by that master engine designer and builder, Ed. H. Witte. It is the only factory that has come down through the entire history of the industry under the management of one man.

For forty-eight years the Witte Engine Works has been doing a square and upright business. During all these years first Father and then Son have constantly labored for their ideal—to produce an article which the public needs in large quantities, and to produce the *best* for less money than anyone else could do it.

Long before the word preparedness came into its present general use, the slogan of the Witte Engine Works was Efficiency, Service and Preparedness.

The value in a power producing machine—automobile, tractor, kerosene or gasoline engine—does not exist in mere weight of metal, paint, printer's ink or salesman's talk. The value lies in the *service* that the machine will give—and the guarantee of the factory that stands *behind* the service.

A postage stamp is just as efficient as a salesman, agent or branch store when dealing with a reliable, one-price house. More efficient, in fact, because factory experts can give definite, trustworthy advice about the proper size engine for the work and solve similar problems that come up. The user is in *personal* touch with the maker.

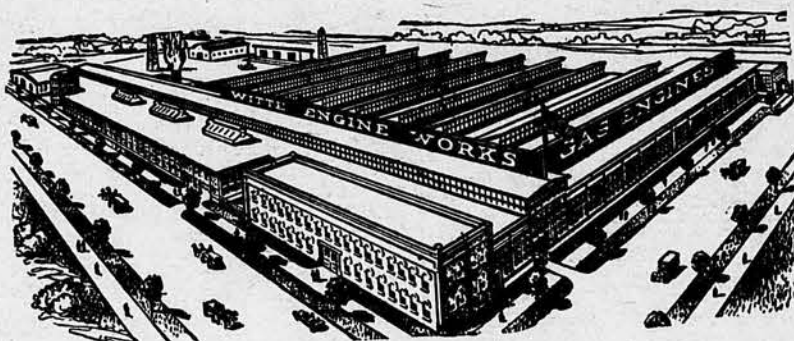
In dealing direct with the factory, one has *first-hand* information. Every statement about the goods is first-hand. The engine is tested thoroughly and reaches the buyer in perfect adjustment and ready to go to work. No danger of buying a second-hand machine or one that somebody has tinkered with till adjustments are all wrong. You will have a latest model with all the latest improvements. If anything should go wrong—an accident, perhaps—a card or a wire to the factory will bring repairs **QUICK**. No matter if it be in two years or twenty years. There is no danger of OUR handling some other engine.

This factory produces nothing but internal combustion engines. In it will be found hundreds of machines for engine production, especially designed by Mr. Witte, and either wholly or partly built by him, and are not purchasable on the open market at any price.

All of the WITTE experts, the equipment—its million dollar plant and assets—are at *your* service. Why should *you*, in buying an engine, pay 40 cents for turning a six horse-power crank pin when Ed. Witte's special machine will turn it for 6 2-3 cents? Why should you pay 18 cents or more for turning a two horse-power gear when a WITTE machine turns them out for 1 cent or less?

All these little expenses that make up the cost of an engine count! Why should you pay more than \$4.80 for the labor that goes into an engine when Ed. Witte's automatic machinery cuts the labor cost of an engine to that figure?

In addition to all this, remember that you pay no "profits" to anybody when you buy a WITTE engine, except the one small factory profit. When we sell you an engine, we stand back of it. A constantly growing business and a clean "100-cents-on-the-dollar" record for forty-eight years should be sufficient evidence on that point.



The Million Dollar Factory Back of Witte Engines and Witte Guarantee.

WITTE material, WITTE service and WITTE prices stand alone. It is the combination of these three features that has built up the factory from nothing to a great plant with a capacity of thousands of engines a month.

A WITTE engine is the product of specialists—experts. Every thought, every energy of Mr. Witte and his hundreds of employees is devoted *exclusively* to the build-

ing of *better* engines for *less* money. We do not make or sell another single article. To do so would mean a division of interest in the work.

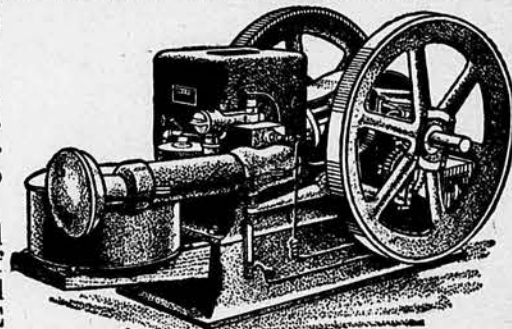
The fact that we turn out the greatest number of engines is secondary to the effort to turn out the *best*. Each engine is given as careful handling, as rigid tests and as close an inspection as though we built only one engine a day.

AN INVITATION

We are anxious to have you visit our plant and see the wonderful manufacturing equipment that has made it possible to sell high-grade engines at such a low price. The plant is located just south of the east end of the Fifteenth Street care line. Your visit will be our pleasure.

If it is impossible for you to come in person, permit us to send you free our descriptive book, "How to Judge Engines."

Write us today. A card or your name on a piece of blank paper will bring full information about WITTE engines and the Witte factory. Let us save you money.



WITTE 1916 MODEL KEROSENE ENGINE
Why burn 20-cent gasoline when 6-cent kerosene will give more power per gallon?

WITTE ENGINE WORKS

1600 Oakland Ave.

Kansas City, Mo.

The New Case 40—\$1090



"—the motor that makes extra cylinders unnecessary"

So said an automobile expert after he had examined the Case 40, both in the shop and out on the highway.

You will say the same thing when you drive it on a heavy country road or up a steep hill, or on the car's 100,000th mile. We have built this car to earn the title of the 100,000 Mile Car.

CASE

The new Case 40, advanced in design and comforts, still retains all the basic engineering features which gave the earlier Case 40 such a splendid reputation.

What other car has such a pedigree as this new Case 40? Where can you duplicate this certainty of satisfaction? Made by Case-trained workmen in the Case plants (you know what this means to you), the Case 40 has behind it a reputation of nearly four-score years. One genera-

tion after another has found in Case products genuine satisfaction. The new Case 40 is bound to add to Case fame everywhere. You will admire its beauty. As you ride in it you will admire its comfort and performance.

Once you own a Case, you will be satisfied. There is no time like the present to learn about this new car, with 120-inch wheelbase, cantilever springs, room for seven and many other features, all for \$1090. Better write for catalog today.

J. I. Case T. M. Company, Inc.

535 Liberty Street
Racine, Wisconsin

Auto-Oiled Windmill

ALL WORKING PARTS INCLOSED

and flooded with oil from the supply in the gear case, which needs replenishing only once a year.

Put your old Aermotor wheel and vane on this self-oiled motor, and have an up-to-date outfit at small cost.



Don't waste your time climbing to oil an old mill. Replace it, on your old tower, with an Auto-Oiled Aermotor which will last you a lifetime and furnish you an abundance of water.

IT NEEDS ATTENTION ONLY ONCE A YEAR.
Write for Folder-Hanger. It tells all about Auto-Oiled Aermotors and Easy-To-Build-Up Towers.

AERMOTOR CO., 1112 S. Campbell Ave., CHICAGO

READ KANSAS FARMER'S CLASSIFIED
ADVERTISING PAGE FOR READY BARGAINS



ROAD QUESTIONS

SUBSCRIBER F. U. D., Kingman County, asks the following questions:

"I have been working four horses and one man on the road for three days. Can I collect for half of the time, or is this merely a custom in some townships?"

"If we are using the township grader can the township board take the grader away from us and give it to a person to work county roads in same township before we finish our road we have started? Or can they take it until we get through with it?"

"Does the township board get any state tax to be distributed among the several township road districts overseers?"

These questions have been answered as follows by W. S. Gearhart, state highway engineer:

"Road work is entirely in the hands of the township board. It must be done under its direction, and the price must be agreed upon before the work is started."

"The board has absolute authority in all matters relating to road and bridge construction on the mail routes and township roads, and can do with the machinery as it sees fit."

"The state constitution prohibits the appropriation of any state money for highway improvement. The county cannot distribute funds for the maintenance of township and mail route roads that are under the direction of the township board. The automobile fees are to be used for the maintenance of the county roads, and cannot legally be used for any other purpose."

Cement Granary Floor.

O. D. S., Wilson County, asks if it is possible to make a satisfactory granary floor of concrete. He has one, but it draws dampness from the ground.

A properly constructed concrete floor is the most satisfactory floor that can be made for a corn crib or granary. In order to prevent its drawing moisture from the ground, it must be laid over a base at least six inches thick, of crushed rock or cinders. This base should be wet and thoroughly tamped before the concrete is laid. Its purpose is to provide drainage so that no water ever stands directly under the concrete. In order to make it doubly sure that no moisture can come through, a layer of three or four-ply tar paper can be placed after two inches of mortar has been laid, and the balance of the material placed on top.

Feeding Floor for Hogs.

E. L. P., Jewell County, asks what kind of feeding floor is most satisfactory for hogs.

There is nothing that makes a better feeding floor than concrete. It is easily kept clean, and if properly laid, is practically permanent. Such floor is simply a series of slabs of concrete laid as is sidewalk. A trench twelve inches deep should first be dug around the outside of the floor and filled with concrete. This is to prevent the hogs from rooting under the edge of the floor as they would do if four or five-inch slabs were laid without this protection. The feeding floor should be given a slight slope, about one-quarter-inch to each foot of length being sufficient.

Pruning Grapes and Trees.

E. P. W., Barton County, asks how to trim grape vines, fruit trees and shade trees.

Grapes should be pruned at least a week or ten days before they start new growth. Each vine should be restricted to three or four strong canes cut back to the length at which the vine is to be headed. Old canes should be cut back to two or three buds of new growth. In our February 19 issue the pruning of grapes was described in some detail.

The different kinds of fruit trees require different methods, based on their fruiting habits. The pruning of the principal kinds of fruit trees was described in considerable detail in our issue of February 12.

In the pruning of shade trees, branches should be removed as the tree grows while they are still but twigs. It is always desirable to have shade trees headed high enough so that no branches will interfere with walking under them. The ideal shade tree type is a central

trunk from which the branches grow with some regularity. As the tree grows, branches that are likely to interfere with others should be cut out. It is never a good plan to remove large limbs unless absolutely necessary. In old trees, all dead or injured branches should be cut out each season. This work should be done during the dormant season.

Kind of Oil for Harness.

R. H., Pottawatomie County, asks what kind of oil to use for harness.

The best grade of neat's-foot oil should be used. The oil is practically colorless, and it is customary to use a pint of Eureka oil to a gallon of the neat's-foot oil. This black oil gives a dark color to the leather. Oil for harness can be purchased usually from the local harness dealer. The harness should always be washed clean before the oil is applied, and kept warm during the process.

Setting Red Cedars.

C. L. B., Mitchell County, writes that he has about a thousand red cedars that he wishes to set out this spring, and wants to know how early he can begin and how late it will be safe to set them.

The proper time to set either evergreens or deciduous trees in that locality is the latter part of March or forepart of April. By early planting the roots will have begun to make growth by the time the leaves or the part above the ground has started, and will therefore be in condition to supply moisture. Late planting is always objectionable because the leaves start before the new roots have developed and the tree is more apt to die.

Evergreen trees of all kinds are very sensitive to exposure to the air. A very few minutes in a drying wind will kill a young cedar. To avoid such danger, the roots of the cedars being being planted should be protected by puddling them as soon as they are dug. This is done by mixing dirt and water until it is of a soupy consistency. By dipping the roots into this mixture they will be coated with mud, and in this condition will stand much more exposure to the air without being killed. A cloudy or damp day is the best time for transplanting trees of any kind. On such days they can be handled with much less danger of the roots drying.

It would be our advice to begin setting these red cedars at once, and endeavor to have them all transplanted before the middle of April, if possible.

Pasturing Young Alfalfa.

R. T., Anderson County, asks if he can safely pasture this spring, some alfalfa seeded last fall.

Newly seeded alfalfa can be easily damaged by pasturing it before it is well established. It is very seldom advisable to pasture fall seeded alfalfa the following spring. An alfalfa stand is worth too much to take any chances of losing it. The plants must develop some leaf growth before they can begin to draw on the soil for plant food and carry on the necessary processes of plant growth. If every leaf is cropped off as soon as it starts, the plant cannot grow and become firmly established in the soil.

We would advise our correspondent to keep all stock off his fall seeded alfalfa until into the summer at least. If it is on rich ground and seems to be well established, he might pasture it cautiously later in the season.

Japan Clover.

We have been asked if Japan clover, or Lespedeza, is a valuable plant.

This is one of the hardiest of the clovers with the exception that it does not stand cold weather very well. It was first introduced in the Southern states, and has become a valuable plant for that section. It is establishing itself in the pastures and along the roadsides in Southeastern Kansas, and is a plant to be encouraged. It will thrive on practically all kinds of soils, has considerable resistance to dry weather, and also seems to have the ability to thrive under wet weather conditions. It has little value except as a pasture crop. It is an annual, but where it has once become established, it re-seeds itself each year and has been known to crowd out even Bermuda grass. This clover will grow on poor soils and in partial shade, and like all the clovers, is rich in nitrogen, and has a beneficial effect upon the soil. If

it once gets started in a pasture it will spread over the whole area in a short time.

Location of Milk Room.

We have been asked if a milk room should be partitioned off in the barn where the cows are milked, and how it should be equipped.

This is not a proper place for locating the milk room. Milk is a food product, and should be taken from the stable as quickly as possible. A milk room can be built as a lean-to or shed, although it is better to make it as a separate building. Such room should be provided on every farm where very many cows are milked. A room 12x14 feet is large enough for the average dairy farm, but a smaller dairy room could be used. Since it is important that the milk room be kept as clean and sanitary as possible, it should be supplied with plenty of windows to let in the sunlight. The outside construction should be of such nature as can be cleaned readily. In this room the separator should be set, and a tank should be provided for the washing of milk pails, cans, and other utensils. A gasoline stove or some other means of heating water, should be provided.

Creosoted Wood for Farm Buildings.

American cities first learned from Europe the value of creosoted wood blocks for street paving, and in like manner we can learn a lesson from rural Europe in the use of creosoted wood for farm buildings. In times of peace, England, France, Germany and Italy consume enormous quantities of American lumber, principally Southern yellow pine, much of which is creosoted and employed in building farm structures. They have discovered that the Southern pine, impregnated with creosote by modern methods, is practically impervious to decay, making the most economical of building materials, even though the first cost is necessarily much higher there than in this country. Much of the rural building abroad, especially on large estates in England, is done under blanket maintenance contracts, and the large construction companies working under such conditions employ creosoted Southern yellow pine (or "pitch-pine," as it is called over there) almost exclusively, because of its enduring qualities.

Another virtue of the treated wood is that the creosote with which it is impregnated is a powerful disinfectant and repellent of vermin and insects. Stables, barns, hog-houses and other farm buildings of creosoted pine not only are sanitary, but the animals occupying such structures are freed of the annoyance of flies, gnats, and vermin of all kinds. Rats and mice have a strong aversion to the smell and taste of creosote oil, and will not inhabit a structure of wood treated with the preservative.

There is a growing demand for creosoted lumber and building timbers in this country, and the market already is such that treated pine and other woods are available everywhere. Sooner or later American farmers generally will come to appreciate the value of creosoted wood for use on the farm.

Bad Spots in Roads.

Temporary repairs to roads are, or at least should be, confined to emergency measures. In proportion to the results obtained, temporary work is always expensive and is never justified by ordinary conditions. Unusual conditions, however, often occur to plague the road man. For example, the closing of a main highway to traffic because of construction, repair, or washouts may suddenly throw a heavy traffic for a short time on a little used and probably unimproved byway. Clearly, in such a case temporary expedients are legitimate.

The most common trouble met with in a case of this kind are mudholes and ruts if the soil is heavy, and dust and loose sand if the soil is light or sandy.

On a clay or gumbo road mudholes usually cause the most trouble. As water is absolutely necessary for the existence of a mudhole, any treatment, whether temporary or permanent in character, must provide for getting rid of the water. The first step is, therefore, to dig a trench to the side and allow the water and mud to drain. If necessary, open up also the side ditches. Furthermore, remove all of the soft mud left in the mudhole. The bottom of the trench should be filled with broken stone or coarse gravel so as to provide a drain to prevent any further accumulation of water. Gravel is the best material for filling the old mudhole. If gravel is not available, use the best earth at hand, tamping it down in 3 or 4 inch layers. If possible, spread a little gravel or sand over the new fill, which should be made slightly higher than the adjoining road surface. The best treatment of all, however, is to keep the drainage in good

condition. Serious mudholes will then rarely develop.

Don't try to fill a mudhole without first draining out the water and removing the soft mud. Don't try to fill it with large stones, because if this is done there will soon be two mudholes instead of one. Don't try to fill a mudhole with sods or similar material which absorb water readily.

On an earth or gravel road ruts are best treated with the drag. Don't be afraid of dragging too often during a rainy spell. If a thin coat of sand or gravel be spread over the road surface when it has been softened by rain and then worked in by traffic and a liberal use of the drag, a poor earth road can be much improved and made to carry a surprisingly heavy traffic for a short time.

In contrast to the clay or gumbo road, the sand road gives least trouble during wet weather. On sandy roads anything that will prevent the free movement of the sand particles will be of value. As long as the road is damp, the surface tension of the capillary water acts as a binder and holds the separate grains of sand in place. All efforts should, therefore, be directed toward preventing the sandy places from drying out, or to adding some binder. The addition of clay furnishes a positive binder and is really the best and most permanent treatment. The addition of any fibrous material such as straw, spent tan bark, sage brush, or pine needles is of value and, when spread on the road and covered with a thin coat of sand or allowed to work into the surface, will make an almost impassable sand road fairly good for a time. But the best way to treat a bad place, whether on a clay or a sand road, is to treat it before it gets bad. Immediate attention to small injuries will prevent later prolonged attention and extensive repairs to serious damages.

Buying Seed Corn.

A Minnesota writer figures as follows on what good pure seed corn is worth: "Concerning the price we can afford to pay for seed corn, we may figure a little in comparative terms. Seed wheat is often \$2 a bushel; oats are 75 cents and barley is \$1.25. We pay such prices for these grains and think nothing of it. We complain when asked to pay \$5 to \$7 a bushel for seed corn.

"Is it too high? At \$7 a bushel we can get ear-tested, or practically 100-per cent germinating corn and can plant about seven acres with it at a cost of \$1 an acre. Wheat seeding costs, at the figures used, \$2.50 an acre; oats cost \$1.50, and barley costs \$2.50.

"Seed corn from good ears, tipped and butted, shelled and graded and testing 90 to 95 per cent, is worth \$5 a bushel. Ear-tested corn is worth \$7 to any man if the seed is of a standard variety and pure."

The store keepers have all taken invoices of their stock. Take a hint from this and do the same, find the leaks, stop them as soon as possible, and increase your farm profits.



In the Best Farm Machines

That farm machine is best which is always ready for work and which requires the least attention.

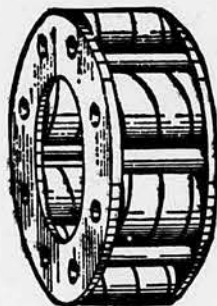
Hyatt Roller Bearings in an automobile, a tractor or any machine used on the farm mean a maximum of bearing service with a minimum of attention and care.

Hyatt Roller Bearings practically eliminate friction, thereby making power available which otherwise is wasted.

Hyatt Roller Bearings keep gears and shafts in constant alignment, thereby preventing wear and tear and frequent breakdowns.

Hyatt Roller Bearings require no attention save occasional lubrication.

Make sure your Automobile and your Tractor run on Hyatt Roller Bearings.



HYATT ROLLER BEARING CO.
DETROIT CHICAGO
NEWARK N.J.

READ KANSAS FARMER'S CLASSIFIED
ADVERTISING PAGE FOR READY BARGAINS

Nature's Imperishable Covering



RED CEDAR SHINGLES

RED CEDAR SHINGLES are made better today than twenty-five years ago. The present day huge output has demanded more scientific machinery, better and keener methods in every sense, truly assuring the Red Cedar Shingle its due as "Nature's Imperishable Covering." And to make doubly sure, the Shingle Branch of the West Coast Lumbermen's Association, consisting of forty mills manufacturing three billions shingles per year, has established an Inspection Bureau for the purpose of positively maintaining perfect grades. All shingles inspected and O. K'd by them are identified by a registered trade mark, which enables you to have absolute confidence in the RITE-GRADE brand. The RITE-GRADE brand means NO SAP; it means selection, inspected thickness, inspected size, inspected grain, in a word it means a PERFECT SHINGLE AS SOLD—true to specification.

The roof is your watchman and your insurance. It guards all you possess under it. Under the right roof there is no rot, there is no insidious damp and damp's disease.

Your children's children will praise the roof you build with Red Cedar Shingles. It is the Roof of Ages—Nature's imperishable covering.

Nature herself wove this noblest tree of the North Pacific forests to provide shelter for mankind.

Heat, cold, wind, rain, snow, cannot warp, twist, or curl the Red Cedar Shingle roof when properly nailed with pure iron or zinc covered nails—such nails do not rust.

The Red Cedar Shingle roof is an honest roof. The roof of the pioneer cabin, the roof of the modern barn, the roof of the distinctive American home.

Figuring material and labor of applying, the cost of the Red Cedar shingle roof is low. Its length of life, forty years and over, makes it the most economical of all.

Insist on RITE-GRADE shingles—inspected and guaranteed by us—look for the RITE-GRADE trade mark which identifies this honest perfect shingle—at your lumber dealers.



WEST COAST LUMBERMEN'S ASSN., SEATTLE WASH.

Big Four Building Library Free

Put X against books you want. Enclose 2c stamp for each book to defray mailing.

FARM BUILDINGS: Some valuable new things by practical barn architects, never published before, with detailed working plans.

DISTINCTIVE HOMES: Twelve beautiful American homes, very practical, very desirable, costing from \$2,500 to \$4,500.

BUNGALOW BOOK: Twelve of the prettiest Bungalows ever designed; to help you choose a home costing from \$1,000 to \$2,500.

THE BOY'S BUILDER: Garages, Boat Houses, Dog Houses, Pigeon Coops, Bird Houses, with instructions.

Your Name
Address
West Coast Lumbermen's Association, 1025 White Bldg., Seattle, Wash.



Equip your Ford

with

LYNITE ALUMINIUM PISTONS

The wonderful light pistons that reduce the piston weight of your Ford by a full two-thirds.

This difference in weight means a great reduction in vibration and more power. By cutting down vibration you'll have greater riding comfort—less noise and rattle—more speed and flexibility and fewer repairs.

LYNITE Aluminum Pistons are acknowledged to be the greatest engineering improvement of 1916. Their use in the best of the season's high-priced cars proves this.

Put this improvement into your Ford and enjoy the same smooth, quick, powerful, snappy motor service that these cars give. And you'll find that these pistons lengthen the life of both motor and car.

The four LYNITE pistons are equipped with 12

McQUAY-NORRIS
LEAK-PROOF
PISTON RINGS

Power Producers—Carbon Reducers

Send for FREE Booklet—"Pistons and Power". Learn about these wonderful light pistons that have revolutionized motor designing.

Manufactured by

McQUAY-NORRIS MFG. CO.
2816 Locust Street St. Louis, Mo.

"Nothing Runs in Dirt but the Plows"

THAT'S the way one owner expresses it, referring to the absolute protection given every working part. Not only is every gear and every part of the transmission encased, but all are running in oil.

Another owner writes in, "It does the work of ten good mules and is the nearest fool-proof, water-proof, dust-proof and oil-proof of any machine I have ever seen."

But it takes the catalog to tell the story of this new Rumely One-Man, All-Purpose outfit—just drop a post card to the nearest branch for a copy.

You will then see how the Rumely is made from start to finish, and how in design, construction and operation it fills your particular requirements.

—then compare it with any other tractor on the market.

The three-plow size, "12-24," is \$990 cash, f.o.b. La Porte.

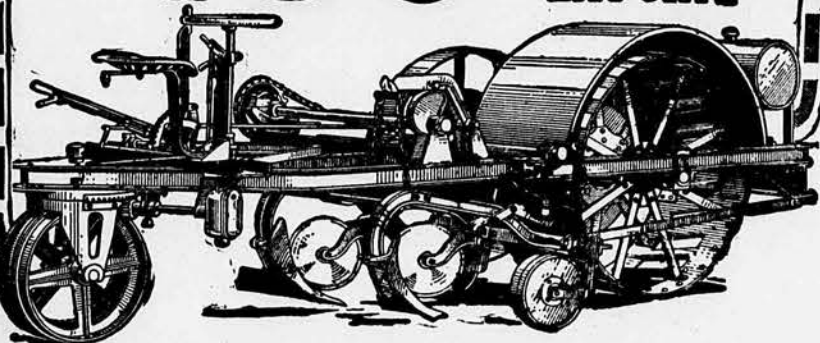
ADVANCE-RUMELY THRESHER CO.
La Porte (Incorporated) Indiana

Wichita, Kan.

Kansas City, Mo.

\$790

**CASH
F. O. B.
LA PORTE**



READ KANSAS FARMER'S CLASSIFIED
ADVERTISING PAGE FOR READY BARGAINS

BRAKE AND CLUTCH

Items of Every Day Interest About
The Automobile and for the Motorist

THE named power of an automobile or gas engine defines the amount of work it is able to do.

Properly operated, the engine may be expected to produce this power, but only for so long as every component part of it is faithful and efficient in the performance of the particular function for which it was designed. A defect in any part is a defect of the whole, and no better or plainer proof of this fact can be found than in its application to piston rings. Faulty rings will counteract the highest grade fuel, the best carburation and the most exact valve action.

Where compression is poor the explosion is weakened, and the horsepower of the motor reduced. There is no escaping the consequences of poor compression, and you cannot get good compression where badly fitting, improperly designed piston rings are used any more than you can hold air in a punctured tire.

The comparison is perfectly logical. Compressed gas in the cylinder head acts just as compressed air in an inflated tire. The weak point is discovered and the attack concentrated upon it. The results of this are more vividly brought to your attention in the case of the tire—in the case of the motor they are apt to be overlooked until the leakage reaches such proportions as to seriously cripple it.

Electric Light Equipment.

The moon, a kerosene lamp and the barn lantern used to be the trio upon which the farmer depended after the sun went down.

But now times have changed—so has the lighting system for the farm. No longer need the farmer depend on the smoky, dangerous, dim oil light. Instead, he may have as bright and cheerful a light as his city friend.

A little glass jar is sealed up with the mystery that makes the home bright, well lighted and attractive. Since the invention of this sealed electric storage battery, electric current may be generated and stored at a very low cost—so low, in fact, that the farmer may use this light not only in his home, but in his barn and sheds.

The greatest advantages of this new electric lighting system is its safety. The danger of the old light in the barn was particularly noticeable in the case of feeding the stock. If the lantern tipped over in the hay, barn and stock were quickly destroyed. This safety is even more appreciated in the case of a fire insurance company will pay the terrible loss that an upset lamp will cause. Many a child has pulled off the table cloth or turned over a stand and started the fearful work of destruction. Every day you used to read in the papers about some farm home being destroyed by an overturned kerosene lamp.

The convenience of this new storage battery system is another great advantage. No matches, no fussing around to get the chimney off the lamp. A turn of the button and light floods the porch as well as the room.

The new lighting system leads to other improvements about the house. Not only does it make the home attractive for your friends as well as for yourself, but if you have the system in the house you can easily add such convenience as electric irons, electric fans, electric toasters, electric vacuum cleaners.

No arguments need be advanced for such improvements, because every one knows how a city home has been made more comfortable, more attractive.

In this age of invention, those improvements for the home have been most appreciated.—R. D. MOWRY.

Cost of Hauling With Horses.

A two-horse team will haul, on a good hard gravel road, fifty bushels of sixty-pound grain at the rate of two miles per hour. According to Farmers' Bulletin No. 672, the Bureau of Crop Estimates finds an average distance from farm to market of six and five-tenths miles for all the farms of the United States. It requires about one-half a day for the average farmer to make a round trip with wagon from farm to market. This bulletin also shows that the size of an average wagon load of wheat is fifty-three and five-tenths bushels or 3,200 pounds.

If it requires half a day for a farmer to go to market and back with his team, the cost of horse labor for the trip will be about \$1.25, figuring five hours' work and horse labor at 12½ cents an hour, which is a very fair price. The govern-

ment in 1906 estimated that the cost of wagon hauling for wheat per day was \$3.60. Since 1906 prices have gone up considerably, so that a fair cost for today would be about \$4.35. For one trip it would be just half of this—\$2.18. This is verified by taking the cost of horse labor as given above at \$1.25 and adding to it a half-day's time for the driver, let us say \$1.00, or a total of \$2.25. On the basis of ton-miles the cost is about 23 cents. (Three thousand pounds equals one and one-half tons for six and one-half miles, which is nine and three-fourths ton miles, costing per trip \$2.18—divided by nine and three-fourths is 23 cents.)

This average cost varies. The government finds that in some cases it costs only 17 cents a ton mile on good roads, while on extremely bad roads the cost runs up to 35 cents a ton mile.

An inner tube which leaks at some part away from the rim, permits the air to escape through the fabric of the tire. The usual result of this condition is "air bubbles" which blow out in the side cushion above the bead. This condition is a result of a small leak in the tube caused by the tube being folded over or punctured by a nail or other sharp obstacle, in such a manner that air cannot escape through the place where the puncture was made.

Improved Bearings for Tractors.

The substitution of roller bearings for plain bearings in gasoline tractors reduce the power lost by friction from 60 to 70 per cent under average conditions, and much more than this when the plain bearings are not in absolutely first class condition. Plain bearing friction losses increase rapidly with wear, due to misalignment of the bearings, while the very small friction loss of a roller bearing will remain practically constant due to the fact that wear is much less than plain bearings, and the alignment of all shafts and gears remains constant almost indefinitely.

Plain babbbitted bearings must be replaced at least once every second season, and sometimes once or twice a year. They usually develop trouble right when the tractor is being worked to its maximum capacity, and the result, shut down to pour a new box, often means loss of valuable time when the tractor should be working to finish up a job of plowing or harvesting. A roller bearing properly incorporated in the design will last for the entire life of the tractor. If, for any reason, it should be necessary to replace one, it would be much easier to do than to rebabbitt a plain box, as they are all made interchangeable and the replacing of the roller bearing is but the work of a few minutes.

The progressive farmer has become acquainted with roller bearings through the extensive use of automobiles, and is today demanding that his tractor render the same care-free service as regards the bearing equipment, as does his automobile. It would be impossible to market a car today with plain bearings in any of the transmission or running gear positions, because this would mean that the driver would have to get out and oil up every 20 to 30 miles or so.

Whatever the professional economist may think of automobile owning as an indicator of wealth it sufficeth the Kansas farmer to know that he can afford to own a "buzz-wagon" or "gasoline buggy" and get over the highways of the state in quick time, with or without a load of farm produce. Car owners in Kansas pay \$331,812.75 into the state treasury for license money on motor vehicles, which money goes back into the road fund. Figures compiled by the secretary of state's office show that in 1915 there were 74,123 motor cars and 8,260 motorcycles licensed by the state. These figures represent an investment of approximately \$75,000,000 for autos and one and one-half million dollars for motorcycles.

This means that there is a motor vehicle for every fifth or sixth family in the state, the per capita ownership being 22.5.

Sedgwick, Reno and Shawnee Counties lead in auto ownership.

If absolute freedom from carbon be desired, exercise care in buying gasoline, as poor gasoline is just as frequently the cause of carbon formation as poor oil.

MAKING BABY BEEF Let These

In general there are two main causes for the increased tendency among feeders to put prime finish on yearlings of high quality. First, an increased demand by consumers for small cuts of high-quality beef; second, certain changes in methods of beef production brought on by increased cost of production. General conditions within the past few years have indicated that no class of beef as yet produced more nearly fulfills the requirements of both producer and consumer as does the class known as "baby beef." Taking present feed-lot and market conditions as a criterion, it would appear that these tendencies are growing and that the production of "baby beef" in the future will be even more popular than it is at present.

In the early days of the cattle industry cattle were kept on the ranges until from 3 to 5 years of age. The use of better bulls, with consequent general improvement in quality and maturing ability of market cattle, together with heavier grain feeding, has made it possible to put just as much beef on the market at from 13 to 20 months of age. The average age at which "baby beef" is put on the market at the present time is probably between 14 and 16 months, and feeders seem to think that in time with improvements in breeding herds and feed-lot methods the same weight of carcass, with more quality, may be put on the market at even an earlier age.

Top prices and prices that will pay for the cost of production are given for "little" cattle when they carry "prime" finish. To put this finish on this type of cattle requires experience and skill. At the present time commission men complain of many would-be baby beefs being shipped to market in half-fat condition. Markets pay a premium for the extra finish, but half-fat yearlings are marketable only at a discount. An axiom in stock yards is "Few feeders are able to turn out a fat yearling."

The following are advantages mentioned by feeders of experience as reasons why they favor finishing their cattle as baby beef:

First. The younger cattle make more gains on the same amount of feed than do the cattle with more age. To get such gains, however, it is necessary that the calves be pushed from the time they are dropped. In addition to the milk the calf gets from its dam, it should be given a grain ration just as soon as it will begin to eat. As expressed by one feeder, "The calf should be fed so that it will never know when it is weaned."

Second. The money invested in cattle is turned faster. Under old range conditions money invested in cattle was realized upon only once in from three to five years. By feeding out calves as baby beef, money can be turned in eighteen months.

Third. By feeding as yearlings the herd to be maintained on the farm is smaller, and pasture, forage, grain, etc., which were once used for yearlings and 2- and 3-year-olds can now be used to increase the number of cows kept.

Fourth. Open heifers find just as ready market as the steers. This is true in no case after the time the heifers have passed the 2-year-old stage. Yearling heifers finish out even more rapidly than do the steers, and marketing them at this age is a big advantage since there is no other time in their lives when markets will treat them as favorably.

Fifth. The baby-beef market at the present time is the most stable of all the cattle markets. Baby beef has, during the past few years, had a market all its own, and probably in most cases regardless of other cattle market conditions. Baby beefs will not take on as high a degree of finish as will 2-year-old cattle, but nevertheless the yearlings with somewhat less finish have usually sold at a higher figure than 2-year-olds.

During the past few years the Christmas market has been very favorable toward all cattle with quality and prime finish, quite a proportion of which are baby beef. Most of the baby beef, however, goes on the market during the months of May, June and July. The market at this time is generally good, and in fact generally stays good throughout the summer, for during the middle and late summer months few prime cattle are for sale. Most of the cattle offered are half-fat yearlings.

In feeding for the December market, fall-born calves are generally used. The following schedule may be used with baby beefs intended for the December market: Have the calves dropped in September and October. Begin giving them a light grain ration, in addition to their dam's milk, at about 12 months of age, or about November 1. Wean them during April and May, or as late as possible, so that they can be turned

directly upon grass. At weaning time begin increasing their grain ration until by the middle of July, or August 1, they are getting about all the grain they will take. Keep them on heavy grain feed until pastures begin to diminish, and then add silage with clover or alfalfa, either one or both, to the ration. They should be ready to market from the middle of November to the middle of December.

Spring-born calves are of a more suitable age for finishing for late spring or early summer markets. If these calves are born in March or April, they should begin to take a little grain by May or June. They would probably be weaned during September and October. At this time the grain ration should be somewhat increased, and then increased again when grass is gone. As grazing decreases in the fall, silage and clover or alfalfa should be added to the ration. At this time and up until December or January the calves should get enough of this ration to keep them growing nicely. They should be put on heavy feed during the months of December and January. These cattle should be ready to market during May and June.

High quality feeds and variety are essentials for proper finish in feeding baby beef. The young calves should be given grain as soon as they will take it. One feeder recommends equal parts by measure of shelled corn and oats. Many feeders prefer to grind or crush these two feeds. Some feeders prefer shelled corn to cornmeal or crushed corn as feed for calves, as it stimulates the secretion of the digestive juices. For the period in the fall after weaning time and before they are put on full feed any one of the following rations would be recommended for spring-born calves. In feeding these rations cowpea hay or clover may be substituted for the alfalfa given in the ration. Linseed meal also may be substituted for the cottonseed meal indicated:

1. Corn, 5 pounds; alfalfa, 9 pounds.
2. Cottonseed meal, 1½ pounds; alfalfa, 4 pounds; silage, 15 to 18 pounds.
3. Corn, 3 pounds; alfalfa, 3 pounds; silage, 15 to 18 pounds.

The same rations without the hay and silage would be suitable for feeding fall-born calves during the summer months.

The following ration would be suitable for the cattle while on full feed. Clover or cowpea hay may be substituted for the alfalfa hay: Corn, 14 pounds; alfalfa, 8 pounds; oat straw, ad libitum.

Silage can also be used in full feeding as a part of the roughage, but if from 20 to 25 pounds a head is fed at the start, it should be decreased to 15 to 20 pounds near the end of the feeding period. Oat or wheat straw helps to keep the digestive organs in good condition, and if possible a supply of this roughage should be kept before the calves at all times. In cases where mixed hays, cottonseed hulls, or other nonleguminous roughage is substituted for alfalfa or clover in the ration, an increased amount of linseed oil meal or cottonseed meal should be fed.

Ample shelter should be provided, and the use of bedding in such quantities as will keep the cattle clean and comfortable will pay. Clean, bright-coated animals always sell at an advantage.

Only cattle with a great deal of quality and early maturing ability should be fed heavily as yearlings. Best results are obtained with calves from high-grade cows and thick-fleshed pure-bred bulls.

Baby beefs should weigh from 400 to 600 pounds when going on full feed. When finished they should weigh from 700 to 1,000 pounds. During the past year markets for this type of cattle have ranged from \$8.50 to \$10 per hundredweight. The bulk of the cattle probably sold near \$9 per hundredweight.

In finishing "little" cattle, remember that they must be "fat" to bring the additional price which is necessary to make this kind of feeding profitable.

Corn and skim milk fed in the proportion of three pounds skim milk to one of corn, along with alfalfa pasture, make a cheap and rapid growing ration. The exercise the pigs get running on the alfalfa helps to keep them in a thrifty condition.

The more bedding the sow has at farrowing, the more danger there is of her smothering her pigs, and she should be allowed but little bedding until the pigs are several days old.

When the sow is about to farrow some one should be at hand to give assistance if it is needed. If the sow seems to be getting along alright she should be left alone.



NORTH DAKOTA Battleships Protect Your Prosperity

Here is North Dakota's invincible Preparedness Fleet in one town of less than one thousand population—giant elevators which house the farmers' grain.

Why don't you come and enjoy this protection with our North Dakota farmers? PREPAREDNESS with them means more acres of grain, more live stock, comfortable homes, schools and churches. NORTH DAKOTA is coming rapidly into its own. The 1915 crop of grain along the Great Northern Ry. in that state amounted to more than EIGHTY-SIX MILLION bushels. The acreage of corn and alfalfa is increasing enormously every year. This means stock raising, combined with grain growing, for bigger and steady profits. Dairy and live stock products have more than doubled in the past few years.

Are you farming on high-priced lands? Then read of results on low-priced land in North Dakota.

M. C. Crockett, one of our big farmers writes:—"I came from Iowa to North Dakota—came from a good stock country, and I have always kept a good herd of cattle and some hogs, and know that all kinds of live stock can be profitably raised here just as well as in Iowa. I now own 2080 acres which I have added to my homestead as I could pay for it, and I figure my soil and farm just as good as they have in Iowa for \$200 per acre. And farm is not for sale."

Medium-Sized Farms Pay Best

Joseph Kasal is a 100-acre farmer in North Dakota. In 1915 he threshed from 157 acres in grain, wheat, 1,725 bushels—oats, 841—barley, 518. Cows, pigs and poultry supply the table necessities. The Great Northern Railway has no land for sale in North Dakota, but there are hundreds of large farms like Mr. Crockett's and larger—there is a great amount of land owned by non-residents. We are in-

terested in having these large farms divided into 160 and 320 acre working farms. If you own or rent high-priced land, you will be interested in learning what our North Dakota farmers are doing on land equally productive, but which costs only about one-fifth as much and may be secured on very easy terms. In fact, what is ordinarily paid by renters will make the payments on a North Dakota farm.

North Dakota Bulletin FREE

Write for free bulletin and map and facts about the soil, advantages of crop yields, experience letters from actual settlers. We will assist you in every way possible in finding a suitable location in any part of the state and our services to you are FREE. Special Low Fares for Home-Seekers. Write today. Address me personally, E. C. LEEDY, General Immigration Agent, Dept. 252 Great Northern Railway, St. Paul, Minn.

MEMORY JOGGER

I will send this today to E. C. LEEDY, General Immigration Agent, Dept. 252, Great Northern Ry., St. Paul, Minn.

Please send me free booklets and full information regarding money-making farms along the Great Northern Railway in North Dakota.

Name..... Address.....

The Sure Way— The Quick Way— To Reach Buyers

and sell your offering quick, KANSAS FARMER Classified Columns have no equal in this field. It is the favorite market place for over 60,000 of the best farmers in the country. They read the Classified Columns each week and they are

In The Market

for live stock, pet stock, poultry, lands, seeds, plants, implements, vehicles, automobiles, automobile findings, and the hundreds of other things that farmers and their families buy. Many of this great army of buyers are sure to want just what you have to sell, and you can reach them

At Small Cost

by using KANSAS FARMER Classified Columns. You reach the real buyers who have the money to pay cash for what they buy. We receive hundreds of unsolicited letters like these from advertisers who have used KANSAS FARMER Classified Advertising

With Good Results

Fredonia, Kan., May 25, 1915.
As usual, Kansas Farmer has been the very best seller of all—the old business brings that years of experience has proven that I may depend fully upon for fixed results. And another thing I appreciate greatly in Kansas Farmer—that is the accuracy, promptness and painstaking detail given to your advertisers. In the eight years I have advertised with you I have noticed this so much, and really felt it the more because we do not always find it elsewhere. For all of which I deeply thank you.
MRS. CLYDE E. MEYERS.

Fredonia, Kan., April 28, 1915.
Enclosed find check in payment for my ad in Kansas Farmer. Have received excellent results. When I want more advertising will place it with the old reliable Kansas Farmer.
KARL F. SPELLAN.

Effingham, Kan., May 26, 1915.
We have been advertising in your paper for years, and this 1915 was the banner year of all for business, and we always get results in the Kansas Farmer.
FERRIS & FERRIS.

See head of Classified Columns for rates, and if you have anything to sell, send in your copy now and have your advertisement

Start In Our Next Issue

SEED CORN AT FARMERS PRICES

A high grade tested seed corn, \$1.50 per bushel; ten bushels and over, \$1.25. Red Texas seed oats, direct from Texas, 65c per bushel. S. G. TRENT, Hiawatha, Kansas

READ KANSAS FARMER'S CLASSIFIED
ADVERTISING PAGE FOR READY BARGAINS

YALE



Yale Chain Hoists

The easy way to handle loads

With this powerful hoist a half grown boy can lift heavy loads easily and safely. The load holds in any position and lowers smoothly when hand chain pull is reversed. Unaffected by weather, it is always ready for use.

Build to last a lifetime

Just the thing for slinging beeves during slaughtering; lifting sick or injured stock; changing wagon bodies; handling cylinders and pipe in wells. A hundred other uses. Put your hoisting problems up to us. Ask for a catalogue.

The Yale & Towne Mfg. Co.
9 East 40th Street New York

GOOD SEEDS

GOOD AS CAN BE GROWN
Prices Below All Others

I will give a lot of new sorts free with every order I fill. Buy and test. Return if not O. K.—money refunded.

Big Catalog FREE
Over 700 illustrations of vegetables and flowers. Send yours and your neighbors' addresses.
R. H. SHUMWAY, Rockford, Ill.

Buy Trees At Wholesale

and Save Agents' and Dealers' Profits.

Apple trees \$6.00 per 100; Peach \$6.00 per 100; Cherries \$14.00 per 100; Concord Grapes \$2.00 per 100; Dimples Strawberries \$2.25 per 1000; Everbearing Strawberries \$2.50 per 100. Everything in Fruit trees, Plants and Ornamentals. Send for our **Free Catalog**
HOLSINGER BROTHERS NURSERY,
BOX 109, ROSEDALE, KANSAS.

SEED CORN

I grow all I sell. Not largest, but best and most modern Seed Corn breeding plant in world. Field selected before frost, dried Nature's way, in heated house, on wire racks where no two ears are allowed to touch. Bred from state and national show winners for high production, our yielding average corn, at least 16 bushels per acre. A high grade product to farmers who want the best. Write for free catalog and samples, 98 per cent test guaranteed.

WICKFIELD FARM, Box 10, Cantril, Iowa.

PURE SEED CORN

Our Boone County White, awarded gold medal at Frisco Pan-Amer. World's Fair, 1915, is the strongest type of pure white corn in existence. The germination and root strength unsurpassed, brought to this point by years of careful propagation. Field picked, thoroughly dried, butted, tipped and hand shelled. Price per bushel, \$5.00, f. o. b. our station; sacks free.

MRS. MABEL MILLER - OSCEOLA, MO.

HIGH GRADE SEED-CORN

Ask for quotations.
Geo. T. Fielding & Sons, Manhattan, Kan.

STRAWBERRY PLANTS

All standard varieties at \$1.50 to \$2.50 per thousand. Everbearing at \$1.50 per hundred, postpaid. Asparagus at \$2.50 per thousand. Grapes, raspberries, etc. Catalog free. Large stock. Try us.
THE ALLEGAN PLANT CO., Allegan, Mich.

SEED CORN

From the Farmer Seed Corn Grower That made 100 bushels per acre. Best that grows. Catalog free. It tells all.
JOHN D. ZILLER, HIAWATHA, KANSAS

350 Assorted June Bearing, 50 Everbearing Strawberry Plants, delivered for \$1.50. Best varieties, none better. **THOMAS, Shenandoah, Iowa.**

NEW FEATHER BEDS ONLY \$5.40

6 POUND FEATHER PILLOWS \$1.00 PER PAIR New, clean, odorless, sanitary and dustless feathers. Best ticking. Satisfaction guaranteed. Write for FREE catalog and our wonderful Free Offer. Agents wanted. Address **Southern Feather & Pillow Co., Dept 1136 Greensboro, N. C.**

SCHOOLS AND COLLEGES

— OTTAWA —
Business College
OTTAWA, KANS. CATALOG FREE

ADVERTISING LIVE STOCK

THE modern business is started by advertising, kept going by advertising, and all real progress in it is made through advertising. The modern breeding business is almost as dependent on advertising as is the manufacturing business. Just stop for a minute and let us think of the five most prominent breeders of the particular breed that we favor. Almost instinctively the names that we see most frequently in the advertisement columns of our farm journals will come to our mind. This is true in at least nine out of ten cases. The breeders who are best known are big advertisers. They do not advertise because they are prominent. They are prominent because they advertise.

The local market is the only market available to the man who depends on the casual buyer to get rid of his stock.

By advertising he can reach the national market, he can greatly increase the number of possible buyers, and hence his chances of selling at something more than a local price. Some breeders would never have received a decent price for the good stock they had to sell had they not made their needs known to national publications. Here are some cases in point:

A young farmer living twelve miles from a railway station had invested \$300 in a pure-bred Holstein cow. None of his neighbors were particularly interested in the Holstein breed, and locally he could not have sold the first bull calf that came from his pure-bred cow for more than \$50 or \$75. He decided to give advertising a trial. He got many inquiries, but did not realize a sale from the first ad. He persevered, and finally sold the calf for \$350. He did not spend over \$10 or \$12 in advertising.

Another young man somewhat similarly situated found himself last spring with three bull calves. Locally they were worth little more than they would bring for beef. Through advertising they were all sold in a distant province, and all were sold at remunerative prices.

The best results in advertising are not secured by intermittent advertising, but by the one who keeps his name before the public all the time. The grocer who boarded up his windows and locked his doors for several months in the season would obtain but little success in building up a trade. The breeder of live stock who places his name before the buying public only a few weeks in the year will never build up the best kind of a connection. Better to run an ad stating that you have nothing for sale at present, but telling about the fine stuff that you will have in the month of April. The medium to select for advertising is, of course, the one that seems to reach the largest number of people who naturally want the thing you have for sale. With the medium properly selected and an advertisement properly worded, the breeder is well on his way to realizing profitable prices for his surplus stock.—E. L. MCCASKEY in Farm and Dairy, Peterboro, Ont.

Keeping Records.

Several of the banks and business houses of the country are showing a splendid spirit of co-operation by distributing to their customers a very handy little account book for keeping a record of the farm business for a year.

These business men realize the value and necessity of keeping records, a thing you or your children will be compelled to realize if you discover the leaks or develop your farming business to a profitable point.

Farmers as a whole are not in a posi-

tion today to demand their rights because of the lack of definite accurate figures concerning the farming business. The manufacturer knows the cost of producing his products and can prove it when he demands an increase in prices. You need just such figures to show the cost of producing your live stock and crops.

Ten or twelve of the progressive members of the farm bureau in this county are this year keeping complete cost account records, which will be very valuable to their business, as well as to the public as the years go on. Apply business methods to your farming business, it deserves it.

The farm management record survey will be conducted again this spring in Harrison Township, and at the request of the farmers in Browns Creek Township this work will be started in that territory with the help of P. E. McNall, Farm Management Agent of the Extension Division, Kansas Agricultural College.—A. D. FOLKER.

Farm Accounts Valuable.

C. E. Pomeroy, Allen County, writes as follows concerning the keeping of farm accounts:

"I have just read your offer to send a Farmer's Account Book to the subscriber that applies for one. I have been trying to keep a book of that kind for three years, but imperfectly for the lack of knowledge as to what and how entries should be made. What I have done in this direction convinces me of the wisdom of such course. So if you will please send me the above mentioned book I will be very much obliged."

Businesslike Methods Help Credit.

Take an inventory of the farm. Find out what you are actually worth. It is a good thing to know. Tell your banker about it. He will have more confidence in you when he knows you are doing things in a businesslike manner. The banker is afraid of slipshod methods. He considers it a greater risk to invest money when such methods are in use. Therefore, he charges a higher rate of interest.

Write down in a blank book a list of all your resources and give value of each item. This will include land, live stock, machinery, feed, supplies, growing crops, also cash and bills that others owe you. Then list all items that you owe, or your liabilities, and the difference between total resources and total liabilities will be net worth.—O. S. RAYNER, Fort Collins, Colo.

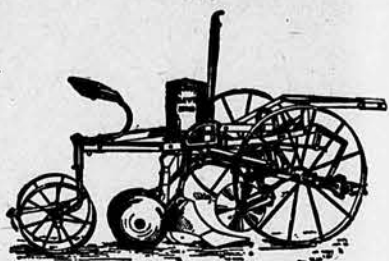
A co-operative farmers' exchange which bought or sold \$25,000 worth of farm products last year, met during farmers' week at Columbia, Mo., and authorized the secretary to publish at regular intervals a bulletin listing articles wanted and articles for sale. It is a state-wide organization of farmers and deals mainly with pure-bred live stock, seeds, feed, and such other farm products. It does not attempt to compete with commercial organizations, but seeks through them to obtain outside buyers and sellers. Its successful transactions include such examples as saving \$100 apiece on two carloads of oats bought for one of the members, and \$39 on a car of hay secured for another.

To bring co-operation, particularly in selling farm products, to its best development, standardization is necessary that the buyer may be sure that the dozen eggs or the carload of wheat will not be below standard in quality or quantity.



NO MATTER WHAT THE PRICE OF WHEAT MAY BE, IT CANNOT BE HAULED TO MARKET OVER A ROAD IN THIS CONDITION

Oliver



No. 19-D Lister

The Oliver No. 19-D is a four wheel corn lister on which the driver's seat is placed back of the seed drop. It is possible to constantly watch the work of the machine. Disk coverers are followed by open tire rear wheels. These wheels are set at an angle and serve to compress the soil around the seed and so conserve the moisture in the ground.

A variable speed edge drop can be furnished on this lister, giving the advantage of adjusting the amount of seed planted to the strength of the soil.

When the bottom is lowered, the rear wheels are locked. Raising the bottom permits the rear wheels to caster in turning. A foot trip can be used to release the rear wheels to make a wide turn with the bottom in the ground.

The seed drop is automatically thrown out of gear when the bottoms are raised. Lowering the bottoms releases the seed drop. This prevents wasting corn. The fact that the seed drop is inoperative when the bottoms are raised also reduces wear on the lister.

The seed plates can be changed without emptying the seed hopper. The No. 19-D is the latest thing in listers. Write us for the name of the nearest Oliver dealer.

Oliver Chilled Plow Works

Plowmakers for the World
Kansas City, Mo. Omaha, Nebr.

SUDAN GRASS



"The Camel of the Grass Family"

We grow an enormous quantity of this last year and are prepared to supply all customers this season at **Bargain Prices**. Do not risk planting Sudan Grass seed from questionable sources. Remember Barteldes Seed Company has been in business for fifty years, and our reputation for square dealing is back of all our seeds.

FETERITA

A Fit Companion to Sudan Grass.
Most popular grain in Middle West. Thirty-five to fifty days earlier than Kaffir. Less subject to attack by chinch bugs than other grains. It makes wonderful yield, even in droughty weather. Feterita seed from Barteldes yielded 85 bushel to the acre during drought of 1913, in spots too dry for corn or Kaffir.

SAMPLES FREE together with big catalog and Pink List which gives lowest prices on all seeds in quantities.
Books Free With \$5.00 Orders. Choice of two well-bound volumes of "ready reference," Farm Guide or Cook Book.

BARTELDES SEED CO.
807 Massachusetts St., Lawrence, Kansas
307 Main Street, Oklahoma City, Oklahoma
307 Sixteenth Street, Denver, Colorado

Special Sale of Apple and Peach Trees

Five to 6-foot, 10c; 4 to 5-foot, 7c; 3 to 4-foot, 5c; all first class. We do this to get acquainted with you. Freight prepaid on orders of \$10 or more. Catalog on request.

Kansas City Nurseries

423 RELIANCE BUILDING

Established 1867.

KANSAS CITY, MO.

Send for Catalog



FARM WAGONS

High or low wheels—steel or wood—wide or narrow tires. Wagon parts of all kinds. Wheels to fit any running gear. Catalog illustrated in colors free.

Electric Wheel Co., 34 Elm St., Quincy, Ill.

Two Types of Farm Management

COLONEL FRED REPERT, the well known live stock auctioneer, during the course of his address at the opening of the first auction sale held by the Iowa Draft Horse Breeders' Association at Iowa's state fair grounds, February 25, 1915, said: "In the near future the most successful farmer in Iowa is going to be the man who so manages his farm operations that live stock raising forms an important part of his work." These prophetic words by this experienced auctioneer brought to mind the different methods of farm management practiced by two farmers in Pocahontas County.

Farmer B. (an actual farmer) is a capable manager, a live stock feeder, and believes in rotations which include a legume. His adjoining neighbor, Mr. H., is a grain farmer, who follows the path of least resistance.

Since the year 1905 Mr. B.'s crops have averaged as follows: Corn, 52.5 bushels; oats, 47.6 bushels; spring wheat, 18.2 bushels; potatoes, 155 bushels, and clover hay, two tons per acre. During the same period of years and with practically the same amount of work, care and cost, Mr. H.'s farm has returned: Corn, 44.4 bushels; potatoes, 75 bushels; timothy and wild hay, 1.2 tons per acre. The former, by feeding his corn to hogs and cattle, realized 65 cents per bushel, while the latter, selling in the open market, had to content himself with 44 cents per bushel. The above difference in yield per acre and in price per bushel makes a total difference of \$14.60 in the profits from each acre. The cost of handling the larger yield will not exceed \$1 per acre. On his clover hay, which was fed chiefly to feeder cattle, Mr. B. received a return of \$12 per ton. His neighbor's timothy and wild hay, on account of its lower nutritive value, returned only \$7.50 per ton when fed to his stock.

The difference in the management of these two farms divides farming into two types, the new and the old. The former is a type that few practice, many know and which a large per cent of Iowa farmers could profitably follow. The old shows the class of farming that many follow, not through lack of knowledge on the subject, but rather because they fail to put into practice what they have learned.

For the soil conditions which prevail over the state in general, the following crop rotation has proved to be successful: Corn, corn, oats and clover. In this system the second cutting of clover is usually plowed under, except in cases where the soil is high in fertility and where cattle feeding is emphasized when it may be more practical to use the second crop as pasture and plow the field late in the fall. Extensive experiments have shown that an inoculated legume derives two-thirds of its nitrogen from the air and only one-third from the soil when the latter is lacking in fertility. On the other hand, if the soil is very rich, the order is reversed, one-third being drawn from the atmosphere and two-thirds from the ground on which the plant is grown.

This fact shows how important it is that we use a legume in the rotation where large quantities of manure are not available for maintaining the productivity of the farm. The nitrogen element in one ton of clover is valued at about \$6 or \$12 per acre, using two tons as an average yield. Many Iowa farms which are low in fertility, yet able to grow clover or alfalfa, can readily take \$8 of this from the atmosphere. The

market value of nitrogen in fifty bushels of corn, plus the stalks, is \$11.10. By turning under the second growth of clover, the average farmer can certainly reduce the cost of producing the next crop of corn, as well as keeping up the nitrogen content of his soil. Two-thirds of the nitrogen in the clover plant is contained in the stem and the leaves, the remainder in the roots.

Where the soil is lacking in plant food, the clover draws the larger portion of its nourishment from the air. When these are the conditions it can be assumed that if only the stubble is plowed under, the soil has sustained neither loss nor gain of nitrogen; however, the other soil elements have been depleted. In the past, when the price of farm land has been very low, the farmer has succeeded in eking out a living without much emphasis on management or rotation of crops; today, with our \$200 per acre land, the successful man must consider not only the best kind of crops to cultivate, but also the best way to dispose of these products. Live stock will, in the course of a number of years, pay far better for the farm products than will the markets. Stock also helps to keep up the fertility of the farm. Herein lies the secret of Mr. B.'s success. He has changed his type of farming to meet his immediate conditions; on the contrary, Mr. H. owes his partial failure to the fact that he has ignored the changing conditions and still follows the methods of soil robbery.

Recent farm management surveys taken over the corn belt states show that the most successful class of farmers are the men who follow live stock farming and use a rotation on their fields. These men are superior, not only in an agricultural way, but also in raising the standards of the community as a whole. Look over the leaders of any rural locality and you will find that the up-to-date farmers are the men in whom the people put their confidence. Farming in the fullest sense of the word is a science which is based on certain fundamental principles that have a rock bottom and must be observed if the fullest measure of success is to result. Permanent agriculture demands that the fertility of the soil be kept up; to keep it up cheaply is the problem which the business farmer must solve according to his individual conditions. At present the best authorities agree that a legume rotation combined with live stock raising will, under average conditions, give the best results.—C. G. JOHNSON in The Iowa Agriculturalist.

Don't have too many fowls in your breeding pens. Fowls can stand some crowding in very cold weather, but when spring time and warm weather comes they must have plenty of room to do well. Do not have over ten hens in a pen—and still less is better—if you have plenty of small houses and runs to put them in. You will have a larger percentage of eggs from the small sized pens than you will from large sized ones.

Hired labor can profitably be put to work cutting brush and removing rocks from the fields. Both should be used in making dams to help prevent soil washing.

A bred sow should not be kept too fat, but it is important that she be kept growing and in a thrifty condition. Every Kansas brood sow should be fed alfalfa or bran, or a little of both.



Sam
Engine
Used on
Binder

Cushman Family Engine

This 4 H. P. Cushman Truck Outfit is so handy that it is called the "Family Engine." It is very light in weight—engine weighs only 190 lbs., and entire outfit, including water tank, weighs only 375 lbs. A child can pull it around from job to job. Cushman Engines weigh only one-fifth as much as old-fashioned heavyweight engines, yet run more steadily and quietly because of modern design, perfect balance and Throttle Governor. No loud violent explosions; no fast and slow speeds.

Cushman Light Weight Engines

Weight Only 40 to 60 lbs. per H. P.

These are the modern engines, built especially for farmers who need an engine to do many jobs in many places instead of one job in one place. No longer necessary to put up with old-style back-breaking heavyweights.

The 4 H. P. Cushman is a wonderful farm engine, because in addition to doing all ordinary jobs better than heavy engines, it may be attached to moving machines, such as grain binders, corn binders, potato diggers, etc., driving the operating part, leaving the horses nothing to do but pull the machine out of gear. Saves a team on the binder, and in wet season saves the crop. Thousands of acres of grain were saved last year by the Cushman that otherwise would have been a total loss to the farmer.



IMPORTANT—Stripped for binder, engine weighs only 167 lbs., and weight on rear is balanced by the simple cone water cooler on the front of binder. This balancing and the water cooling, to prevent overheating on all day runs, are necessary to successful work in a hot field.

8 H. P. Double Cylinder Cushman weighs only 320 lbs. Also 15 and 20 H. P. double cylinder light weight engines. Cushman Engines are not cheap, as they are better built of better material, but they are cheap in the long run. Engine Book free.

CUSHMAN MOTOR WORKS
622 N. 21st St. Lincoln, Nebraska



Wanted 50,000 Farm Hands

of experience at once on the farms of Western Canada

To replace the young farmers who have enlisted for the war. Good wages and full season's work assured.

There is no danger or possibility of Conscription in Canada.

References required from all applicants. For special railway rates and other information apply to

GEO. A. COOK,

2012 Main St., KANSAS CITY, MO.

Authorized Canadian Government Agent

BARGAINS IN WHEAT LAND

POSITIVELY NO TRADES CONSIDERED.

This land has proven its ability to make 20 per cent net each year on the value asked. It is offered for sale, as the owner is ready to retire.

FARM NO. 1.

Harper County, Kansas, containing 160 acres; sandy loam with clay mixture; 90 acres in wheat, 20 acres ready for spring crops, 50 acres pasture. All fenced and cross-fenced. Running water, two wells. Four-room house, cave, etc. Stable for eight horses, cattle sheds and other out-buildings. Cash price, \$30 an acre.

FARM NO. 2.

480 Acres, Harper County, Kansas. 160 acres broke, 100 acres in wheat, 60 acres ready for spring crop, all good hard wheat land. \$25 an acre, cash.

FARM NO. 3.

160 Acres, 110 acres broke, 60 acres in wheat, 50 acres ready for spring crop; 60 acres mow land on creek bottom; all fenced, meadow cross-fenced; running water, well, granary and stock sheds; good hard wheat lands. \$25 per acre, cash.

FARM NO. 4.

74 Acres in Sedgwick County, Kansas. All broke, all fine alfalfa land; 6 acres in alfalfa, balance in wheat, was alfalfa; fenced; good house, well, barn for four horses, and usual outbuildings. Near station; 10 miles from Wichita. \$100 an acre. Balance of quarter in alfalfa and can be had for \$115 an acre.

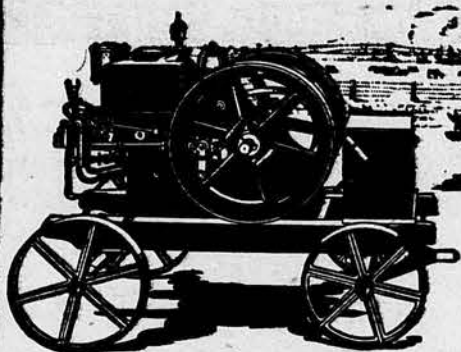
WRITE TO H. N. HOVEY, CARE KANSAS FARMER, TOPEKA, KANSAS.



SCENE ON RED LINE ROAD.—RESULTS OF POOR DRAINAGE

READ KANSAS FARMER'S CLASSIFIED
ADVERTISING PAGE FOR READY BARGAINS

Power for Forty Farms



Mogul and Titan Engines

TWENTY Titan engines of all sizes, all kerosene burners, were lined up in front of the I H C dealer's store at Litchfield, Minn., one day last summer. That day their new owners took them out to supply good, reliable power on twenty farms. A few months later Litchfield saw twenty more farmers take Titan engines out to their farms.

Two big I H C engine delivery days in that town last year. In many hundreds of towns you will find this same popularity of I H C Mogul and Titan engines—the best farm power—Grand Prize winners at San Francisco.

You must have an engine—then buy an International Harvester engine—Mogul or Titan. It will keep down your fuel and repair bills, deliver the most power with least trouble, and save you more hard work than you can realize now.

International Harvester engines are made in all approved styles, sizes from 1 to 50-horse power, operating on low as well as high-grade fuels. Some local dealer near you handles Mogul or Titan engines. If you don't know him, drop us a line. We'll send you full information, and make it easy for you to get the best farm engine made.

International Harvester Company of America



CHICAGO

Champion Deering McCormick Milwaukee Osborne Platts

USA



When Summer Is Just Around The Corner

From now on you can fill every spare hour with keen, healthful pleasure, if you own a Harley-Davidson motorcycle. And if you have sidecar equipment with it, you can share the pleasures that it gives with pleasant companions—and joy that is shared is doubly sweet. Think of the wonderful trips you can take with your

Harley-Davidson

these delightful spring evenings when the dew has fallen and that indescribable perfume from field and stream is in the air. Laughing, chatting, living, you can sweep along over country roads or through city streets at your own chosen pace, in safety, comfort and dignity.

Don't let another week go by without getting in touch with your dealer. The Harley-Davidson, for fourteen years the master motorcycle, will win you with your first ride. Your dealer will probably make terms to suit your convenience.

Catalog on request

Harley-Davidson Motor Co.

1189 A Street

Milwaukee, Wis.

Producers of High-Grade Motorcycles For More Than Fourteen Years.



READ KANSAS FARMER'S CLASSIFIED ADVERTISING PAGE FOR READY BARGAINS

Kansas Banker Commends Dairy Club

THE Kansas Banker, which is the official organ of the Kansas Bankers' Association, has the following to say in the last issue regarding the Kansas Farmer Dairy Club:

"The Kansas Banker has been much interested in the text of a letter addressed by KANSAS FARMER, Mr. Albert T. Reid, president, to all the banks of this state, setting out clearly the features of a plan to form a dairy club for boys and girls. Let it be understood that whoever else may have endorsed the plan, or to whatever extent the banks or other institutions may co-operate, the credit for originating the plan and exploiting it belongs wholly to KANSAS FARMER, always wide awake to every public welfare movement. Reduced to its lowest terms, the plan is this—that the banker in any and every community is asked to select some worthy boy or girl between the ages of twelve and eighteen, and to make a loan to at least one such boy or girl for the purpose of buying a good producing dairy cow. The borrower will be a minor, but the banker need not be thereby deterred since he is choosing his own borrower. The boy or girl will at once become a member of the Kansas Farmer Dairy Club, and be in line for prizes which from a number of sources have already been offered, and which will doubtless yet be largely increased.

"KANSAS FARMER will issue frequent circulars of instruction to the young purchaser who all along is required to report to the banker. Interesting stories concerning the progress of the movement will from time to time be prepared and published in local papers, and the names of the contracting parties, KANSAS FARMER, the local banker and the boy or girl member, will all be woven into the story. Entries for this contest will be received up to June 1. The contestant's records will start from the time the cow is fresh and continue for a period of one year. The contest will be on the maximum score of 100 points; 30 points on the total production for one year, thirty points on the profit made over cost of feed, twenty points on the keeping of the records and the story of the work, and 20 points on the quality of the product.

"Here is something quite worth while. There is no calculating the cumulative benefits which in a few years will accrue from such a well ordered and entirely feasible movement. The bankers' part in such a case is not merely benevolent and philanthropic, though it is all of that and more. It is a wise look into the future, and not the very far distant future either, when the dairy interests of Kansas shall be brought to fuller development. This is something that does not require the whole of a lifetime to eventuate. Its results come quickly, each year bringing its own rich dividends. Here are, say 100, 200, 500, any number of boys and girls, the pick and flower of the community, chosen for their honesty, their integrity and their industrious habits, for the purpose of demonstrating the possibilities of dairying under the finest leadership and the best of circumstances, backed by the banker of the community.

"No reader of these lines will contemplate for one moment that such a scheme can possibly fail. Its results even in one year will exemplify surprising totals and in a series of but few years compound itself into amazing totals; and after all this is said, the best is yet to be said, that the copy has been set for the boys and girls of the remaining

years of the generation and a new order of things will have come to stay. Only recently a prominent man in Kansas commenting on this Kansas Farmer Dairy Club movement said that 'it will be but few years under such a plan as this when Kansas will be second only to Wisconsin in her dairy interests.'

"This proposition is not being handed down to the banks of Kansas by The Kansas Banker, nor by the Kansas Bankers' Association, for we do not deserve one particle of the credit for originating this movement, but it is a delight to offer this genuine word of sincere congratulation to KANSAS FARMER for having brought this movement to the attention of the banks of Kansas, and to add to it whatever the commendation of The Kansas Banker and of the Kansas Bankers' Association may be worth in its further promotion. Already a considerable number of banks have hastened to respond with good favor to the proposition and without doubt many others will follow and thus it may come to pass that the bankers of the state will have found another splendid opportunity in which to do something magnificent for the communities in which they live, helpful to the growing generation of boys and girls, and incidentally, as always, eventuate in a rich compensation to the banks themselves."

The Household Gas Engine.

If we are to realize higher perfection of home life upon the farm, it is highly essential to turn our attention to the gas engine and its domestic uses.

It is growing self-evident that one's time is growing in value and that the intensity of purpose to which time shall be used must be increased.

With the use of the gas engine, there is not only a saving of time and money, but with this equipment, the country home may possess the luxuries of the city dwelling, namely, water supply, light and laundry.

The water supply can be made to furnish running hot and cold water for kitchen, bath and laundry, a means of efficient sewage disposal, and fire protection.

The gas engine driven electric lighting systems for country use have passed the experimental stage and now rival the efficiency and economy of the home gas lighting systems.

In the laundry, the gas engine makes it possible to reduce the amount of exposure and drudgery of wash day. Besides furnishing water for the washing, the various machines may be conveniently operated by the power of the engine.

Where there is no milk house separate from the home, this engine can be made to operate both churn and separator in connection with any one of the above operations.

In choosing an engine for these purposes, nothing less than a two-horsepower engine should be selected. Usually it is more advisable to secure an engine larger than your present needs require.—J. T. COPELAND, Fort Collins, Colo.

Good tools pay! With good tools and a little repair shop on the farm you can do all the repairing that you will have to do and keep your implements in good shape at all times.

Watch your wood pile! Replenish it if necessary so that it will be large enough to last until this time next year.



THIS IS WHAT HAPPENS TO IMPROPERLY DESIGNED CULVERTS

VALUE OF MANURE

THE high prices of potash and acid phosphate at this time are causing much concern among farmers who depend upon commercial fertilizers to supply these constituents for the successful production of their crops.

If we had always fully appreciated the true value of farm manure, and used it on our land, the present situation would be much less acute. The annual loss of fertilizing materials is enormous in this country through careless handling of manure. This loss can be easily prevented in a large measure by proper methods of handling. While many are getting the most from the manure produced on their farms, yet many could well exemplify the European farmer in this matter, who saves carefully and utilizes every pound of manure available.

In feeding as much live stock as possible we may figure that we are receiving a double remuneration from the crops: First, from the marketing of feeds through live stock; and, second, from the fertilizing substances which are left in the manure. Practically all of the nitrogen, phosphorus, and potash which is in the feeds is recovered in the manure from live stock. We should always be keenly conscious of this fact, and employ methods of management accordingly.

It is a well known fact that the animal uses the nitrogen, phosphorus, potassium, and other elements of the feed-stuffs to build up the body, carry on the work of the body, and to produce milk, work, wool, etc. At the same time we must remember that all of these processes involve the building up and breaking down of body cells, and the component parts of these broken-down cells are thrown off as waste matter.

In this waste matter we have the same elements as were in the feedstuffs consumed. Except in cases of growing animals, whose bodies are increasing in size, practically the same amount of nitrogen, phosphorus, and potassium are voided in the manure as were contained in the feeds eaten. The exact percentages of these substances voided by live stock varies within wide limits, depending largely upon the age and kind of animal, amount of feed eaten, work which the animal is doing, and various other factors. A young and growing animal retains a large part of these elements in the growing tissues of the body. A dairy cow uses a portion of them in the production of milk. A hard-working horse or a mature fattening animal voids from 90 to 100 per cent of them. It is then evident that a large percentage of the elements of plant food removed from the soil by growing crops remains on the farm where these crops are fed, and that the manurial value of feeds is in direct proportion to their composition.

The following table shows the amount of fertilizing constituents estimated to be in 1,000 pounds of each of a few common feeds:

FEED	Fertilizing Constituents in 1,000 Pounds		
	Nitrogen	Phosphoric acid	Potash
Corn	16.2	6.9	4.0
Wheat bran (all analyses)	25.6	29.5	16.2
Oats	19.8	8.1	5.6
Cottonseed meal (31.6 per cent protein)	60.2	26.6	18.0
Linseed meal (new proc.)	59.0	17.7	13.0
Corn stover	9.1	4.0	11.5
Oat straw	5.8	2.1	15.0

Under practical methods of feeding live stock all of the fertilizing substances shown in the above table can not be returned through manure to the soil. Allowances must be made for a small

waste in feeding operations, the retention of some nitrogen, phosphorus, and potassium in the animal's body, and a reasonable amount of loss of these elements from the manure before it reaches the fields. With such losses in view it is safe to say that when the manure is carefully handled 75 per cent of the phosphorus and potassium and 70 per cent of the nitrogen originally present in the feeds can be returned to the soil.

From these figures and the above table we can easily compute the actual value of the manure from a given amount of a feed. We will base our values upon normal prices of fertilizing materials, as follows: Nitrogen, per pound, 20 cents; phosphoric acid, per pound, 4 cents; potash, per pound, 5 cents.

The following table shows the actual value of the fertilizing constituents returned to the soil in the manure from one ton each of several typical feeds. The percentages of valuable substances saved and the prices of fertilizers as indicated above are used to calculate the values in the table.

FEED	Value of Manure Returned to Soil from One Ton of Each Feed			
	Nitrogen	Phosphoric acid	Potash	Total value
Corn	\$4.54	\$0.41	\$0.30	\$5.25
Wheat bran	7.17	1.77	1.21	10.15
Oats	5.54	.49	.42	6.45
Cottonseed meal (31.6 per cent protein)	16.86	1.60	1.35	19.81
Linseed meal (new proc.)	16.50	1.26	.97	18.73
Corn stover	2.55	.24	.86	3.65
Oat straw	1.62	.13	1.32	3.07

For example, let us say one ton each of corn, cottonseed meal, and corn stover has been fed to fattening steers. From the above table we find the value of the manure from these feeds to be \$28.71. This amount represents approximately one-half the value of the feeds consumed. No allowance has been made for bedding material, which has some value as a fertilizer, and if not too coarse, improves the physical condition of the soil.

This serves to illustrate the point that the farmer who has the requisite number of live stock can use feedstuffs grown upon his farm or purchased to supply those elements of plant food needed by the soil to maintain its fertility; and by following such a practice consistently he can overcome to a large extent the necessity of extensive purchase and application of commercial fertilizers.

Let it be understood that the manurial values indicated in the above table are within the reach of every farmer, but not without exercising care in handling the manure produced on his farm.

The liquid portions of the manure contain about three-fourths of the nitrogen and nearly all of the potash voided by the animal. Therefore, it is highly important that as much of the liquid manure be saved as possible. This is usually accomplished by using a sufficient amount of bedding to absorb it, or by allowing it to drain into a pit or cistern of some sort. Spreading manure while fresh is generally most economical. Where this is impracticable, it should be stored under cover or in a concrete pit, and always kept well packed. "Fire-fanging" can be prevented by keeping it quite moist. Those desiring further information relative to the care and use of manures should correspond with the department or their state experiment station.

Aside from the fertilizing elements contained in manure, it has beneficial mechanical effects upon practically all soils.

THE SANDUSKY TRACTOR

"THE LITTLE FELLOW WITH THE BIG PULL"

15 Draw Bar H. P.—35 Belt H. P.

Eleven years' experience has made it possible to standardize this machine so as to ensure you against costly experimental principles of design as well as details of construction. The result is a dependable four-wheel tractor capable of doing an honest day's work when required.

It is increasing profits and decreasing costs on hundreds of farms and will do the same for you.

Sold subject to three day trial, demonstrating on your own work its ability to fulfill

OUR GUARANTEE

We guarantee The Sandusky Tractor to handle four 14-inch mold board plows 8 inches deep where a big team can pull a 12-inch plow 6 inches deep; to run belt machinery up to 32-inch separator; to have one-third reserve over drawbar rating, and for one year against defective workmanship and material.

Equipped with our own four cylinder, four cycle, 5 x 6 1/2 heavy duty, slow speed, vertical motor; 2 1/2 inch crankshaft; 31 inches of motor bearing surface; all four bolt bearings; positive self-contained combustion force feed and splash oiling systems. Motor set crosswise to frame eliminating objectionable bevel gear drive; removable underpan permitting taking up or replacing bearings, connecting rod, rings or entire piston without disturbing any other part of tractor. Three speed selective transmission, 2 to 5 1/2 miles per hour with direct drive on low; three point spring suspension; all steel construction; light weight; small overall dimensions and short turning brakes; easily handled; surplus cooling capacity.

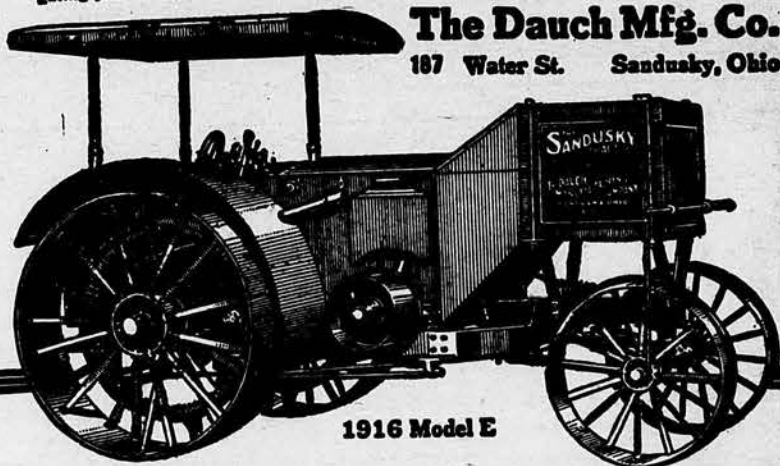
The Sandusky Tractor, its motor, and transmission were each awarded the Gold Medal at the Panama-California Exposition. Also highest award Silver Medal at Society for Improvement of Agriculture Exposition, Lancashire, England.

Book "Power on the Farm" Free

Write for a copy of the new 40-page edition covering the latest refined 1916 Model E, its uses, and containing other valuable information. Tell us fully about your power problems and we'll gladly help you solve them without obligating you in any way.

The Dauch Mfg. Co.

167 Water St. Sandusky, Ohio



1916 Model E



That Bridge Must Go!

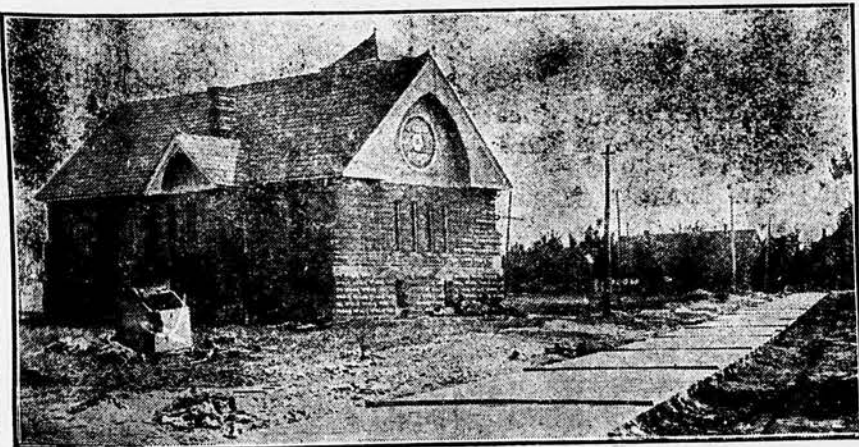
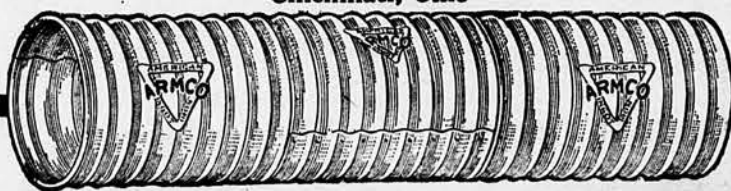
The "Safety First" idea rules the country today. The public is demanding that the highways be made as safe as the railroads and traction lines. Wooden bridges must give way to

"ARMCO" IRON CORRUGATED CULVERTS

These culverts are not only absolutely safe but moderate in first cost, inexpensive of installation and entirely free from up-keep costs. The fact that they are made of "ARMCO" IRON insures unequalled rust resistance and life-time service. Specify "Armco" (American Ingot) Iron and insist on seeing the Triangle Trade-Mark on every section. This is your assurance that your taxes are being spent for the public benefit.

For full information on "Armco" Iron Culverts, Flumes, Sheets, Roofing and Formed Products, write the manufacturer in your vicinity, or

ARMCO IRON CULVERT MANUFACTURERS ASSOCIATION
Cincinnati, Ohio



BUILDING A CONCRETE ROAD IN ALLEN COUNTY—
SUCH ROADS ARE PERMANENT AND GOOD EVERY DAY

You Will Be In Good Company

You can afford to be guided in your selection of a Milker by those now using Hinman Milking Machines.

HINMAN MILKER

The picture above is of a Hinman equipment on the farm of I. S. Merrell of the Merrell-Soule Co., manufacturers of the celebrated Nono-Such Mince-meat, milk powder, etc., Syracuse, N. Y.

The picture below was taken on the famous Hershey Milk Chocolate Farm, where they have installed and are daily using Hinman Milkers in eight of their barns.

You need no arguments for buying a milker. Do you need any for your selection? We'll gladly give you the names and addresses of Hinman users nearest you and a list of prominent Hinman owners.

You can then make your own investigation and find out just what you can expect if you decide to install Hinman Milkers in your dairy.

Why not send us a postal and let us tell you more about the Hinman?

HINMAN MILKING MACHINE CO.

53-63 Elizabeth St. Oneida, N. Y.

Free Milker Booklet

15 ON TRIAL American CREAM SEPARATOR

A SOLID PROPOSITION to send new, well made, easy running, perfect skimming separator for \$15.00. Skims warm or cold milk; making heavy or light cream. Bowl is a sanitary marvel; easily cleaned.

ABSOLUTELY ON APPROVAL. Different from picture, which illustrates our large capacity machine. Western orders filled from western points. Whether dairy is large or small write for handsome free catalog. Address:

AMERICAN SEPARATOR CO. Box 4091, Rahadridge, N. Y.

Stack Your Hay The Easiest Way

Stackers and Sweep Rakes. Save time, men and money. Lightest in weight—easiest to operate—delivers hay anywhere—no repairs or delays—cannot tip—fully guaranteed—wood or steel. Sold direct at Manufacturer's prices. As long as our present supply lasts prices will not be advanced, so write quick for catalog and price list.

F. WATTS MFG. CO., 610 R. 26 ST., SALINA, KANS.

THIS BUGGY \$36.50

Can't be duplicated elsewhere at this price. It's a wonderful buggy for the money and we will let you see it for 60 days.

Subject to your approval. It's another proof of Elkhart quality and the saving made you by our factory to user plan.

Write for Big Buggy Bargain Book

and read how 45 years experience has taught us how to give the most for the money in wearing quality, appearance and general satisfaction and by cutting out agents and dealers you save you \$25 or more on each buggy.

175 Styles Buggies and 65 Styles Harness

are illustrated and described. Don't buy without seeing our book. A postal brings it free. Better write today.

ELKHART CARRIAGE & HARNESS MFG. CO. 705 Boardway Ave., Elkhart, Ind.

Only \$2 Down One Year to Pay!

\$24 Buys the New Butter-Fly Jr. No. 2. Light running, easy cleaning, close skimming, durable. Guaranteed a lifetime. Skims 55 quarts per hour. Made also in four larger sizes up to 5-1-3 shown here.

30 Days' Free Trial! Earn its own cost and more by what it saves in cream. Postal brings Free catalog, folder and "Direct-from-factory" order. Buy from the manufacturer and save money.

ALBAUGH-DOVER CO. (INC) 2181 Marshall Blvd. CHICAGO

No. 57

New Edition of Modern Silage Methods

Only 10c

ENTIRELY a new book—new chapters—tells about every type of silo—home-made, stave, brick, cement, tile, metal, etc. Tells best for your needs.

Impartial suggestions for making most profits. 264 pages—10 page index—Copyrighted Nov. 1914, covers 41 silage crops.

Send for new book; it beats all previous editions. Write today. Mailed for 10c. Mention this paper. Silver Mfg. Co., Salina, O.

BUYING DAIRY COWS

IN buying a dairy cow, the pedigree of the man from whom the cow is purchased is as important as the pedigree of the cow. There are good many things to consider in buying cows for a dairy herd. In fact the very best dairymen seldom buy cows. They have found it almost impossible to depend on this means of replenishing their herds. After once getting a start with a few good animals, they breed and raise their own cows. In this way they know absolutely the history and condition of every animal added to the milking herd.

Members of the Kansas Farmer Dairy Club are beginners and will have to buy cows. In doing this, they will be doing what every dairymen has had to do in the beginning. They will be making their first investment and the cow purchased, if a good one, may be the foundation of the future herd. If she is carelessly selected and is found later to have serious defects, or possibly even diseases that make it necessary to get rid of her, the investment will not be a paying one. Not only will there be loss, but it will be necessary to begin over again.

We hope our club members will not buy their cows hastily. Too much is at stake in making this initial purchase and it will pay to go about it deliberately and systematically. Professor Reed in his special article for club members, on dairy cow selection, advised picking the cow from a herd where all the ancestry is known. If the owner of the herd is also known personally and can be depended upon for every statement made, the buying of the cow will be greatly simplified. Such a man can usually be depended upon to start the beginner with a cow or heifer that will be satisfactory.

In buying a cow or a herd of cows, it is important to know positively that they are free from disease. The two most dreaded diseases among dairy cattle are tuberculosis and contagious abortion. No dairy cattle can now be shipped into Kansas without having passed the tuberculin test, and just recently an order has been issued that all cattle to be used for breeding purposes must be tested before being admitted.

The cow bought should always be purchased subject to the tuberculin test. If the purchase is made from a man personally known, who tests his herd regularly and the animal in question passed at the last test, this might be accepted as satisfactory. If there are reactors in the herd it would be better to insist on a test before accepting the cow.

The presence of contagious abortion in the herd is sometimes difficult to determine. In buying a cow, the history of the herd as to calves lost should be investigated. A thoroughly honest man would not attempt to sell a cow from his herd if he knew he had contagious abortion. If the results of the investigation of the herd show that quite a number of abortions have occurred, it should be viewed with suspicion even though the owner may not be willing to admit the presence of this serious disease. Here again the honesty and integrity of the man is of considerable importance. If he succeeds in concealing the truth, a cow might be purchased that is infected with the germs of contagious abortion and not only would the calf be lost, but the production of the cow would be seriously affected. This disease is hard to cure and other cattle on the home place might become infected.

In buying bred cows or heifers, as our

dairy club members will have to do, it is always important to have the exact breeding date, likewise the name of the sire. We would urge that our club members insist on having this information supplied positively for the cows they purchase. Since September 1 is set as the latest day on which a record can start, this is important. A guarantee should be secured that the cow is bred and in calf, and provision made for re-breeding or adjusting the transaction so that the member can be sure of having a cow that will be fresh within the required time limit. This sort of guarantee is a good one to acquire, no matter what are the circumstances under which a cow is purchased. The mere statement that the owner thinks the cow will be fresh, is not sufficient.

If the cow is purchased from a man having personal knowledge of the animals in his herd, he should be asked to state positively either in writing or in the presence of witnesses, that the cow is all right in every particular, has no "blind tests," is not "breachy," or a kicker, and has no other bad habits or defects that would make her unsatisfactory as a milk cow. If the cow must of necessity be bought from a man who is not in a position to supply all this information, the cow herself should be investigated most closely, and the purchaser would be justified in asking assistance from others having experience with dairy cows. Cows with a part of the udder spoiled, having teats with extra openings or other deformities, or that are hard milkers, are to be avoided. It takes more than a skin with the markings of some dairy breed to make a satisfactory milk cow. Many have bought cows recklessly, paying little attention to the real requirements of dairy animals.

In counties where there are agricultural agents, members of the Kansas Farmer Dairy Club will find it to their advantage to consult with these men regarding their purchases. They are familiar with the different herds of the county and will gladly direct inquirers to farms where they can get what they want. They will also be willing to assist in making selections if their advice and help is desired. The banker should likewise be consulted frequently in this matter of purchasing the cow. He can give good advice relative to the kind of guarantee that should be required from men from whom cows are purchased. KANSAS FARMER will likewise give help in locating suitable cows for members of the club, when this help is requested.

Pure-Bred Cow for Club Members.

Mrs. A. P. L., Sedgwick County, asks if it would pay to buy a registered cow for the work of the Kansas Farmer Dairy Club. Her son is desirous of becoming a member.

This question is raised frequently by those just beginning in the dairy business. Good cows are essential to success in dairying and it is a worthy ambition to desire to own a pure-bred dairy herd. The improvement of dairy cattle by breeding has resulted in developing animals that have remarkable powers of production, but only a very small per cent of the cows producing the dairy products of the country are registered. High grades possess so many of the characteristics of the pure-bred from which they sprung, that this means of improving the cows of the country from a utility standpoint has met with great favor. Grades of high producing power

IN buying dairy cows to be used in the work of the Kansas Farmer Dairy Club, if possible buy from a herd where the ancestry of the cows is known.

Buy from a man whose reliability and honesty is not questioned.

Buy only tuberculin tested cows.

Do not buy from a herd where contagious abortion is present.

Secure a positive guarantee that the cow is bred, is in calf, and will calve before September 1, which is the last date on which a record can start.

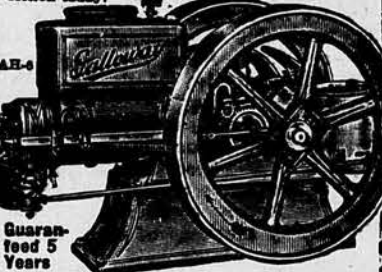
Secure a guarantee that the cow has no bad habits and has no faults or defects that would make her unsatisfactory as a milker.

WAIT! DON'T DO A THING

ABOUT BUYING AN ENGINE

Until you have seen this new 1916 250-hp. book that tells all about Galloway engines and explains my new extra special advertising distribution offer. If you answered all the engine advertisements ever published you would not find an offer fairer, squarer or more in your favor. You owe it to your pocketbook and the satisfaction that you demand in the operation of the engine you buy to answer this advertisement and learn the particulars of this new 90-day offer to distribute 10,000 more Galloway Masterpiece Engines from 13-4 h. p. to 16 h. p.

The great Galloway chain of factories are running day and night. We are turning out more Masterpiece engines than ever and the reason is that we are building this engine as good from such a highly perfected design of such good materials, and by such thoroughly skilled workmen, that every Galloway Masterpiece will work or more wherever introduced. Ask for proposition today.



IMPROVEMENTS AND FEATURES

include valves in the head; extra cooling surfaces; large water pot; frost-proof cylinder; adjustable bearings; economy carburetor; uses any fuel; large perfectly balanced fly wheels; built-in magnet; Hercules water-cooled cylinder head, cannot blow off; easy to start; no cranking; needs no batteries; independent of weather, hot or cold, wet or dry. A mechanical masterpiece! These features and many others make Masterpiece engines power kings in their field. Ask today for this new book printed in four colors. It will solve your power problems. A postal gets it. Engines shipped from Waterloo, Conn. or St. Paul, Minn. Galloway, Inc., 215 Galloway St., Waterloo, Conn. Engine Manufacturing Specialists.

Don't forget to drop in and see us when in Kansas City. Offices and showrooms across street from the Stockyards Exchange.

GET IT FREE

We are giving Ropp's New Calculator FREE to every farmer or land owner who has not yet sent for a copy. Ropp's Calculator should be in the hands of every farmer. It will instantly give the correct answer to any business problem that can be solved by arithmetic. We will also send you our free illustrated catalog on

SQUARE DEAL FENCE

Which tells you why it is better than any other fence and where to get it. Land owners, if you want a farm fence that will last, and stay trim and tight the year round, write for these FREE books today. Keyhole Steel and Wire Co., 723 Industrial St., Kansas City, Mo.



OVERALLS

Fit "FITEZ"—and they'll fit you. We'd like to see the shape of the man or boy they will not fit.

Made in 66 Sizes

For all shapes and forms—and built for comfort as well as strength. If your dealer doesn't happen to have your size in stock—ask him to order you a pair. He can get 'em in 24 hours from

BURNHAM-MUNGER-ROOT DRY GOODS CO.

Kansas City, - Missouri.

A HEALTH INSURANCE POLICY

TOWER'S FISH BRAND REFLEX SLICKER \$3

when it rains

A. J. TOWER CO. BOSTON

FISH BRAND

Ditching and Terracing

Made Easy—Bigger crops—better farms with

10 days' trial. Money-back guarantee. All Steel—Practical—Adjustable—Reversible. Cleans ditches, cuts and works out dirt at same time. Does work of big machines. Soon pays for itself. Write for free booklet and introductory proposition. Queensboro Ditcher & Grader Co., Inc., Box 825, Queensboro, N.Y.

Cuts ditch to 4 ft. Grades roads.

When writing to KANSAS FARMER live stock advertisers, please mention this paper.

can be produced so much more cheaply because the pure-bred sires having heavy production records back of them can sire hundreds of calves in a few years and transmit to a large extent the capacity for production which they have inherited from their female ancestors. This kind of breeding combined with good feeding and care, has made it possible to build up very cheaply high producing herds.

Breeding and improving pure-bred animals is a business in itself and should not be taken up lightly. Many a man has made a splendid success as a dairyman but failed as a breeder of pure-bred stock. The safest plan in becoming a breeder is to gain all the experience possible with grades. The change to pure-breds can be made gradually by securing one or two pure-bred cows or heifers and using them as the foundation stock. The amount of capital available always enters into the question, some being able to buy more pure-breds in the start than others.

If the boy referred to has already had some experience in handling dairy cattle, it might be a paying proposition for him to make this investment in a pure-bred cow or heifer. Such cow will cost at least twice as much as would a good grade, therefore the interest charge on the investment would be higher. It is true, the offspring of the registered cow will be worth more. The males from grades must of course be sold as market animals, while the pure-bred bull calves can be sold for breeding purposes. The beginner, however, always has trouble selling his surplus for what it is really worth. He is not known and cannot expect to sell a bull calf at as high a price as could a breeder who is well established and known all over the country. This is one of the disappointments that a young breeder must expect. If he is persistent and has the ability to keep his stock up and bring about improvement, he can hope in time to be able to sell his surplus for what they are worth, providing he is a good salesman.

Simply from the standpoint of the year's record in the work of the dairy club, this boy might not make any better showing with a pure-bred cow than with a good grade. Only 30 points are allowed on production. The balance of the score, namely, the points on economy of production or profit, on the records and story and the quality of the product, has more to do with the efforts put forth by the boy or girl than with the cow. From the standpoint of getting a start in a herd of pure-bred dairy cows, the purchase of a registered animal is necessary, and if this is the intention and it is the ambition of the boy to make the growing and handling of pure-bred dairy cattle a business, he might start in the club with a pure-bred cow.

Quality in Dairy Products.

In the Kansas Farmer Dairy Club 20 points are allowed for the quality of the product. A Leavenworth County banker asks how this point will be determined.

No one can question the desirability of making quality a consideration in placing the awards. The kind of care given to milk and cream on the farm have a great deal to do with the quality of butter made at the creamery. The quality of the butter determines its price when sold on the open market, and finally the price the creamery can pay for butter fat is based on what it can get for the butter it markets. The producer, therefore, is directly concerned in producing cream that will make good butter.

The young people taking part in this contest are to be encouraged to learn how to handle milk and cream so that their product will score high. This will be valuable knowledge for them in later life in case they follow the dairy business.

For this contest it will be impossible to have inspectors visit all the members for the purpose of scoring the quality of their product, but at some time during the year they will be asked to send a bottle of milk to the dairy department of the Kansas Agricultural College, Manhattan, where it will be carefully scored for quality. A uniform period will intervene between the time the milk is produced and the time it is scored, so that all will have an equal chance. This score will be used as a basis for the standing in quality.

Community Breeding.

Kansas is rapidly developing as a dairy state. With the introduction of so many cattle of dairy breeding, the question of community interest should be given consideration. Wisconsin has achieved prominence through community effort in dairy cattle breeding. In Pennsylvania the farmers of a number of communities have agreed to keep the same breed.

"We sometimes refer to this plan as community breeding," says L. W. Lighty, of that state, "and it is an excellent

plan for a certain limited territory to have cattle practically all of the same breed. This plan is feasible in many sections, and its advantages are worth looking into. One decided and profitable advantage is the fact that such a community attracts large buyers from a distance who know what they want and pay top prices. Such communities are not at the mercy of a local buyer who fixes prices to suit himself, but competing buyers come in and offer the best prices of the country. Community breeding enables us to sell our surplus at top prices.

"Another great advantage is the ease by which we can improve our stock. In a community where everybody is interested in one certain breed it is profitable to bring in the best sires that money can buy, and the most promising cows may be bred to such a sire, and thus we are sure of constant improvement and building up of our stock. An isolated breeder cannot afford, as a business proposition, to purchase the best and most promising sire. The breed selected becomes the pride of the community and everybody vies with everybody else to possess the best. Before very long not only has the stock been wonderfully improved, but the people, by friendly competition, have educated themselves in practical stock breeding and caring for the same so as to do and show their best. They want to make a favorable impression on the stranger coming into the community and they get profitable prices for their stock and thus have the cash to improve their farms, buildings, roads, schools and altogether elevate and enrich the community.

"This is rural uplift that uplifts, instead of wild talk and palaver that is so overmuch indulged in. Let those communities that have not thus benefitted investigate the merits of this practice to their own general advantage. Community breeding of cattle, horses, swine, poultry and other stock, has many advantages and no disadvantages."

Feeding Fat Into Milk.

Rich feeds do not make rich milk. It seems most difficult for many to let go of the theory that the feeding of rich feeds will increase the richness of the milk the cow produces.

Only a few days ago a young dairyman was in KANSAS FARMER office, and in the course of our conversation this point came up incidentally, and we were surprised that he had not learned that the percentage of butter fat is an individual characteristic of the cow and cannot be changed. This point has been so thoroughly studied, experimentally, that there can be no doubt as to this fact. Any sudden change in feeding methods or other disturbing influence can temporarily affect the percentage of butter fat in milk, but it will eventually swing back to the normal for that particular cow. All cows vary in the per cent of butter fat from month to month, but the milk of each cow will be found to possess a certain fixed composition that is natural to her, and variations in the kind or character of the feed will have no influence.

Cows that are almost starved sometimes drop below their normal percentage of butter fat. As a general proposition, a dairyman is safe in taking it for granted that he cannot feed butter fat into milk. His efforts in feeding must be directed toward increasing the milk flow. If cows testing higher are desired, this characteristic must be bred into them.

A Long Distance Record.

Sophie 19th, of Hood Farm, is claimed now to be the champion long distance cow of the world.

Beginning at the age of two years and two months and finishing at the age of nine years, this cow has possessed herself of a most wonderful record. During these years she has given birth to five living, healthy calves and yielded on authenticated test 64,005 pounds of milk containing butter fat equivalent to 4,414 pounds 14 ounces of 85 per cent butter.

It often makes us wonder what a prosperity there would be for the American dairy interests if all cows supplying our creameries were such producers as this and other record cows we know of. Sophie's record rests not on the performance of one year, but extends over a period of seven years.

Cows like Sophie 19th are greatly needed in all parts of the United States. It will be a long while before any cow will surpass the above record; but if it is surpassed, it will be by a pure-bred. The scrub cow cannot even approach it. Talking better dairy cattle ought to become a habit. It's money in your pocket and in the pocket of your patron. The last point makes him a better listener than if the benefits were wholly on your side.

It isn't what you put into a Cream Separator—but what you get out of it that counts.



DE LAVAL Cream Separators are by far the most economical

REAL economy is never short-sighted. It never confuses PRICE with VALUE.

PRICE is what you pay for an article—what you put into it.

VALUE depends upon the amount and quality of service the article gives you—what you get out of it.

You get by far the greatest actual VALUE for your money when you buy a De Laval—BECAUSE it will give you much better and longer SERVICE than any other separator.

From the standpoint of its greater durability alone the De Laval is the most economical cream separator to buy, and when you also take into consideration its cleaner skimming, easier running, greater capacity and less cost for repairs, the price of the "cheapest" machine on the market is most exorbitant compared with that of the De Laval.

And there is no reason why you should let its FIRST COST stand in the way either, because the De Laval may be purchased on such liberal terms that it will actually pay for itself out of its own savings.

A De Laval catalog to be had for the asking tells more fully why the De Laval is the most economical cream separator, or the nearest local De Laval agent will be glad to explain this and many other points of De Laval superiority. If you don't know the nearest local agent, simply write the nearest De Laval main office as below.

THE DE LAVAL SEPARATOR CO.

165 Broadway, New York

29 E. Madison St., Chicago

50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER

Plenty Of Water For Your Dairy

Supply an abundance of fresh water for your dairy and milk house. More milk and healthier stock. Makes the dairy pay. Our experts will help you select the right pump from among our 300 styles. All rigidly tested and guaranteed by the largest manufacturer of pumps in the world. Backed by 65 years' pump-making experience. They are strong, durable and reliable.

Write for this Book.

COULDS PUMPS FOR EVERY SERVICE

will furnish you plenty of water under pressure for fire protection. Get our freebook, "Water Supply for the Country Home." Plan now for sanitary plumbing in bathroom, kitchen and laundry. Write today. Address Dept. F

The Coulds Mfg. Co.
Main Office and Works:
Seneca Falls, N. Y.

Branches:
Chicago Philadelphia
Boston New York
Pittsburgh
Houston
Atlanta



CORN, ALFALFA AND LIVE STOCK

THE PROFIT-PRODUCING COMBINATION.

Do you want a nicely improved quarter section, highly productive, two miles from Marysville, the county seat of the banner corn county in Kansas? A bargain for someone at \$16,000, with favorable terms. For particulars address

X. Care, Kansas Farmer

THE BEST LINIMENT

ON PAIN KILLER FOR THE HUMAN BODY

Gombault's

Gaustic Balsam

IT HAS NO EQUAL

For — It is penetrating, soothing and healing, and for all Old Sores, Bruises, or Wounds, Felons, Eczema, Cancers, Boils, Corns, and Bunions. **HUMAN GAUSTIC BALSAM** has no equal as a Liniment.

We would say to all who buy it that it does not contain a particle of poisonous substance and therefore no harm can result from its external use. Persistent, thorough use will cure many old or chronic ailments and it can be used on any case that requires an outward application with perfect safety.

Perfectly Safe and Reliable Remedy for
Sore Throat
Chest Cold
Backache
Neuralgia
Sprains
Strains
Lumbago
Diphtheria
Sore Lungs
Rheumatism
and
all Stiff Joints

REMOVES THE SORENESS—STRENGTHENS MUSCLES
Cornhill, Tex.—"One bottle Gaustic Balsam did my rheumatism more good than \$120.00 paid in doctor's bills."
Price \$1.50 per bottle. Sold by druggists, or sent by us express prepaid. Write for Booklet B.
The LAWRENCE-WILLIAMS COMPANY, Cleveland, O.

Easy to Own this good Engine

Before you arrange to try any engine, at any price, send for my money-saving offer, Cash or Easy Terms, on

BAUER ENGINES

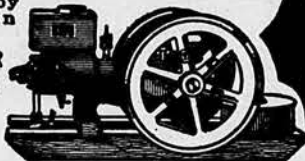
Gasoline, Kerosene and Gas

Now sold direct from factory to user. Prices average under \$16.50 per H.P. Sizes 2, 3, 5, 7, 9, 12 and 16 H.P. Long stroke, valve-in-head, even speed, engines.

Guaranteed 5 Years.

Free Book! Send name and address now so I can send you my free book with most liberal offer by return mail.

A. F. BAUER
ENGINE CO.
153 Bauer
Block,
Kansas City,
Missouri.



GET RID OF Worms and Bots

You can remove every one of them. We guarantee to kill and bring from the body, dead, in a very short time, all pin worms and bots, with the safe and sure remedy.

NEWVERMIFUGE

Absolutely harmless. Can be given to mares in foal before the eighth month. Horse owners write us that Newvermifuge has removed from 500 to 800 bots and worms from a single horse. An animal that is wormy can't help but be ugly and thin. If your horses are troubled with worms send us your order today. 6 Capsules \$1.25, 12 for \$2.00. **BALLING GUN FREE** with 4 dozen \$8.00, with 2 dozen \$5.00. **Farmer's Horse Remedy Company, Dept. D 6, 692 7th Street, Milwaukee, Wis.**

FARM LOANS

Kansas, Missouri, Oklahoma

We are in the market at all times for high-grade First Mortgage Loans on improved farms.

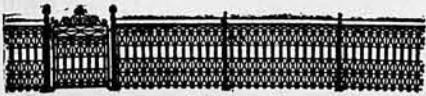
WRITE US. CALL AND SEE US.

FIDELITY TRUST COMPANY
CAPITAL AND SURPLUS \$2,000,000
Kansas City, Mo.
Prompt Inspections. Low Rates. Prompt Settlements.

12 1/2% ECONOMY FENCE

Before you buy any more fence, write for facts about our 26-inch **ECONOMY HOG FENCE** at 12 1/2% per rod. Many other styles and prices.

Keystone Steel & Wire Co.,
6857 Industrial St. PEORIA, ILL.



Cheap as Wood We manufacture **Lawn and Farm Fence**. Sell direct, shipping to users only at manufacturers' prices. **WRITE FOR FREE CATALOG**

UP-TO-DATE MFG. CO. 916 10th St. Terre Haute, Ind.

GERMAN DISTEMPER REMEDY
For Distemper, Coughs, Colds, Epizootic, etc., in Horses and Stock.
Fifty cents and \$1 a bottle at all druggists or direct. German Distemper Remedy Co., Jackson, Michigan.

GOPHER TRAPS something the gophers can't cover up. Circular free.
A. F. Renken, Box 32, Kramer, Neb.



SPRING PASTURE FOR HOGS

THOSE who have alfalfa and plenty of hog fences have admirable conditions for producing pork at a minimum cost. Many farmers are still without alfalfa, and, therefore, must depend on other crops for hog pasture. Even the farmers with alfalfa can often make profitable use of annual forage crops for pasture. The economy of pork production hinges largely on the use made of forage crops. The hog is a natural grazer at all times of its life to a greater or less extent. The hogs which have had succulent food almost constantly available are the ones producing pork for the least money. They are almost invariably the most thrifty and healthy and have made their gain on a smaller amount of grain than the hog which has been confined to dry-lot feeding through a considerable portion of its life.

Rape is one of the most satisfactory early pastures for hogs, and should be used far more than it is. At the Kansas Experiment Station, rape has returned a value of \$12 per acre, in combination with proper grain rations. It is very low in crude fiber, which makes it especially adapted to the digestive system of the hog. Careful analyses made at the Ohio station show that in proportion to the total dry matter in the plant it contains a higher per cent of protein than clover, soybeans, hay or even alfalfa. An acre of rape will pasture 15 to 20 hogs for two or three months. It is a cool weather plant, belonging to the cabbage family, and may be seeded early in the spring. It produces a rank growth of large, succulent leaves, growing 20 to 30 inches in height. It does best in rich, heavily manured soils, and can be used to great advantage in feed lots which have been used through the winter season. The ground should be carefully plowed and well pulverized. The seed may be drilled in rows 20 to 30 inches apart at the rate of two to three pounds of seed per acre, or sown broadcast at the rate of four to six pounds of seed per acre. Grown in rows, it may be given some cultivation, which is an advantage in foul land, and in grazing it down the hogs will not trample and destroy as much as where sown broadcast. In drilling it in, a garden drill may be used, or an ordinary wheat drill, using the grass-seed attachment. It may be sown from early spring on into early summer, but far better results will come the early seeding. It is a good plan to make successive seedings, so as to be able to move the hogs from one lot to another. If it is not pastured too severely, it will grow up again after the hogs have been removed for a time. The hogs should be removed while a few leaves still remain on each plant. If drilled in rows, it may be cultivated when the hogs are removed, and much better growth will result than if it is left alone. As high as three good crops may be secured from the same plants in this manner.

It will be ready for the hogs in six to eight weeks from the time of seeding. Large hogs should not be turned in until the rape is about 12 to 14 inches tall; young pigs might be allowed on it earlier. If allowed to get too large and rank before the hogs are turned in, they are apt to refuse to eat it. There have been some complaints made that hogs would not eat rape. In the writer's experience nothing of the kind has ever occurred, the hogs eating the rape greedily at the first opportunity. There have also been some complaints made that a peculiar skin disease is produced by the rape plant. This difficulty has been observed to occur with other rank forage plants as well as with rape. It probably is due to the pigs running in the rape, or other plant, when it is covered with a heavy dew and having the sun come out afterwards, resulting in a scalding of the skin. We have had practically no trouble of this kind at the experiment station.

Rape and oats are often used together for an early pasture for hogs. At the Missouri Experiment Station it has given one of the most highly productive spring pastures ever used. They may be seeded at the same time or the rape may be broadcasted after the oats are up and harrowed lightly to cover. At the Michigan Experiment Station splendid results were secured by sowing broadcast rape and millet, mixed equal parts, using a pint of each per acre. A mixture of corn, oats, and Canadian field peas in equal parts, was then drilled in at the usual

depth; this operation covering the rape and millet already sown.

The Dwarf Essex variety is the only variety widely grown in this country. The seeds are small, very much resembling a large, black mustard seed. It can be obtained of almost any salesman. It is a good plan to secure samples and make germination tests before final purchase of the seed. It should not cost to exceed 10 cents a pound.

Sheep Experience in Lane County.

We started raising sheep about ten years ago with only eight ewes and one ram—all grade Merinos of rather inferior quality. After about two years we secured a pure-bred Shropshire ram, which we used with splendid results. Some of his lambs from these "scrub" ewes were larger than he was. We used him longer than we should have.

We were given a good pure-bred Rambouillet ram by a man who was selling his flock of sheep. We did not like his lambs because they had too much wool around their eyes. We often had to shear it away so they could see to graze. The most of them were of good Rambouillet type.

We now have a grade Shropshire ram which my father bought in the Kansas City yards. His lambs are not large enough, and are of poor quality. My father thinks we should get a Lincoln and breed larger sheep, which I think we will do another year, though personally, I would prefer a good Shrop.

We had 81 sheep and 6 lambs, and lost 35 large ones and four lambs in the recent prairie fire in this district. The ones we have left are nearly all ewes, and there will be several lambs in May. We like the lambs to come in May, but we are usually late in taking the ram out in late summer and, therefore, get some winter lambs of which we usually lose about half.

The cross with the Rambouillet ram did not show any Shropshire.

Our ewes very seldom have more than one lamb.

I have been quite interested in reading the articles in the Breeders' Gazette in regard to the New Zealand Corridales. It seems to me these might be good sheep for this part of the country.—LYMAN S. MILLER, Lane County, Kansas.

Value of the Pure-Bred Bull.

If a community of farmers will combine what they are annually paying for scrub bulls and purchase a pure bred, they will lay the foundation for an increase in the average production of their herd, provided they raise their heifers as they should. The results will astonish them if they will but take the trouble to keep a milk sheet and make a fat test regularly.

Record cows have made over 30,000 pounds of milk, and 1,000 pounds of butter in a year, yet the average farm cow returns about 3,000 pounds of milk and 140 pounds of butter, in the same time. This fact not only emphasizes the wonderful productive capacity of the dairy breeder's highest attainment, but it exposes with equal force the woeful failure of the rank and file of dairymen to achieve the improvement which is well within their possibilities.

Comparison of the primitive cow in her native state where she invariably became fresh in the spring, produced only sufficient milk of such quality as the sustenance of her calf required, and went dry as soon as the calf was weaned, with the modern cow of highly specialized function, leads one to inquire by what means this marked improvement has been accomplished.

In the very beginning some calves fared better from their dams than others and naturally those best born and best raised were most likely to survive and be the parents of the next generation. Hence, even in the wild state there was a tendency for the cows to become better producers, generation by generation.

When the dairyman assumes responsibility for the mating of the cows, and deciding which calves shall or shall not be kept as breeders, all natural tendency toward improvement is lost, and under an unwise or a careless system of selection his cattle may actually show less improvement than they would if their natural mode of living had not been interfered with. Only by selecting out the best producers and mating them with the sires and sons of other best producers can the steady increase in productive capacity, which has marked the success

The Famous TUNG-LOK



Only
\$99.00

Think of it—a genuine "Tung-Lok"—the best silo in the world for only \$99.00.

There is no reason now why a "Tung-Lok" should not be on every farm. Every silo owner who owns or has examined a "Tung-Lok" frankly admits it is the world's best.

Durability—price—cost of construction, all considered, the "Tung-Lok" is in a class by itself.

No Hoops. No Guy Wires.

Remember you have no troublesome Hoops or Guy Wires on the "Tung-Lok." Wet or dry—cold or hot—wind or calm, full or empty, the "Tung-Lok" stands. It can't blow down—it cannot come apart, because the "Tung-Lok" style of construction is scientifically correct. Sections laid horizontally, each section tongued and grooved so that all fit perfectly and interlocking, making a rigid wall. No scaffolding or expert help needed to erect—you save \$50 more right there.

Free Book

Write for Free Book and full information, together with special proposition to progressive farmers on Tung-Lok Silos, Tanks and Grain Bins.

Tung-Lok Silo and Tank Co.
303 Interstate Building,
Kansas City, Mo.

THE BEST \$45.00 Strictly All Oak Tanned Western Double Team Harness on Earth, with Breaching, and Collars, for



\$36

Catalog for asking.

Hame tugs 1 1/2 ins. with three loops and patent buckle. Traces 2 1/2 ins. solid single ply, with cockeyes.

The FRED MILLER SADDLE & HARNESS CO.
1413-15-17-19 Larimer St., Denver, Colo.

SECOND HAND SEPARATORS



For Sale—A number of good second-hand separators and engines of different makes. We are manufacturers of Prairie Queen Separators and state agents for A. D. Baker Engines and Separators. Write for description of both second hand and new machines. **McINTIRE BROS. - NEWTON, KANSAS**

BIG MONEY IN FRUIT

Replenish your orchard; plant your roadside. Write for low wholesale prices on our hardy nursery stock—apple, plum, cherry, grapes, etc. Also how you can, without using any crop land, make from \$2.00 to \$3.00 per acre extra profit. You also get our 1916 **FOUR-COLOR PURE SEED BOOK AND PLANTING GUIDE FREE** Field, vegetable, flower seed; fruits, shrubbery, trees, plants—all kinds. Send postal today. **GALLOWAY BROS. & CO., Dept. 216 Waterloo, Iowa**

Hill's Evergreens Grow

Best for windbreaks and hedges. Protect crops and stock. Keep house and barn warmer—save fuel—save feed. Hill's evergreens are hardy, nursery-grown. Get Hill's free illustrated evergreen book and list of 50 Great Bargain Offers—from \$4.50 up per thousand. 56 years' experience. World's largest growers. Write **D. HILL NURSERY CO., Inc. Evergreen** 2812 Cedar St., Dundee, Ill. Specialists.

of breeders of pure-bred cattle, be accounted for.

This is the advantage of the pure-bred bull over the scrub. He comes of a long line of carefully selected ancestors, accurate record of the breeding and performance of each of whom has been kept. Every time that a high producing cow or the son of sire of high producing cows appear in his pedigree, the likelihood of his siring high producing daughters is increased by one. Furthermore, he becomes so thoroughly reinforced along lines of high production that his breeding power to impress his own inheritance, in high production upon his calves, becomes so strong that he is actually more than half the breed, that is, his calves will inherit more from him than from the cows to which he is bred. This would be equally true of the pure-bred cow, but as she has but one calf while a bull may be the sire of fifty in a season, the latter is a much cheaper and more convenient means of securing the increased production that comes with pure blood.

A grade is an animal only one of whose parents is a pure bred, and the mating of common-bred cows to a pure-bred bull, always of the same breed, is called grading up. Since with each generation the proportion of pure blood to common blood increases, until after five of six of these top crosses of pure blood, it predominates to such an extent as to render the cattle practically as productive as pure breeds, although, of course, they are not eligible to registration. They are termed high grade.

In order to keep pace with the improvement wrought through the use of better blood, more liberal feeding must be practiced, but feeding can never compensate for the lack of breeding.

Improved blood endows the cow with greater capacity to produce, which in turn requires a liberal supply of the raw materials provided in the ration out of which to make milk and fat, but it is as unreasonable to feed an abundance of high-priced feed to low-bred, unproductive cows, as to waste good seed in poor ground. It is economy to increase the ration as long as the cow responds with a corresponding increase in production, but the limit to which this response may reach is altogether determined by her breeding.—DR. CARL GAY, Penn.

It is very necessary that little pigs have plenty of exercise and all the sunlight that can be given them. Do not allow the pigs to run out during a cold rain. If possible, provide green feed or roots. These keep the sow healthy and cheapen the ration. Encourage the pigs to eat grain after they are three or four weeks old. Build a creep for them so they can feed alone. At this age feed for bone and muscle. Give them all the skim milk you can. If skim milk is not available, give them some meal and plenty of pasture. In about eight or ten weeks the pigs will have practically weaned themselves. After they have been successfully weaned the most perplexing job is over.

Correction.

In our report of the organization of the Holstein-Friesian Association of Kansas, we gave the name of Herman Regier, of Whitewater, as one of the directors. This was a mistake. It should have been Gerhard Regier, of the firm of G. Regier & Sons, Whitewater.

Milk and Cream Contests.

All are interested in improving the quality of milk and cream. Milk and cream contests have been found by the federal Department of Agriculture to be a very valuable means of inducing dairymen to take greater pains in the production and handling of milk. The law can, of course, be applied to glaringly insanitary conditions, but after a certain degree of cleanliness has been reached, subsequent improvement must be obtained in other ways.

The first milk and cream contest was held in 1906 during the National Dairy Show at Chicago. Since then there have been many others, and the method of scoring the exhibits has gradually been improved. Under the present system, out of a total possible score of 100 points, 35 are allowed for the bacterial count, 25 for the flavor and odor of the milk, 10 for the absence of visible dirt, 10 for percentage of fat, 10 for percentage of solids not fat, 5 for acidity, and 5 for the appearance and condition of the bottle and cap.

To obtain a perfect score for the bacterial count, the milk must contain less than 500 bacteria per cubic centimeter. A bacterial count above the local legal limit results in a score of 0. The deductions from the possible score of 25 for flavor and odor are made according to the conditions found. This is also true of the examination for visible dirt. For this the milk is allowed to remain

for some time undisturbed and the bottom is then examined very closely for the slightest movable speck. Four per cent or more of fat in the milk results in a perfect score of 10; less than 2.7 per cent in 0. To obtain a perfect score for the solids not fat, the percentage must be 8.7 or more, and less than 7.8 per cent is counted 0. In the case of cream, there is no credit for solids not fat, and the percentage of fat counts 20 points instead of 10. To obtain a perfect score for acidity, the percentage must be 0.2 or less. More than 0.24 per cent is counted 0.

The same score card is now being used for market milk and for certified milk, but in most of the contests conducted by the federal department, those who compete in the certified class are not allowed to enter samples in the market class.

The educational value of these contests is indicated by the fact that almost invariably dairymen who have had experience in such competition, obtain higher scores than those who have not. On the other hand, the contests are used also to point out to consumers the fact that clean milk is more difficult and expensive to produce than dirty milk.

Protect Young Trees.

In a recent circular from the Kansas state forester, the following good information is given on the care of trees:

"Newly planted trees require protection against injury by the sun, wind, and animals. Protection against injury by the sun and wind is required by the evergreens more than by the broadleaved species. Furthermore, because evergreens are in full foliage when they are planted, there is considerable danger that they will suffer from the effect of excessive transpiration. To guard against this danger, a screen of some kind should surround them. When only a few trees are involved, small boxes with their tops and bottoms knocked out, can be set around the trees. Empty nail kegs will also answer the purpose. A screen of burlap tacked to three or four stakes at equal distances around the tree answers the purpose very well. For extensive planting, as in groves and shelter-belts, shingles or short pieces of light box boards from six to eight inches in width, driven into the ground a few inches from the tree on the southwest side, provide excellent protection. Some protection of this nature is very necessary during the first month or six weeks after the evergreens are planted.

"The broadleaved species will require no special protection, except from rabbits. Their stems should be wrapped with burlap, grass, cornstalks, or wooden veneer tree-protectors, or painted with crude oil.

"Live stock of all kinds must be rigidly excluded from the area occupied by young trees. Browsing off the tips of the branches, rubbing against the stems, and trampling the ground around the trees, are all detrimental and cannot be permitted if successful growth is to be secured.

"When leaf-eating insects threaten, the trees should be sprayed with an arsenical spray. To protect against borers, the stems of the newly planted trees may be painted with a saturated solution of sal soda, to which enough laundry soap has been added to make a thick paint. Carbolic acid is then added to this mixture at the rate of one pint to ten gallons. This should be applied frequently enough to keep the stems completely coated from the first of May to the middle of August during the first and second seasons."

Sweet Clover Valuable Plant.

Sweet clover is being recognized as a valuable crop for pasture and soil improvement, while it may sometimes be grown to advantage for hay production where alfalfa or red clover cannot be successfully raised.

Like any other legume, sweet clover is more or less exacting as to type of soil. It does not thrive on acid or poorly drained soils, nor is it adapted to the heavy other types in the eastern half of the state, especially those well supplied with lime. Acid soils not otherwise unadapted to sweet clover, may be treated successfully with lime or ground limestone to correct the acidity.

Every precaution should be taken to give the cow about to freshen the most cleanly and sanitary surroundings. The cow should calve in a clean, freshly-bedded stall, or better yet in mild weather, in the pasture. It is essential that surroundings be clean in order to avoid infection of the freshly-severed navel cord. The cow will be in better physical condition and will yield more milk if she is dried up about six weeks before calving time than she would if milked up to time of calving.



Profit and Pleasure in Game Farming

YOU do not need to be told that there is a great demand for game birds in this country—a demand much larger than the supply. You probably know that game birds of many kinds bring high prices in city markets. But has it ever occurred to you that, by means of game farming, you can help supply, and profit from, this demand?

You are well equipped to raise game birds for the market, for your table, and for sport. You have the necessary land. You and your family have the experience gained in raising stock and poultry. You may conduct a game farm on either a small or a large scale, as conditions and your own inclinations warrant. The expense involved in time and money is not great in either case, while with reasonable care, success is almost certain to follow.

Proved by Experience

The experience of others verifies this statement; for while game farming has not been carried on as extensively in this country as in Europe, we have many well conducted and profitable farms in all parts of the United States. The owners of these game farms not only receive good prices for eggs and for birds but some of them also rent the shooting privileges on their land to those who are very wil-

ling to pay for the sport

For your information on this important subject we have prepared a book called "Game Farming for Profit and Pleasure." It gives detailed information regarding the raising of game birds, their habits, foods, etc. You will find it well worth reading.

Write today for a free copy of this book. Use the coupon below.

Game Breeding Department, Room 96

HERCULES POWDER CO.

Wilmington, Delaware

Manufacturers of Explosives; Infallible and "E. C." Smokeless Shotgun Powders; L. & R. Orange Extra Black Sporting Powder; Dynamite for farming.

Game Breeding Department, Room 96
Hercules Powder Company, Wilmington, Delaware

Gentlemen:—Please send me a copy of Game Farming for Profit and Pleasure. I am interested in game breeding from the standpoint of _____
Very truly yours,

Name _____

Address _____



ARE YOUR CROPS PROTECTED ?

You know the deadly work of hail. Within a few hours all your crops can be destroyed. Your income is gone. Your labor is wasted.

What a sense of security you have when your crops are protected against hail in a safe and conservative company. Don't risk another day, but insure now in a company whose officers are bonded to the State of Kansas for \$50,000, which guarantees you safe and full protection throughout the life of your policy.

THIS IS THE COMPANY

that first put the insurance in force from the moment the application was signed and the premium paid. Always has adjusted all losses, no matter how small. We ask for your application on our past record. Don't wait for the storm, but write us for full particulars or see our agent before you insure your grain.

THE GRAIN GROWERS HAIL INSURANCE COMPANY

Elmer F. Bagley, Secretary, Topeka, Kansas.

When writing to KANSAS FARMER live stock advertisers, please mention this paper.

Ask your dealers for brands of goods advertised in KANSAS FARMER.



Better Things to Eat For the Worker on the Farm!

"You want things at your house that are nourishing and wholesome as well as tasty and tempting. Then take my advice—use Calumet Baking Powder every bake day."

"Such tender, light and appetizing biscuits, doughnuts, muffins, cakes and other goodies!—all so tempting you just can't keep away from them."

"My mother uses Calumet all the time and I know she knows what's best. It's unequalled for sure results—for leavening and raising qualities—for purity and economy. Try it on the money-back guarantee."

Received Highest Awards

New Cook Book Free
See Slip in Pound Can



Calumet Baking Powder Co.



Little Talks to Housekeepers

Helpful Hints Here for the Women Folks of the Farm

Look at thy heart, and when its depths are known, Then try thy brother's, judging by thine own. But keep thy wisdom to the narrow range, While its own standards are the sport of change. Nor ask mankind to tremble, and obey The passing breath that holds thy passion's way. —Holmes.

A very simple arrangement which will do away with the annoyance of overturned garbage pails, can be made as follows: Nail a barrel hoop to the side of the house and also to a stake which is driven into the ground. If you wish it away from the house, fasten it into the ground. The pail can now be set inside of the hoop, and even the most persistent dog will have some difficulty in spilling the contents of the pail.

Fly Campaign in Order.

It is not too early to start the fight on flies. The most important thing is to remove all favorable breeding places. Then leave nothing that will attract them setting around the kitchen or just outside, uncovered, and have "blood in your eye" for every fly that makes his appearance, that he may not have a chance to establish the summer home of

millions of his kin on your premises.

Much can be done from now on in the way of preventive measures, to lessen the number of flies, and this is far more satisfactory than having dishes of poison distributed through the house later to kill them. This latter practice is always dangerous on account of the possibility of children getting into it.

An excellent remedy for insomnia, one sufferer writes, is the use of cold water to bathe the feet every night before retiring. If you awaken during the night and have difficulty in getting to sleep again, get up and plunge the feet in cold water, dry them, go back to bed and to sleep.

Origin of Surnames.

Once upon a time given names were the only names in use. One was Tom, Dick or Harry, and that was all there was about it. Our present surnames arose from nicknames. Thus Tom the Tailor became in time Tom Taylor and his descendants used Taylor as a family name. The most familiar of our surnames were taken from the occupations of our forefathers, as Smiths, Bakers, Brewers, etc.

Ponies Free

YES, a beautiful, gentle, little Shetland Pony like this sent free—the most wonderful playmate a child ever had. How can we do it? Why that is simple. Just send your name and address and we will tell you. We will also send you a book with pictures of many of the 364 Ponies we have given away; pictures of the children riding and driving them; pictures of their homes, and letters from these children thanking us for the Ponies we have given them.

One little boy wrote us this: "If all little boys and girls could only have a Pony like my 'Tip', I am sure they would all love him as dearly as I do 'Tip' and have as many good times as I do. I can never thank you enough for sending 'Tip' to me."

WOULDN'T YOU LIKE TO HAVE A PONY, TOO?

Wouldn't you like to have your name entered in our next club, so you would stand the same chance to get a Pony as any other child? Of course you would. It doesn't cost a cent, and you might get one of these Ponies we are soon going to give away. We pay all shipping expenses, and throw in a Buggy, Harness, Saddle, Bridle and Blanket. Send us a postal card or letter, or get your parents to do it for you, and mail it right away. Just say, "I want a free pony and your big free Pony Book".

THE FARMER'S WIFE PONY CLUB

250 Webb Bldg. St. Paul, Minn.

Pony Picture and Story Book

Pony Book Free

THE STORY OF THE SOIL

CYRIL G. HOPKINS

of The University of Illinois

Author of SOIL FERTILITY AND PERMANENT AGRICULTURE

Published for KANSAS FARMER Topeka, Kansas

SPECIAL EDITION

SPECIAL OFFER ON This Splendid Farm Book

"THE STORY OF THE SOIL"

Is an intensely interesting volume giving you in the form of a story all the essential facts regarding the formation of soil, how to fertilize it, what fertilizers accomplish, how to restore flooded or wornout land, what are the plant foods, and treating in a simple way some of the big agricultural problems of the United States. Every farmer should have this book, if not for himself, then for his sons and daughters. It will interest them in nature and they will get an insight into soil culture that they may not obtain in any other way. The author of the book is Cyril G. Hopkins, of the University of Illinois, one of the foremost authorities on scientific farming. The cloth bound edition price by mail is \$1.15. However, Kansas Farmer has secured the same volume, 362 pages, complete on good paper and large clear type, in paper binding, with beautiful colored illustrations, and we will send this book postpaid and enter or renew your subscription to Kansas Farmer for one year for only \$1.10. This is our best book bargain for this year. Send all orders to

KANSAS FARMER, TOPEKA, KANSAS

FASHION DEPARTMENT — ALL PATTERNS TEN CENTS

This department is prepared especially in New York City, for Kansas Farmer. We can supply our readers with high-grade, perfect-fitting, seam-allowing patterns at 10 cents each, postage prepaid. Full directions for making, as well as the amount of material required, accompanies each pattern. When ordering, all you have to do is to write your name and address plainly, give the correct number and size of each pattern you want, and enclose 10 cents for each number. We agree to fill all orders promptly and guarantee safe delivery. Special offer: To anyone ordering a pattern we will send the latest issue of our fashion book, "Every Woman Her Own Dressmaker," for only 2 cents; send 12 cents for pattern and book. Price of book if ordered without pattern, 5 cents. Address all orders for patterns or books to Kansas Farmer, Topeka, Kansas.



No. 7594—Ladies' Waist: Cut in sizes 34 to 44 inches bust measure. This smart bodice has two short tucks at each side of the front, a plain back and shoulder straps. The open neck is trimmed with large revers and there is a flare collar with wide points at the sides, which trims the back of the neck. No. 7620—Children's Rompers: Cut in sizes 2, 4, 6 and 8 years. These rompers are to be worn without skirts under them. They have either a front or a back opening as preferred, but in either case there is an opening across the waistline in the back. The neck is high with flat collar. No. 7628—Ladies' Dressing Sacque: Cut in one size. This garment is made of a perfectly square piece of material, with a cross cut for an opening at the neck. The edges in turning back form revers and the slope of the sides is completed by turning up little pointed ends on each arm. No. 7608—Ladies' Morning Set: Cut in sizes 34 to 42 inches bust measure. This set offers a novelty in the morning dress. It has a middie blouse made on the usual lines, but in one piece, without shoulder seams. The skirt has four gores. The cap is gathered with revers band in front. No. 7624—Ladies' Skirt: Cut in sizes 22 to 34 inches waist measure. This skirt has three gores, with closing in the center of the front. It fits neatly at the top and widens at the lower edge to 2 1/2 yards in the medium size. The belt at the top may be used or omitted. No. 7593—Ladies' Dress: Cut in sizes 34 to 42 inches bust measure. Plain and practical, this dress has a side front closing with a high flare collar at the sides and back of the plain high neck. The long sleeves are fitted and finished without a cuff unless shortened. The skirt has a deep yoke, below which are three gores.

Central Kansas Business College

ABILENE, KANSAS.

GENTLEMEN.—Please send me information as to how to get a free course in penmanship or stenotype (machine shorthand).

Name

MAIL TODAY. Town

Many men, moving to new towns, had the name of the place from which they had come fastened upon them. Others took names like Pope, King, and Bishop, from playing those parts in plays. Hogg and Bacon are simple. Purcell developed from porcine, meaning little pig. Galt and Grice are old dialect words of the same meaning. Tod meant fox, Fitchie was pole cat, and so the keen student of language traces the beginnings of our names in the old dialects. Some of the nicknames were originally distinctly uncomplimentary, as Seely for silly, Cameron, for crooked nose, and Kennedy for ugly head. Grace developed from gras or fat.—The American Boy.

Important Kitchen Conveniences.

Is your kitchen work table the right height for you? Have you ever given this matter a thought, or was the table bought without regard to its height? If this was done, and dish-washing and the preparation of vegetables tires your back terribly, it will be quite well worth your while to investigate the table height. Experiment by putting blocks of different sizes under it, until the work at the table can be done more easily, then have the men folks make the change in the height.

Many women stand to do things that can be done as well sitting. A stool of the height to fit that of the table, can be used very profitably by the housewife many times a day.

If the kitchen table is used for ironing, draw it near the stove, to save steps. Learn to press the stool into service on ironing day, too. It may seem a little awkward at first, but you will soon become accustomed to it and will find it a strength-saver.

Kansas Farmer Dairy Club.

This is the first junior dairy club started in Kansas. It is unique in several ways. It gives opportunity for the boy and girl to exercise and check their judgment in selecting dairy cows; it affords all the pleasure of contest work; and it offers training in record-keeping and in financial matters.

The lesson of responsibility is one of the most valuable, and the earlier this lesson is learned, the more useful and happier we are. When we are set at a task that is merely a task—which does not require that we use our minds or any initiative—it is apt to become drudgery before we have progressed very far. But when we are given something to do which will be successful to the extent to which we put ourselves into it, our interest is at once attracted and increases as we see our mental picture of the completed task being realized.

The lack of interest shown by young people in work assigned them is often due to the unimportance of the job. If kept at such work long enough, they are apt to become indifferent to the possibilities life offers them, and may spend all their days carrying out the orders of others, when in the beginning there was in them the material which could have been molded into masters.

One of the greatest advantages of the Kansas Farmer Dairy Club, is that it will develop a high type of responsibility in its members. The first thing which the boy or girl who wishes to become a member of the club, must do, is to call upon the banker and ask him whether or not he will be willing to loan the money necessary to buy a dairy cow to be used in the club work. This talk with the banker will be helpful in several ways. Bankers should be—and usually are—the best type of business men, and if this is the first time the boy or girl comes in contact with the business world, the right impression of good business men will be gained. It will bring these young people to an institution with which they should early become acquainted and learn to use.

Faith in the boy or girl—belief that he or she will stick to this work until it is completed—will probably determine whether or not the banker looks with favor upon the proposition of making the applicant a loan amounting to the cost of a dairy cow. If the banker promises the loan, the boy or girl should then make application to KANSAS FARMER for membership in the Kansas Farmer Dairy Club, giving the name of the banker who has offered the loan. Upon receipt of application in this form, the necessary information for completing our part of the arrangement will be promptly forwarded.

Boys and girls should be encouraged to talk with the bankers concerning the Kansas Farmer Dairy Club and the possibility for obtaining the loan to buy dairy cows, that they may join the club and learn its valuable lessons.

Organized Play.

Organized games and the use of apparatus on the playground are valuable in the child's training, as they teach him

to co-operate with others. A certain amount of hard play and well directed play will tend to keep the faculties alert and this training will in after years help materially in taking care of unexpected situations which arise in every life.

Less than 10 per cent of Kansas's rural schools have any play apparatus. This is not expensive equipment, and every school could have at least some of the following: Sand box, swings, teeter board, indoor baseball, basketball, sliding board, horizontal bar and frame, merry-go-round, baseball, croquet, horse-shoes.

If the equipment is supplied, the teacher will be able to direct its use. If not, he will soon learn.

The child whose energies are well directed—who is kept busy at wholesome play and suitable work—will have little time for developing those undesirable traits which unfit him for the highest type of life.

Add Flavor to Canned Peas.

If the members of your family like onions, the next time you cook canned peas flavor them with a bit of onion.

For a quart can of peas use a tablespoonful of chopped onion, which has been cooked in a little butter and water until tender. Add salt and pepper. Heating the peas in the saucepan in which the onion was cooked lessens the labor of dish-washing that much—a simple application of the principle that a housekeeper should always try to plan her cookery in such a way that she "saves dishes" and so spares herself needless labor.

A tablespoonful of chopped or shredded cooked ham may also be added with onion to flavor canned peas. Chopped celery leaves, which might otherwise be wasted, if cooked with peas will give a pleasing flavor.

It is not necessary to improve the flavor of good, home-canned peas, but even with these the variations will be appetizing.

Uses of Mint.

A mint bed near the house is a welcome bit of fragrant green and there are many uses for the leaves. If this flavor is relished by the members of the family, it can many times be added in cooking vegetables that lack in flavor or that need a little toning.

A few of the crushed mint leaves added to lemonade will increase its refreshing qualities.

Nothing is more delicious to serve with lamb or mutton than mint sauce. This is made of two tablespoonfuls of very finely chopped young mint, one tablespoonful of pounded and sifted loaf sugar, and six tablespoonfuls of vinegar. This mixture should be stirred until the sugar is dissolved.

Many patches of mint can be found in low, damp places along the creek or near the spring, and the transplanting of two or three of these roots near the house will furnish sufficient leaves for all uses. For winter use, the leaves can be dried in a warm, but not hot, oven.

Macaroni and Cheese.

Break one cup of macaroni into uniform pieces. Drop into boiling water, boil until tender. Drain and rinse in cold water. Place in a buttered baking dish. Make a cream sauce using two tablespoonfuls flour, two tablespoonfuls butter, one cupful of milk, salt and pepper. Melt one cupful of grated cheese in the cream sauce. Pour over the macaroni. Sprinkle with bread crumbs and bake.

Cheese Pie.

Cut two-thirds of a small loaf of stale bread in one-third-inch slices and remove crusts; then cut slices in halves crosswise. Arrange a layer in a buttered baking dish, which is not too deep, cover with a layer of mild cheese cut in one-eighth-inch slices and sprinkle with salt and paprika, repeating until you have the desired quantity. Beat two eggs slightly, add a cupful of milk and pour over the contents of the baking dish. Bake in a moderate oven until the cheese is melted and deliciously browned, which will require about thirty minutes.

Buttonholes.

With four rompers, each with sixteen buttonholes to be made, I had to think of a way to make them more quickly than with ordinary thread, so I tried using a rather heavy embroidery cotton. The rompers were of butcher's linen. A finer cotton should be used for finer materials. I found I could make a neater, stronger buttonhole in half the time it used to take with regular thread. The embroidery cotton does not knot easily and being heavier there were about one-half the number of stitches to take.

"You won't need to bake to-day!"

Put the box of Sunshine L.-W. Soda Crackers right on the table. Always ready to eat—no baking bother when you have Sunshine L.-W. Sodas in the house. Men folk like their toasty crispness and prefer them to bread. Look for the name

Sunshine

Biscuits

at your dealer's. You'll find a lot of kinds to choose from. Delicious biscuits that will add a welcome change to meals.

LOOSE-WILES BISCUIT COMPANY
Bakers of Sunshine Biscuits



"Everbearing" Strawberry Plants

The Greatest Wonder of the Horticulture World.

Also fifteen million plants of other varieties of strawberries. We grow all other kinds of small fruit plants. Our Catalog is different from any you ever read and will interest you. It is free. Address

F. W. DIXON, Holton, Kansas.

HELP WANTED

Good pay and permanent business connection for one man in each county in Kansas to look after established business. Twenty-six dollars or better per week at start, working small towns and rural routes. Good chance for rapid advancement. Farmers and farmers' sons with a little spare time especially wanted. Previous experience not necessary. Write at once.

J. H. YETTER, SALES MANAGER, 625 JACKSON ST., TOPEKA, KAN.

TRIUMPH Does My Washing For 3¢ a Week

ALL I do is to put in the hot suds—then the clothes—clamp down the cover—and turn on the power. No back-breaking washboard scrubbing for me—no arm-breaking wringing.

Triumph Power Washer With Swinging Wringer

does all the washing—all the wringing. Dainty lingerie—baby's clothes—heavy bed clothes, all come out clean, sweet, not a thread broken. Rapidly reversing dolly swirls the garments at high speed in the tub. Suds forced through clothes—carries all dirt, grease with it. Wringer takes 4 positions—no tub changing. Try the Triumph for 30 days. Write for special circular today. Dept N15



Sold on 30 Days' Trial

For \$1 I Will Send You 8 2 Yr. Apple Pear or Peach

or 5 two year Cherry trees, or 75 Raspberry, Blackberry or Dewberry or 20 Grape, Gooseberry, Currant or Rhubarb or 100 Asparagus or 200 Spring bearing or 50 Progressive fall bearing Strawberry plants or eight 2 year Rose bushes or 25 transplanted Red Cedar. Freight paid on \$10 orders. Catalog free. Manhattan Nursery, Manhattan, Kan.

THE STANDARD FARM PAPERS

BEST FOR THE READER

THEREFORE
BEST FOR THE ADVERTISER

All Members of the Audit Bureau of Circulations.
ARRANGED ACCORDING TO LOCATION,
READING FROM WEST TO EAST

	Guaranteed Circulation	Rate per Annot Line
Pacific Rural Press	22,000	.16
San Francisco, Cal.		
Kansas Farmer	61,253	.30
Topeka, Kan.		
Wallace's Farmer	80,000	.40
Des Moines, Iowa.		
The Farmer's Wife	750,000	3.00
St. Paul, Minn.		
The Farmer	140,855	.60
St. Paul, Minn.		
Wisconsin Agriculturalist ...	63,454	.30
Racine, Wis.		
Hoard's Dairyman	67,820	.40
Ft. Atkinson, Wis.		
Prairie Farmer	100,000	.50
Chicago, Ill.		
Breeders' Gazette	90,000	.60
Chicago, Ill.		
The Progressive Farmer	174,121	.80
Birmingham, Raleigh, Dal-		
las, Memphis		
Indiana Farmer	57,101	.25
Indianapolis, Ind.		
Pennsylvania Farmer		
Philadelphia, Pa.		
(Rate 25¢ per line)		
Ohio Farmer		
Cleveland, Ohio.		
(Rate 60¢ per line)		
Michigan Farmer		
Detroit, Mich.		
(Rate 40¢ per line)		

1,863,465 \$8.43 1/2

These publications are conceded to be the authoritative farm papers of their individual fields.

For further information address

GEO. W. HERBERT, Inc.,

Western Representative,

Advertising Building,

CHICAGO, ILL.

W. C. RICHARDSON, Inc.,

Eastern Rep., 41 Park Row,

NEW YORK CITY.

grain has gone up in price it is very hard to buy pure stuff from many dealers. In some of the hen feed we have bought has been much damaged and moldy grain, as well as lots of worthless weed seeds. In some of the cracked corn and even in shelled corn, are lots of cobs broken up to help swell the weight.

In answer to a correspondent, would say that the gapes is a disease confined mostly to chicks. While old hens sometimes have it, it never kills them. It is caused by a worm that gets into the windpipe of the chick and causes it to choke to death, unless relieved. Take a feather and dip it in turpentine. Put down the chick's throat, turning it around. The worms will be dislodged and either come out on the feather or be swallowed. The gape worm is a reddish looking worm about half an inch long, and wherever the gapes are prevalent, the chicks should be changed to new ground. If there was gapes on your place last year, you should not raise your chicks on the same ground this year. Use plenty of lime and ashes on the ground as a preventive. If the land becomes badly infected, it should be plowed and put out to crops for a year or two before being used for a chicken run again.

A farmer once told us that millet seed was one of the best things to feed poultry in order to keep them healthy. He said that whenever he had millet stacks on his farm and allowed his hens to pick the seeds around them, he never had sick chickens, but when he had no millet he had disease among his flock. Whether it was the millet or the exercise that the fowls got while scratching for it that kept his fowls healthy, we couldn't be sure, but are inclined that there was more in keeping the fowls busy than in the seed itself. However, it is a good plan to have some millet seed on hand to feed the chickens, both young and old, and especially when the fowls are confined in small quarters. When you go into the yards and the hens run up to you for food, which they will do, even when fed quite frequently and are not very hungry, scatter a handful of millet seed for them and let them hunt for the seeds. Mustard seed, hemp seed, or any small seed will do, though millet is generally the seed that is cheapest and handiest to get. A handful of seed at a time is sufficient, as it is not intended so much as a portion of the fowls' ration as it is to keep them busy, for when hens are idle they get into all manner of evil habits, such as feather pulling and egg-eating. The idea is to keep them busy scratching for the small grain, for they eat up the large grains, such as corn and wheat, in a few minutes and then stand around idle. It is said of the great archenemy of mankind, when he goes around fishing for the souls of man, that he baits his hook to suit the inclinations of the several individuals. For one man he places money on the hook, for another an office, for another fine clothes, but for an idle man he needs dangle nothing but the bare hook, for he is just waiting for a chance to bite. The moral for men and chickens is to keep busy, and so keep out of mischief.

It won't do to keep a lot of hens in a dark or uncomfortable building and expect them to be busy and lay. They won't do it. They just mope around and merely exist. They prefer a light, roomy place, where each hen can exercise freely and without hindrance from the others. They will never care to scratch, however, if they are fed every time they appear hungry. They must be compelled to scratch and work for their food. We do not advise the limiting of the food. Give them plenty, but only in the litter, where they must work and scratch for each grain. Throw the grain in leaves, cut straw, cut hay or any kind of litter. At night you might feed them in a trough all they will eat, but during the day make them work hard. At first they might not be inclined to accept such conditions, but unless they scratch, let them go hungry. Scratching means eggs, for it keeps them in health and out of mischief. Idle fowls are the ones that form the habits of feather pulling and egg eating; busy fowls have no time for such nonsense.

Because a flock of hens has free range is no reason for supposing that a plentiful supply of gritty material is found by them. There are different kinds of soils of course, and in some of them may be found gritty portions, but in others there is no grit at all. A calculation will show that when the hens are searching daily over every portion of the range, only a very short time is required for them to appropriate all the gritty material that can be utilized. Round gravel is not suitable. The hens should have

sharp, cutting material, such as flint or broken china or earthenware. Where the fowls are confined it is still more important that the matter of providing grit should not be overlooked. But whether confined or on free range, some kind of grit is imperative to their well being. It is well to have grit and charcoal before the hens at all times.

Bird Law Continues in Force.

A misleading statement has recently become current in newspapers of the Mississippi Valley and elsewhere, to the effect that the department has suspended the enforcement of the federal regulations under the migratory bird law and by this means has enabled sportsmen, under state laws, to shoot wild fowl the coming spring.

Under the federal regulations as they now stand, the season on all migratory wild fowl is closed until next autumn throughout the United States. Federal inspectors and wardens are required, and others interested in the protection of wild fowl are requested, to report to the Department of Agriculture all cases of violations of the regulations, in order that proper action may be taken.

The Department of Agriculture has no power to suspend the law or to pardon violations of the regulations. Doubtless the erroneous impression, on which the newspaper statements are based, has grown out of the pendency of litigation involving the constitutionality of the act of congress approved March 4, 1913, under which the regulations were promulgated. The lower federal courts disagreed as to the validity of the statute, and the issue was carried to the supreme court of the United States. The case was argued in the supreme court in October, 1915, but has not been decided. Following the lower court decisions, congress appropriated money for the purpose of continuing the enforcement of the law. The Department of Agriculture is bound to report to the Department of Justice violations of the regulations if the supreme court should declare the law constitutional. All persons should, therefore, be warned of the danger they incur from failure to abide by the regulations.—Federal Department of Agriculture.

Transplanting Annual Flowers.

Those planning their flower beds for the coming season should remember that certain annual flowers can be started in a seed bed and later transferred to a permanent bed, but that other annuals do not take kindly to transplanting. The following annual flowers which can be transplanted give particularly good results if started early in hotbeds or cold frames: Ageratum, alyssum, aster, calendula or pot marigold, calliopsis, campanula, castor bean, chrysanthemum, cockscomb, cosmos, four o'clocks, godetia, marigold, petunia, sweet william, Scotch pink, scarlet sage, and verbena.

The seed of some of the flowers listed below need not be started in hotbeds, but can be sown later in the season in the open ground and then transplanted to their permanent locations. The seed of these flowers should not be sown until the ground is in condition for making a good seed bed and until there is no longer likelihood of a heavy frost in the locality. A good test to determine whether the garden soil can be worked well is to take up a mass of it in the hand and compact it into a ball. If this ball readily falls apart, the ground is dry enough to be worked. It is particularly important in planting flowers to spade up the ground, fine it thoroughly with hoe and rake, and remove the stones and lumps from it. The actual surface should be made very fine and soft. In planting each kind of seed the directions as to depth of planting should be carefully followed. Flowers that can be sown in this way are: Ageratum, alyssum, aster, pot marigold, calliopsis, campanula, clarkia (shade), cockscomb, dahlias (single), godetia, gaillardia, mignonette, pansy, pinks, rudbeckia, snap dragon, stocks, zinnias.

Most of these may be sown earlier in a hot bed or cold frame and thus be made to bloom sooner.

Certain flowers, however, die or do not do well if they are transplanted. These, therefore, should be sown only in the open ground or beds where the plants are to grow. The varieties which it is best to sow in a permanent location are: California poppy, candy tuft, corn flower, forget-me-not, lobelia, nemophila (shade), phlox drummondii, sunflower, sweet peas.

A small hand forge is often very handy on the farm. In many cases it will pay for itself the first year. Once the method of using it is learned, the trips to the blacksmith will be less frequent during the busy summer season.



We Are Prepared

Within the wide boundaries of our country, embracing more than three million square miles, dwell a hundred million people.

They live in cities, towns, villages, hamlets and remote farms. They are separated by broad rivers, rugged mountains and arid deserts.

The concerted action of this far-flung population is dependent upon a common understanding.

Only by a quick, simple and un-failing means of intercommunication could our people be instantly united in any cause.

In its wonderful preparedness to inform its citizens of a national need, the United States stands alone and unequalled. It can command the entire Bell Telephone System, which

completely covers our country with its network of wires.

This marvelous system is the result of keen foresight and persistent effort on the part of telephone specialists, who have endeavored from the first to provide a means of communication embracing our whole country, connecting every state and every community, to its last individual unit.

The Bell System is a distinctly American achievement, made by Americans for Americans, and its like is not to be found in all the world.

Through it, our entire population may be promptly organized for united action in any national movement, whether it be for peace, prosperity, philanthropy or armed protection.



AMERICAN TELEPHONE AND TELEGRAPH COMPANY
AND ASSOCIATED COMPANIES

One Policy

One System

Universal Service

PURE LIFE INSURANCE PROTECTION

No expensive "side features" which add so greatly to the cost, and yet are of so little real value to the insured. Our rates are lower than those companies having the "side features," and justly so.

Several thousand of the best men and women in Kansas have carried our insurance for years. **THOSE WITH US LONGEST are our best friends.**

Rate at age 35, for each \$1,000.00 insurance, \$13.30; other ages in same proportion. Policies from \$2,000.00 to \$10,000.00, providing death, disability and old age benefits, issued to men and women (ages 20 to 50 years) on equal terms, except that the latter are limited to \$2,000.00 each.

More than \$1,500,000.00 in first mortgage farm loans many of them upon Kansas farms, are pledged to sustain our rates.

IT WILL PAY YOU TO INVESTIGATE.

GUARANTEE FUND LIFE ASSOCIATION
OMAHA, NEBRASKA.

HOME MADE BROODERS

With warm medicated dirt floors. Saves baby chicks. You can change any old brooder or make one of these from an ordinary box. We will send this information absolutely free, also tell you

WHY CHICKS DIE IN THE SHELL

Just send names of 5 or 10 friends who use incubators. This will save you from \$100 to \$500 this summer. **ABSOLUTELY FREE FOR THE NAMES.** Send them today.

RAISALL REMEDY COMPANY., Blackwell, Oklahoma

BOYS THIS CRACK SHOT RIFLE FREE

Will Be Given As a Prize!



Here is a prize that will please every live wide-awake boy that likes to shoot. This is NOT A TOY gun, but a regular target or hunting rifle that shoots 22 LONG OR SHORT standard cartridges. It is made by one of the biggest and most reliable fire arms firms in the world and is guaranteed to shoot accurately. We are going to give away several hundred of these fine guns to boys who will get only four one-year subscriptions to Kansas Farmer at \$1 each, the regular subscription price. You can get them in half an hour. We pay express charges, so the gun don't cost you a cent of your money. You can get two three-year subscriptions at \$2 each, just so you send a \$4 club. Address your order to

KANSAS FARMER, 625 Jackson Street, Topeka, Kansas

MENTION KANSAS FARMER WHEN YOU WRITE.

Growing Sudan Grass For Seed

SUDAN grass, the new annual hay grass introduced from Sudan in 1909, was so enthusiastically received by the farmers in the semi-arid portion of the United States that in 1913 the seed which was available only in limited quantities sold readily at \$1 a pound and even more. These unusual prices gave Sudan grass seed production a great impetus, so that in 1914 seed was much more abundant, the crop being roughly estimated at from five to six million pounds. Three or four million pounds of this amount were produced in Western Texas, where for a time an attempt was made to maintain the price at \$1 per pound.

In other localities, however, the seed was offered at 25 to 30 cents per pound, and as a result of this a great deal of the Texas seed of the 1914 crop remained unsold in 1915. This surplus seed carried over from 1914, together with that from the 1915 crop, has fully supplied the demand, and the price of seed has dropped to five cents a pound or less wholesale, and from seven to ten cents a pound retail. Under favorable conditions seed can be profitably grown for five cents per pound, since yields of 500 pounds per acre are quite common, and 1,000 pounds per acre very often are obtained under favorable conditions without irrigation. With irrigation the yields may reach 2,000 pounds per acre.

Sudan grass is usually grown in cultivated rows when a seed crop is desired. Planted in this way it is readily harvested with a row binder, and after curing well in the field it can be thrashed with an ordinary grain separator. Since no especial machinery is required to handle the seed crop, the expenses are reduced to a minimum, and there remains no reason why the seed should not be reasonably cheap and abundant.

The most dangerous weed pest of Sudan grass fields is Johnson grass. This grass is common in the South and not infrequently occurs in fields of Sudan grass. The seeds of Johnson grass resemble Sudan grass so closely that only the very closest examination will reveal their presence.

An admixture of Johnson grass does not injure the quality of the Sudan grass hay crop, but it is a matter of decided importance when it comes to the production of seed for market purposes.

In the region where winter freezes are severe enough to kill the underground root-stocks very little Johnson grass is found. The only way seed of it can occur in Sudan grass seed, therefore, is through willful mixing of the seed, but as Johnson grass seed cannot be grown so cheaply as Sudan grass seed there is now no object in such adulteration. Where reasonable care is used by the seed grower to obtain pure seed with which to plant his fields in the North, there then remains little chance of an admixture with seed of Johnson grass.

Many of the farmers in the South will be forced to buy their seed, because the presence of the sorghum midge in humid parts of the Southern states interferes seriously with seed production. The midge is most abundant close to the Gulf of Mexico, and there its attacks result in almost complete sterility of the Sudan grass. Farther north in these states, where the midge is not so abundant nor so uniformly present throughout the summer, a partial crop of seed often can be obtained, and in some cases a full crop of seed will set during a period when the midge is not present.

In the dry atmosphere farther west the midge is not troublesome, and in Arizona, New Mexico, and California large yields of seed can be obtained under irrigation.

Sudan grass deserves a much wider use as a hay crop throughout the Southern states and in the irrigated sections of the Southwest, and this continued and endless use for hay purposes should provide a steady demand for good pure seed. Extended information regarding the culture of this grass is contained in Farmers' Bulletin 605, which is sent free on application to the Division of Publications, Department of Agriculture, Washington, D. C.

Handle Cream with Care.

Care given cream by the cream station operator and care on the farm are the two factors effecting the quality of cream and regulating its value. Better care would bring increased profits.

The creameries of Kansas are almost without exception equipped with the latest and most efficient machinery and have in their employ the best men money can procure. The cream received at the plants is pasteurized before being manufactured into butter. This is with the object of destroying all detrimental bacteria. Why, then, does not Kansas

butter sell as "extra"? The answer is an easy one—the raw product does not reach the plant in a condition which makes possible the manufacture of an extra quality of butter.

The ideal room for handling dairy products on the farm should be located on a well drained piece of ground and be at least fifty feet from any stable, barnyard, oil shed, or similar place.

A great deal of Johnson grass seed came to Kansas in seed oats this year. Fore-warned is fore-armed, and those who knew that the oats they planted contained this seed will be on the lookout for it and will destroy it before it gains a foothold. The surest way of doing this is to plow the oat stubble as soon as the crop is removed, and then by surface cultivation destroy any of the grass that may still survive.

Wood Blocks for Floors.

Pavements made of wood blocks are no new thing—in fact, they were extensively used a generation ago in the principal timber-producing regions of the country. They were usually composed of round blocks set on end and the spaces filled with sand. While excellent

when new, they soon wore out in places by the decay of some of the blocks, which left the pavement rough and full of holes, unless frequently repaired.

Substitutes such as stone, brick, and asphalt have largely replaced wood for pavements, while concrete has come into use for ground floors in stable and dairy barns. The desirable qualities of wood, however, which these substitutes largely lack have again brought the wooden block into favor. Thus, it is more quiet, it is not so slippery, and is less trying to the feet and legs of animals than are most of its substitutes.

Its lack of durability is now overcome by treating the blocks with coal tar creosote, and the blocks are cut square or rectangular so that there are no large openings between them.

For dairy barns, creosoted wood blocks laid on a concrete foundation are found to produce an almost ideal floor, and one that is lasting and sanitary as well.—B. O. LONGYEAR, Fort Collins, Colo.

Don't permit the sow to lie in a dusty bed. There is danger of her breathing disease germs in the dust and it is not healthful. Practice sanitary measures for best results. Fresh air, slaked lime, coal tar dips and other disinfectants can be used to good advantage.

The manufacturers of farm tractors have agreed to recognize none of the

plowing demonstrations arranged by commercial clubs, farm papers, or other institutions or organizations. This year the demonstrations will be under the direct management of the manufacturers, through committees upon which the various companies will have representation.

Poultry Notes.

The pullets that will fill the egg basket in early fall and winter are the early hatched pullets.

The incubator is ready to use any time but with hens a desire to hatch cannot be hastened.

Chicks should be left in the incubator thirty-six to forty-eight hours after hatching.

Keep the chicks well covered in cold weather while moving them to the brooder.

Keep the brooder in a sanitary condition. Impure air will ruin a fine flock of chicks in a very short time.

Make it a rule that every chick must come out from under the hover at feeding time.

Guard against sudden changes in the temperature. During cold weather locate the brooder indoors.

12 Grafted Apple Trees



Given FREE!

This Home Orchard Collection

CONSISTING OF

12 Grafted Apple Trees



3 GENUINE DELICIOUS
This apple has, ever since its introduction, secured and maintained the highest price ever paid for any apple. A beautiful deep red, shading to golden yellow at the blossom end. Of wonderful flavor and aroma.



3 STAYMAN WINESAP
Deep, rich red in color, it is a marked improvement over the old Winesap, both in appearance and quality. It is a universal favorite in all markets.



3 JONATHAN
The Jonathan is liked by everyone. Its deep wine color apparently reflects its rich wine flavor. Invariably in good demand at high prices.



3 WEALTHY
One of the first really good apples of the season, and a general favorite, especially for eating out of hand.

Given with Kansas Farmer This collection of Twelve Grafted Apple Trees which we want to send you, consists of three trees each, of four varieties of proven merit. They are hardy, will thrive anywhere, and provide a nice succession of quality fruit.

INCLUDING THREE GENUINE DELICIOUS, THREE STAYMAN WINESAP, THREE JONATHAN AND THREE WEALTHY

These Trees are genuine grafted stock, guaranteed true to name, sound and healthy. We have arranged with one of the largest nurseries in the country for a supply of these grafted trees, and we want to send you a set of twelve. Whether your place is large or small, these twelve trees will find a place, and add to its beauty and value.

Early Maturing Varieties such as these four grand varieties, mean that you will have fruit from this orchard in just a few years. In three years you should have some apples from these trees; in five years you should have an abundance. No better varieties could be found for a Model Home Apple Orchard than the four in this collection.

Complete Instructions are sent with each set of twelve trees, practical, simple directions that explain just how to plant and take care of these twelve trees. By following these instructions you will have, in a few years, an orchard that will prove a constant source of pleasure and profit to you.

Our Offer is made possible by a comparatively new method of propagating the apple tree. Instead of the slow, laborious method of "budding" a "seedling" apple tree to obtain the variety desired, a much quicker method is now employed. Healthy, vigorous branches are clipped from trees selected for their size and yield. To each of these branches a strong root from a tree of the same type is carefully grafted, and the little tree, thus complete, is ready to be set out. The twelve little trees we send you are all produced in this manner. They take root at once, make thrifty growth, and develop into large, heavy-bearing orchard trees as soon or sooner than a large tree set out at the same time. These little trees are about a foot long, and the thickness of a lead pencil. You could not secure trees of better quality, or trees that would come into bearing quicker, if you were to pay a dollar apiece for them. Thousands of trees are sold every year and sent packed in damp moss at the proper time for planting.

How to Get These Trees

If you will send only \$1.00, and 15 cents extra for handling —\$1.15 in all—we will enter or renew your subscription to **KANSAS FARMER** for one year and send the **TWELVE (12) Apple Trees** postpaid to you; or, if you will send \$2.15, we will renew your subscription two years and send **KANSAS FARMER** one year to some new subscriber you may name, and send you the trees. As the demand for these trees is enormous, you should take advantage of this offer at once. We reserve the right to refund money after the supply is exhausted.

SEND ALL ORDERS TO

KANSAS FARMER

625 Jackson Street, Topeka, Kansas

These twelve grafted apple trees are packed in sphagnum moss, are well wrapped in heavy oiled paper, and securely tied. They will stand the longest trip by parcel post, and arrive in perfect condition for planting.

FARM AND HERD

G. C. Wheeler, Live Stock Editor
W. J. Cody, Manager, Stock Advertising.
O. W. Devine, Representative

Address All Communications to Kansas Farmer and Not to Individuals

Personal mail may have to be held for several days, or be delayed in forwarding, and Kansas Farmer cannot assume any responsibility for mistakes occurring thereby

CLAIM SALE DATES.

Shorthorns.

March 31—Consignment sale, South Omaha, Neb. H. C. McKelvie, Lincoln, Neb., Mgr.
April 5 and 6, 1916—Central Shorthorn Sale, Fine Stock Pavilion, Kansas City, Mo.
April 18—Robert Russell, Muscotah, Kan.

Holsteins.

April 25—J. R. Smith, Newton, Kan.
April 25—F. J. Searle, Oskaloosa, Kan.
April 26—Mark B. Curdy, Howell, Mich.

Jersey Cattle.

May 20—Robt. I. Young, Route 5, St. Joseph, Missouri.

Kansas Farmer Dairy Club.

The Kansas Farmer Dairy Club is causing increased inquiries for high class dairy cattle of all breeds. We are already receiving inquiries from contestants who have entered the club as to where they can buy dairy cows that will meet the requirements.

Our advertisers who have dairy cows to sell can greatly assist us in supplying this demand by writing us just what they have to sell at this time. A considerable number of cows will be needed, and to be able to quickly locate the cows meeting the requirements, is very essential.

In writing, give the number you have for sale, whether grades or pure breeds, age, when they will fresh, production record, if any, and any other information that will assist us, as we will co-operate with the club members in locating dairy cows when requested to do so.

Kansas Farmer Dairy Club was inaugurated for the express purpose of stimulating the interest in dairy cattle and dairymen in Kansas by having the boys and girls of the state demonstrate in a practical way the profits in the business.

By sending this information at the earliest possible time, you can help us to quickly locate the cows needed and help give the dairy interest a boost.

The Central Shorthorn Association will meet at the Coats House at Kansas City on the evening of April 5 at 7:30 p. m. All breeders of Shorthorn cattle are requested to be present. Many interesting talks will be given that will be of interest to breeders.

A registered Duroc sow owned by W. C. Blankenship, near Checotah, Okla., has produced in two years \$692.50 worth of pigs, according to a bulletin issued by the agricultural college of that state. The bulletin furnishes an itemized report on this remarkable showing. Mr. Blankenship sold pigs for which he received in cash, \$530. He traded pigs for two boar pigs, which he values at \$50, and he has for sale nine pigs farrowed by this sow, which he estimates at \$112.50, which makes the total of \$692.50.

Ed Beavers, of Junction City, Kan., owner of one of the good herds of Poland Chinas, writes that his herd is doing well. Mr. Beavers has the big, easy feeding type that mature early. A feature of his herd at this time is a first class lot of fall boars.

Forty-one fairs and expositions in the United States were accorded recognition by the Percheron Society for 1916. Classification and list of fairs is attached hereto. Provision was also made to recognize, with a special classification, all Canadian fairs that obtain recognition from the Canadian Percheron Association. Strong exhibits of Percherons at the fall fairs will benefit the Percheron breed, and all breeders. Special attention is directed to the futurity stakes for colts foaled in 1915 to be held at the Iowa, Illinois and Ohio State Fairs and the International in 1916. Breeders should fit good yearlings for these shows, and help to demonstrate that America can produce Percherons second to none.

More than 2,000,000 acres of public lands were designated by the Interior Department as subject to entry by homesteaders in February, it is announced. Some of the land already has been settled and applications have been filed for settlement on much of the rest. The land opened is scattered throughout nearly 200 counties in nine Western states. In Arizona, 17,000 acres were opened; in California, 73,000; Colorado, 160,000; Kansas, 17,000; Montana, 300,000; North Dakota, 250,000; Oregon, 13,000; South Dakota, 1,000,000 acres in the Belle Fourche, Lemmon and Rapid City districts; Wyoming, 270,000.

The loss of live stock every year by disease and the consequent heavy financial loss to breeders, is one of the features of the live stock business that is receiving the attention of breeders all over the country. Many of the leading breeders have, after careful consideration of the matter, decided that they cannot longer afford to carry their own risk on live stock and that live stock insurance is just as much a business proposition as fire or cyclone insurance on the buildings in which the live stock is housed. The extent of the financial loss every year should cause every breeder of live stock to give the question of live stock insurance careful consideration and when a decision in favor of insurance is reached, be sure that the risk is placed in a reliable company.

H. C. Young, of Wineland Farm, Lincoln, Neb., writes that his Jersey herd is doing well. Wineland Farm Jersey herd is noted as one of the good producing herds of Jerseys now assembled, and the Wineland Farm dairy barn is conceded to be one of the best dairy barns in the West. The herd now consists of over 100 head, all registered Jerseys, and is headed by the great bull, Golden Oxford Pogs 109569, a son of Viola's Golden Jolly and out of an Oxford Lad dam. Seventeen of the cows now in this herd have qualified for Register of Merit. The young stock, both bulls and heifers in the herd at this time, are a very choice lot.

Classified Advertising

Advertising "bargain counter." Thousands of people have surplus items of stock for sale—limited in amount or numbers hardly enough to justify extensive display advertising. Thousands of other people want to buy these same things. These intending buyers read the classified "ads"—looking for bargains. Your advertisement here reaches over 300,000 readers for 4 cents a word per week. No "ad" taken for less than 60 cents. All "ads" set in uniform style, no display. Initials and numbers count as words. Address counted. Terms, always cash with order.

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

HELP WANTED.

LADY OR GENTLEMAN TO TRAVEL for old established firm. No canvassing. Staple line. Salary, \$18 weekly, pursuant to contract. Expenses advanced. Address G. M. Nichols, Pepper Bldg., Philadelphia, Pa.

FARMERS GET \$75 MONTH. MEN AND women. U. S. Government jobs. Short hours. Easy work. Common education sufficient. Write immediately for list of positions now obtainable. Franklin Institute, Dept. H82, Rochester, N. Y.

WANTED—MEN AND WOMEN TO qualify for government positions. Several thousand appointments to be made next few months. Full information about openings, how to prepare, etc., free. Write immediately for booklet CG-809. Earl Hopkins, Washington, D. C.

AGENTS WANTED

FREE TO A FEW MEN—SUIT MADE TO measure in latest style and chance to make money in spare time. For samples and offer write Knickerbocker Tailoring Co., Dept. 374, Chicago.

REAL ESTATE.

OZARKS OF MISSOURI, FARMS AND timber lands, from \$5 to \$40 per acre. Write for list. Avery & Stephens, Mansfield, Mo.

SOUTHERN FARMS—MISSISSIPPI, Arkansas, Tennessee. Send for booklet. Martin & Cole, Memphis, Tenn.

IF YOU WANT TO SELL OR EXCHANGE your farm, write us. Black's Business Agency, Desk C, Chippewa Falls, Wis.

RESIDENCE NEAR K. S. A. C. NINE rooms, in the best residence section. \$4,100; terms. Address Mrs. B. E. Ford, Manhattan, Kan.

FOR RENT—FENCED PASTURE WITH running water, Section 31, Alta Township, Harvey County, Kansas. Address Peimelia Cone, 1533 College Ave., Topeka, Kan.

FENCED PASTURE WITH RUNNING water, Section 31, Alta Township, Harvey County, Kansas. Address Peimelia Cone, 1533 College Ave., Topeka, Kan.

FOR SALE—A MODERN HOME IN Topeka, located on a good street, near school and business district; two lots, modern seven-room house, barn, a choice location. Will sell at a bargain. No trades. Address Z, care Kansas Farmer.

IN THE WORLD'S BEST CLIMATE—The Immigration office of the Elephant Butte Water Users' Association, Las Cruces, N. M., invites the homeseeker's attention to the unexcelled opportunities for dairymen and general farming on Uncle Sam's greatest irrigation project. Only 45 cloudy days and 8.82 inches rainfall per annum. Associations shows lands, supervises sales, protects purchaser's interests, helps him to succeed. Write us.

HORSES AND MULES.

SHEPHERD PONIES, GELDINGS, MARES and colts, all colors. C. H. Clark, LeCompton, Kan.

11-WORTH COUNTY JACK FARM—Twenty head of jacks and jennets, big boned and wide out. Corson Bros., Potter, Kan.

FOR SALE—VERY REASONABLE, REGISTERED Percherons. Five Imported Percheron Society mares, two Percheron Society fillies, one French Draft and her weanling stud colt. A. G. Hamer, Route 5, Lincoln, Neb.

FOUR BIG BLACK REGISTERED jacks, coming three and four years old, 15 to 16 hands. One first and one second prize winner Kansas State Fair 1914 and all sired by champion Tennessee and Kansas State Fair. For sale, or would trade one or all for horses, mules or cattle, within 100 miles. J. W. & E. E. Stormont, Dighton, Lane Co., Kan.

HOGS.

FINE O. I. C. BOARS AND GILTS FOR sale. W. C. Hall, Coffeyville, Kan.

DOGS.

BEAUTIFUL WHITE SPITZ PUPPIES—Just the thing for your children. G. A. Allen, Centralia, Kan.

PURE-BRED SCOTCH COLLIE PUPPIES—Males, \$5; females, \$3. Geo. Pratt, Wakarusa, Kan.

AIRDALE—THE GREAT TWENTIETH century dog. Collies that are bred workers. We breed the best. Send for list. W. R. Watson, Box 128, Oakland, Iowa.

TOBACCO.

FOUR POUNDS BEST GRADE CHEWING or smoking tobacco, prepaid, 80c; nine pounds, \$1.65. Your money back if not satisfied. Write for price list. Kentucky Tobacco Co., Patesville, Ky.

LUMBER.

LUMBER! BUY FROM US. HIGH GRADE. Bottom prices. Quick shipment. Keystone Lumber Co., Tacoma, Wash.

A Shorthorn breeders' banquet will be given at the Castle hotel, Omaha, Neb., on Friday night, March 31, the day of the combination sale of Shorthorn and Polled Durham cattle to be held at the pavilion at South Omaha, under the management of H. C. McKelvie, Lincoln, Neb. Shorthorn breeders are especially invited to attend this sale and banquet, and those who will do so, will please write to H. C. McKelvie. An interesting list of talks will be given, and the manager of the sale should know at once the names of parties who will attend.

CATTLE.

REGISTERED JERSEY BULL PERCY Lill, Mt. Hope, Kan.

RED POLL BULLS, NONE BETTER. D. F. Van Buskirk, Blue Mound, Kan.

FOR SALE—HIGH-GRADE HOLSTEIN cows and heifers, all ages. R. N. Martin, Blue Mounds, Wis.

TWO REGISTERED HOLSTEIN BULLS, ready for service, related to world's champion. E. E. Klefer, Lawrence, Kan.

AYRSHIRE BULLS FOR SALE, AGES from five weeks to sixteen months; out of choice stock. Jens S. Jensen, Milltown, Wis.

FOR SALE—ONE REGISTERED HOLSTEIN bull, eleven months old. J. A. Forth, Route 1, Overbrook, Kan.

BREED LARGER JERSEYS.—"MODDER's Guenon Lad" will help. For pedigree and price write C. S. Walker, Route 1, Macksville, Kan.

FOR SALE—SON OF WILLOW MEADOW King Pontiac, whose twenty nearest dams average 25 pounds butter and 525 pounds milk in seven days. Calf's dam giving 50 pounds milk per day. Registered. \$35 if taken at once. We need the milk. Calf guaranteed. Simpson & Ballou, Dodge City, Kan.

MISCELLANEOUS.

FERRETS, FERRETS, RABBITS, GUINEA Pigs, Toulouse Geese. (Jewell), Spencer, O.

FOSTER'S CROP WEATHER FORECASTS free. Address 28 Tea Street Northeast, Washington, D. C.

MONEY TO LOAN ON IMPROVED KANSAS farm lands. All negotiations quickly closed. No delays. A. T. Reid, Topeka, Kan.

APPLES—GANOS, BARREL, \$3.50. Sweet potatoes and R. R. Ohio, bushel, \$1.25. The Copes, Topeka.

FOR SALE—LATEST PLAT BOOK OF Shawnee County, 44 pages, size 14x19 inches. Shows each township in the county, with name of each property owner on his land, also rural routes, school houses, railroads and complete alphabetical list of taxpayers in county outside Topeka and Oakland. Satisfaction guaranteed. Cloth binding, \$5.00. To close out remaining Bristol board binding will sell a year's subscription to Kansas Farmer and Plat Book for only \$1.50. Last previous county map sold for \$10. Send all orders to Kansas Farmer, Topeka, Kan.

SILOS.

MONOLITHIC SILO BUILDER, BUILDS a reinforced concrete silo on your ground. Manufactures every detail from chute to window. Any farmer can operate it. Only ten days to have complete silo set up and in use. Is absolutely a great money saver. Details, photographs and experiences of others sent you for the asking. Address E. H. Euler, 114 Kansas Ave., Topeka, Kan.

PATENTS.

PATENTS PROCURED. INQUIRE ABOUT our \$100 cash prize. Free advice. Free search. Free official drawings. Capital Patent Co., Dept. E, Washington, D. C.

IDEAS WANTED—MANUFACTURERS are writing for patents procured through me. Three books with list hundreds of inventions wanted sent free. I help you market your invention. Advice free. R. B. Owen, 122 Owen Bldg., Washington, D. C.

NURSERY STOCK.

TEN ELBERTA PEACH TREES FOR 75c postpaid. Fruit book with wholesale prices free. Wellington Nurseries, Dept. G, Wellington, Kan.

HIGHEST QUALITY, LOWEST PRICES, nursery stock and small fruits wholesale. No agents. Free list. Highland Nurseries, Waukon, Iowa.

BERMUDA GRASS.

BERMUDA GRASS—HARDY, RANG growing variety. Stands floods, drouths, hot winds and severe freezing. Best and hardest pasture grass. Great milk producer. Write today for leaflet telling how to get started. Henry Jefferies, Ottawa, Kan.

HEDGE POSTS.

HEDGE POSTS FOR SALE—CAR LOTS. H. W. Porth, Winfield, Kan.

TANNING.

LET US TAN YOUR HIDE: COW, HORSE or calf skins for coat or robe. Catalog on request. The Crosby Frisian Fur Co., Rochester, N. Y.

SITUATION WANTED.

WANTED—STEADY WORK ON FARM, experienced hand, age 30 years. A. H. Sprinkle, Jonesville, Va., Route 3, Box 43.

MAN AND WIFE WANT PLACE ON farm. Have had five years experience with stock. Stock farm preferred. Ralph Strang, Garnett, Kan.

YOUNG MAN WANTS WORK ON A widow's farm. Can do all kinds of work, understands machinery; good habits. A. A. Joff, St. Peter, Minn.

YOUNG MAN, FARM REARED, POULTRY culture graduate with experience, high school, business education, desires position on poultry farm. References. W. E. A., 325 B East, Hutchinson, Kan.

TREES, SEEDS AND PLANTS.

NORTHWEST KANSAS ALFALFA FOR sale. Geo. Bowman, Logan, Kan.

SEED CORN, BRUCE SAUNDERS, Holton, Kan.

FOR SALE—YELLOW DENT SEED corn, "Extra Good." Also German millet seed. Wm. Mortl, Leon, Kan.

SEED CORN FOR SALE—WHITE Elephant, largest yielding early corn grown. G. Manville, Faucett, Mo.

TREES AT WHOLESALE. CATALOG free. Agents wanted. Peyton Nurseries, Boonville, Mo.

500 BUSHELS CHOICE PURE "COMMERCIAL WHITE" seed corn. High germination. Sacks free. E. D. King, Burlington, Kan.

ALFALFA SEED, FANCY, RECLEANED, \$12 per bushel. Theo. Smith & Son, Phillipsburg, Kan.

PURE WHITE BLOSSOM SWEET CLOVER seed. Hulled, \$10 per bushel. J. W. Flatt, Norwich, Kan.

WHITE SWEET CLOVER SEED—FINE quality, low price. Japan Clover also. John Lewis, Hamilton, Kan.

ACCLIMATED BERMUDA GRASS ROOTS—Bran sack full, \$1; six sacks, \$5. Frank Hall, Toronto, Kan.

BERMUDA ROOTS—WRITE FOR DELIVERED prices. Howard Pendleton, Yukon, Okla. The Tamworth breeder.

McGEE TOMATO—1,200 BUSHELS PER acre. Please send your address for the proof of this great fact. M. C. McGee, San Marcos, Texas.

PURE-BRED DROUTH-RESISTING SEED corn, over 100 bushels per acre on upland, \$1.50 per bushel. J. J. McCray, Manhattan, Kan.

ALFALFA SEED—KANSAS GROWN, fine germination, \$9.50 bushel while it lasts, sacks free. Brooks Wholesale Co., Ft. Scott, Kan.

MILLET SEED—I HAVE A QUANTITY of choice German millet seed for sale. Recleaned and fine. Ask for samples and price. Ed Fulcomer, Belleville, Kan.

PURE BRED SEED CORN, FULLY tested and guaranteed. Boone County White, Hildreth and Reid's Yellow Dent. M. T. Kelsey, 106 Arter Avenue, Topeka, Kan.

WHITE BLOSSOM SWEET CLOVER seed, guaranteed pure white. Hulled, \$10 per bushel, 60 pounds. Funston Bros., Farmers, Carlyle, Kan.

PURE GOLDMINE AND BOONE COUNTY White seed corn. Selected, graded, sacked, \$1.50 per bushel. Samples free. J. F. Feigley, Enterprise, Kan.

FIELD SEEDS—WE HAVE LARGE stocks of fancy clovers, grass seeds, seed corn and all field seeds. D. O. Coe, Seedsman, Topeka, Kan.

RED CEDAR TREES THAT WILL GROW for you. Windbreak and beauty for the farm and home. Transplanted, puddled roots, plant early and firm. Specialty of ornamentals. Farrar Nurseries, Abilene, Kan.

BROME GRASS SEED—BEST FOR PERMANENT pasture. Fifteen cents per pound in fifty-pound lots. Achenbach Bros., Washington, Kan.

FRUIT AND SHADE TREES, ORNAMENTALS, evergreens, strawberry plants; spray pumps, spray material, garden implements. Seed corn, our own growing. Falls City Nursery, Falls City, Neb.

PURE SUDAN GRASS SEED, NORTHERN grown, fancy quality and free from Johnson grass, at \$8 per hundred. Southern grown Sudan seed at \$6 per hundred. The Gould Grain Company, Dodge City, Kan., Drawer 718.

PURE CLEAN SUDAN GRASS SEED, grown from certified seed, inspected in the field while growing, thoroughly cleaned, 25 pounds \$2, 50 pounds \$3.50, 100 pounds \$5, f. o. b. Lubbock. Wheelock Seed & Grain Co., Lubbock, Texas.

PURE SEED CORN THAT WILL GROW. Test from 98 to 100 per cent. Grown on our own farms, hand picked, nubbed, shelled, graded, tested, sacked and delivered to any railroad station in Missouri or Kansas for \$2.50 per bu. We pay the freight. M. A. Violette & Son, Florida, Mo.

BOURBON COUNTY RAISED SEED CORN—Hand picked, tipped, butted and shelled. Boone County White, Commercial White, Blue and White, Hildreth's Yellow Dent, Reid's Yellow Dent. \$2 per bushel delivered any point in Kansas, Missouri and Oklahoma. Mead Grain Co., Ft. Scott, Kan.

BUSINESS CHANCES.

FREE FOR SIX MONTHS—MY SPECIAL offer to introduce my magazine, "Investing for Profit." It is worth \$10 a copy to anyone who has been getting poorer while the rich, richer. It demonstrates the real earning power of money, and shows how anyone, no matter how poor, can acquire riches. Investing for Profit is the only progressive financial journal published. It shows how \$100 grows to \$2,200. Write now and I'll send it six months free. H. L. Barber, 431-28 W. Jackson Blvd., Chicago.

ENGINES.

FOR SALE AT A BARGAIN—ONE BIG 4 gasoline engine, 30-60 h. p.; one Reeves separator, 33-55; one engine plow, Reeves, 8-bottom. All in good condition, used two seasons. Write W. C. Child, Belvue, Kan.

THE STRAY LIST

TAKEN UP—BY JACOB MEISNER, OF Bern, Nemaha County, Kansas, on October 1, 1915, one red steer coming two years old, appraised at \$30. W. L. Kauffman, County Clerk.

HERMAN LINKINGEL, ADDRESS BREMEN, Kansas, being duly sworn, says that on the 18th day of November, 1916, he took up one stray heifer calf eight or nine months old, red with white spot in forehead, white behind front leg, white tip on tail, valued at \$16, and that a notice has been posted in three places as provided by law. Subscribed and sworn to before me this 8th day of March, 1916. Wm. Duensing, Justice of the Peace. A. J. Harvey, County Clerk, Marshall County, Kansas.

RELIABLE POULTRY BREEDERS

LEGHORNS.

LEGHORNS—SETTING EGGS, BUFF, \$4 hundred. Jessie Crites, Florence, Kan.

FINE S. C. WHITE LEGHORN EGGS—Hundred, \$8. Will Tonn, Haven, Kan.

SINGLE COMB WHITE LEGHORN EGGS. T. N. Smith, Route 2, Chanute, Kan.

ROSE COMB BROWN LEGHORN EGGS—Heavy laying strain. M. E. Hoskins, Fowler, Kan.

SINGLE COMB WHITE LEGHORN EGGS, \$3.50 per hundred. Heavy laying strain. Mrs. Edw. Dugan, Route 31, Montrose, Mo.

SINGLE COMB BROWN LEGHORNS—Wittman, the great laying strain. Eggs, \$3 per hundred. Rosa Simpson, Palmer, Ill.

ROSE COMB BROWN LEGHORN EGGS, fifteen, \$1; thirty, \$1.50; hundred, \$4. Mrs. Frank Seaman, Cedar Vale, Kan.

SELECT SINGLE COMB WHITE LEGHORNS. Eggs, \$4 hundred. Mrs. Frank Odle, Wamego, Kan.

EGGS, \$1.00 SETTING, \$5.00 HUNDRED. Pure Baron White Leghorns. John Ball, 280 West Locust, Dubuque, Iowa.

SINGLE COMB WHITE LEGHORNS EXCLUSIVELY. Eggs, \$5 per hundred. Mrs. J. G. Olson, Dwight, Kan.

SINGLE COMB WHITE LEGHORN EGGS Hundred, \$5; fifteen, \$1. Mrs. Mabel Sullivan, Route 7, Abilene, Kan.

FOR SALE—SINGLE COMB WHITE Leghorn eggs, \$3 per hundred. Mrs. C. C. Cole, Levant, Kan.

PURE-BRED ROSE COMB WHITE LEGHORN EGGS, \$5 per hundred, \$2.50 per fifty, \$1 per fifteen. Jennie Martin, Frankfort, Kan.

SINGLE COMB WHITE LEGHORNS—Winter layers. Stock and eggs. Eleanor Poultry Ranch, Brighton, Colo.

EGGS—REDUCED PRICE, SINGLE COMB White Leghorns, Keep-laying strain. Thol R. Wolfe, Conway Springs, Kan.

PURE SINGLE COMB BROWN LEGHORN EGGS, hundred, \$8. Eighth year. Mrs. D. A. Wohler, Hillsboro, Kan.

R. C. B. LEGHORN EGGS FOR HATCHING, 75c per fifteen, \$2 per fifty, \$3 per hundred. Blue Grass Stock Farm, Oneida, Kan.

SINGLE COMB WHITE LEGHORN EGGS from selected matings, \$5 hundred. Eggs tested 98 per cent fertile. Dave Baker, Conway Springs, Kan.

BRED TO LAY WHITE LEGHORNS—None better. If you are interested in greatest egg laying machine on earth, write Pleasant View Poultry Ranch, Peabody, Kan.

S. C. BROWN LEGHORN EGGS FOR HATCHING, pure-bred, fifty eggs, \$2.25; hundred, \$4. Mrs. L. H. Hastings, Thayer, Kan.

PRIZE WINNING SINGLE COMB BROWN Leghorns exclusively, 102 eggs, \$3.50; thirty, \$1.25. Charles Dorr, Osage City, Kan.

ROSE COMB BROWN LEGHORN EGGS, Kulp strain; fifteen, \$1; hundred, \$5. Otto Borth, Plains, Kan.

SINGLE COMB BROWN LEGHORNS, both matings. Eggs from high scoring pens, \$2 and \$3 per fifteen; utility, \$4 per hundred. Mating list free. G. F. Koch, Jr., Ellinwood, Kan.

S. C. WHITE LEGHORN EGGS—PURE D. W. Young strain. Three cock birds in pens sired by Young's first prize winners. G. D. Willems, Inman, Kan.

"HARDSCRABBLE" STRAIN OF S. C. W. Leghorns. Bred eleven years from the best layers. Eggs guaranteed 90 per cent fertile. Write for particulars, stating what you need. E. M. Wheeler, Jefferson, Kan.

SINGLE ROSE COMB BROWN LEGHORNS, large vigorous prize stock, bred to lay. Eggs, \$1.50, fifteen; \$3, fifty; \$6, 105. Eggs that produce layers, winners. M. Earnshaw, Lebo, Kan.

ROOF'S SINGLE COMB BROWN LEGHORNS. Twenty-four prizes at state show, including ten firsts, eight seconds. W. J. Roof, Malze, Kan.

FOR SALE—PRIZE WINNING SINGLE Comb White Leghorns, \$2 to \$25 each. Eggs, 5 cents. Chicks, 10 cents. Clara Colwell, Smith Center, Kan.

WINTERLAY S. C. WHITE LEGHORNS—Bred for egg production exclusively. Day-old chicks. Hatching eggs. Barlow & Sons, Kinsley, Kan.

DORR'S PRIZE WINTER LAYERS—Rose Combs, White Leghorns. Eggs, \$1, fifteen; \$5 hundred. A. G. Dorr, Osage City, Kan.

S. C. BROWN LEGHORNS, STOCK AND EGGS. Prices reduced for farmers' trade. Write wants. H. C. Short, Leavenworth, Kan.

S. C. B. LEGHORN EGGS EXCLUSIVE. 90c setting fifteen; incubator lots, \$4 hundred. Mrs. A. J. Taylor, Route 5, Newton, Kan.

WELDAY'S STRAIN SINGLE COMB Brown Leghorns. Prize winners. Grand layers. Choice eggs, 75c for fifteen. John W. Moore, Hendrickson, Mo.

SINGLE COMB WHITE LEGHORNS EXCLUSIVELY. Eggs, fifteen, \$1; hundred, \$5. Fertility guaranteed. Sunnyside Egg Farm, Box C, Hallowell, Kan.

EGGS FROM HIGH SCORING SINGLE Comb White Leghorns, \$1 per fifteen, \$5 per hundred. Rhode Island Whites, \$3 for fifteen eggs. Shetland Pony Farm, Coffeyville, Kan.

SATISFACTION STRAIN OF ENGLISH White Leghorn hatching eggs, \$1.50 per setting, \$7 per hundred. Satisfaction guaranteed on shipments. Sidney Williams, Route 5, Box 6, Springfield, Mo.

PURE SINGLE COMB WHITE LEGHORN EGGS. Young-Frantz-Yesterland strains. Fifteen, \$1; hundred, \$4. Chicks, hundred, \$10. Satisfaction guaranteed. Mrs. C. G. Cook, Lyons, Kan.

LEGHORNS.

SINGLE COMB WHITE LEGHORNS—Winning stock mated with winning male, Des Moines, 1916. Eggs, this mating, \$3.50, fifteen. Eggs from stock with egg records of 200 to 250, \$5, fifteen. Range eggs, \$1.50, fifteen. All stock trap-nested. F. Lefebvre, Scammon, Kan.

S. C. WHITE LEGHORNS—CYPHERS, Wycoff and Dr. Hess bred-to-lay hens mated to Tom Barron cockerels; sires and dams imported. Have assembled the best laying stuff I can find. Fifteen eggs, \$1.25; thirty, \$2.25; hundred, \$4.25, f. o. b. J. L. Stratton, Ottawa, Kan.

LAKESIDE POULTRY FARM OF PEEBLES D. W. Young and Barron strains of S. C. White Leghorns, bred to win and lay. Won at Fredonia, Kan., 1915, six firsts, \$15 cup for best birds in show in strong class; Topeka, second cock, first third cockerel, first, third pullet. Write for prices. Eggs in season. A. K. Sell, Fredonia, Kan.

PLYMOUTH ROCKS.

BARRED ROCK EGGS, FIFTEEN, \$2; hundred, \$8. Christina Bazill, Lebo, Kan.

WHITE ROCK EGGS, \$3 PER HUNDRED. Nora Lamaster, Hallowell, Kan.

BARRED ROCKS—EGGS, \$3 PER HUNDRED. Earl Summa, Gentry, Mo.

BUFF ROCKS—EGGS FOR HATCHING. Prices reasonable. Write for list. William A. Hess, Humboldt, Kan.

SINGLE COMB BUFF LEGHORNS—Thirty eggs, \$2; 100 eggs, \$4.50. J. A. Reed, Lyons, Kan.

WHITE PLYMOUTH ROCK COCKERELS—Large birds. Eggs, \$2 per fifteen. W. W. Pressly, Meade, Kan.

DUFF'S BIG-TYPE BARRED ROCK EGGS. Federation medal winners. A. H. Duff, Larned, Kan.

QUALITY BARRED ROCKS, PULLET mating. Satisfaction guaranteed. Eggs—Utility, \$4 a hundred; pens, fifteen for \$4. R. D. Ames, Walton, Kan.

LINDAMOOD'S BARRED ROCKS—BOTH matings. Better than ever. Silver cup and sweepstakes winners. Eggs from pens, \$3 and \$5 per fifteen; utility, \$5 per hundred. Circular. C. C. Lindamood, Walton, Harvey County, Kansas.

PLYMOUTH ROCKS.

BUFF ROCK EGGS FROM PENS AND RANGE. Geo. R. Scherman, Olathe, Kan.

RINGLET BARRED ROCKS—BEST blood lines. Satisfaction guaranteed. T. J. Embry, Baxter Springs, Kan.

LARGE WHITE ROCKS—FEW GOOD males, \$1.50. Eggs, \$1 setting, \$4.50 hundred. Grace Dolson, Neal, Kan.

WAGNER'S BARRED ROCK EGGS, \$1.50, \$2. Three matings. Circular free. Mrs. E. C. Wagner, Holton, Kan.

BUFF ROCK EGGS, FRISCO WORLD'S Fair championship stock, \$1.50 and \$3 per fifteen. C. R. Baker, Box F, Abilene, Kan.

UTILITY BARRED ROCKS AT BERMUDA RANCH. Eggs, fifteen, \$1; hundred, \$4. Frank Hall, Toronto, Kan.

BARRED PLYMOUTH ROCKS—FARM-bred, beautiful. Eggs, 4 cents each. Mrs. W. C. Becker, Solomon, Kan.

BARRED ROCKS—C. A. HAWK'S STOCK, fifteen eggs, \$1.50; hundred, \$7.50. Wm. L. Shelly, Route 1, Atchison, Kan.

EXHIBITION UTILITY BARRED ROCKS—Winners at State Show, Wichita. Four pens. Eggs, fifteen, \$2; thirty, \$3.50. George Sims, LeRoy, Kan.

"RINGLET" BARRED PLYMOUTH ROCK EGGS, thirty for \$2, 100 for \$5.50; carefully selected and packed. Early chicks pay best. Harper Lake Poultry Farm, Jamestown, Kan.

FOR QUICK SALE—BUFF ROCKS. Eight females and one male. Good show birds or breeders, well mated. Price, \$20. Favorite Poultry Farm, Stafford, Kan.

WEIGHER-LAYER BARRED ROCKS—106 premiums. Flock eggs, \$1.25 fifteen, \$6 hundred. Pens, \$2 to \$7.50, fifteen. Wm. Opfer, Clay Center, Kan.

BARRED ROCKS—EGGS FROM LARGE vigorous range birds, heavy laying strain, setting, \$1; hundred, \$5. S. R. Blackwelder, Isabel, Kan.

BARRED ROCK EGGS, FARM RANGE, \$5 hundred. Yards, \$2 per fifteen. E. Leighton, Effingham, Kan.

BARRED ROCKS—LAYERS, WINNERS, yard eggs, fifteen, \$2; utility, fifteen, \$1; hundred, \$6. A. G. Hammond, Vinland, Kan.

VINLAND, KANSAS, February 25, 1916.

KANSAS FARMER COMPANY, Topeka, Kansas.

Dear Sirs: Please cut my cockerel ad out, as it sold all my cockerels and I have returned orders for nearly 100. Enclosed is an egg ad which you may insert.

A. G. HAMMOND.

PURE-BRED BARRED PLYMOUTH ROCK EGGS, \$1 per setting, \$5 per hundred. Mrs. Thos. VanOrsdol, Route 11, Silver Lake, Kan.

EGGS FROM PRIZE WINNING BUFF Rocks, \$1.50 setting. C. S. Hart & Sons, Milan, Mo.

WHITE ROCKS, SIZE AND QUALITY. Eggs, fifteen, \$1; fifty, \$3; hundred, \$5. G. M. Kretz, Clifton, Kan.

FOR SALE—FULL BLOOD BARRED Rock eggs for setting at \$4 per hundred. John Hayes, Darlow, Kan.

PRIZE WINNING BARRED ROCKS—Write for mating list. It will tell you all about them. Mrs. Chris Bearman, Ottawa, Kan.

EGGS FROM BLUE RIBBON BARRED and White Rocks, \$1 to \$3 for fifteen. Write for mating list. Fine cockerels and pullets for sale. H. F. Hicks, Cambridge, Kan.

WHITE ROCKS—MY BEST WINTER layers mated with Fishel cocks. Eggs, \$1, fifteen; \$4, hundred. Mrs. Clifford Hutchinson, Wetmore, Kan.

EGGS—BARRED ROCKS. BRED TO win and lay. If you want beauty and utility combined, write. Mrs. Clarence Dearing, Palmyra, Mo.

THREE EXTRA FINE PENS BARRED Rocks—Eggs, \$3 per fifteen. First hen at Topeka, Hutchinson and Ellsworth. C. D. McIlree, Lorraine, Kan.

BUFF ROCKS—FOURTEEN YEARS' successful breeding. Utility eggs, \$2 per fifty, \$4 per hundred. Mrs. Homer Davis, Walton, Kan.

BRED TO LAY BARRED ROCKS—EGGS from selected farm stock, \$1.00. Special matings headed by ten-pound exhibition cockerels, \$3.00. C. D. Swaim, Geuda Springs, Kan.

BARRED ROCKS—SEVENTY-ONE premiums. Topeka, Manhattan, Clay Center, Denver, cockerel matings. Eggs, Pens 1 and 2, fifteen \$3, thirty \$5; Pen 3, fifteen \$2. Miss Mattie A. Gillespie, Clay Center, Kan.

WHITE ROCK EGGS—STATE SHOW winners only \$1.00 fifteen, \$5.00 hundred. Baby chicks, 10c. Mating list with records free. Nellie McDowell, Route 1, Garnett, Kan.

RINGLET BARRED ROCK EGGS—HUNDRED, \$5; 200, \$8. Big boned cockerels and many hens score 90. Missouri-Kansas winners. Fertility guaranteed. Veatch Farm, Gardner, Kan.

EGGS FROM HEAVY LAYING HIGH-scoring Barred Rocks. Champion cock at our big North Missouri show. Write for prices. Clarence Ragsdale, Route 3, Moberly, Mo.

WHITE PLYMOUTH ROCKS STILL hold their popularity. Barring one, they were the largest class at the World's Fair at San Francisco. Good to lay, good to eat and good to look at. I have bred them exclusively for twenty-four years and they are one of the best breeds extant. Eggs from first-class birds, the same kind I hatch myself, \$2 per 15, \$5 per 45, and I prepay express or postage to any part of the Union. Thomas Owen, Route 7, Topeka, Kan.

BUFF AND WHITE ROCK EGGS, Hutchinson and Topeka champions. Fifteen eggs, \$1; hundred, \$5. W. H. Beaver, St. John, Kan.

JONES' BARRED ROCKS—GOOD LAYERS, large and vigorous, fine quality, eggs are hatching over 90 per cent. Eggs, utility, \$3.50 per hundred. Mrs. F. C. Jones, Elk City, Kan.

WHITE ROCKS, PURE-BRED, FARM range. Eggs, fifteen, 75 cents; hundred, \$3. H. F. Richter, Hillsboro, Kan.

BUFF ROCKS—EGGS FOR HATCHING. Prices reasonable. Mrs. Wm. Small, Wilson, Kan.

BRADLEY STRAIN ROCKS—EGGS, FIFTEEN, \$1.50. Mrs. W. G. Prather, Eureka, Kan.

PRIZE WINNING BARRED ROCKS—Eggs from pens, \$2 per fifteen; farm range, \$4 per hundred. Fertility guaranteed. Ed Schmidt, Route No. 3, Geneseo, Kan.

BUFF ROCKS—GET THE BEST GOLD Nugget strain, never defeated. Eggs from three grand pens. Fifteen, \$1.50; fifty, \$3.50. Abram Troup, Logan, Kan.

WYANDOTTES.

PRIZE BUFF WYANDOTTES—FIFTEEN eggs, \$1.50. G. Kittell, Newton, Kan.

WHITE WYANDOTTE EGGS, \$5.00 PER hundred. Dr. O. F. Searl, Solomon, Kan.

WHITE WYANDOTTE EGGS, \$1, FIFTEEN; \$5 hundred. Mrs. Geo. Downie, Route 2, Lyndon, Kan.

WHITE WYANDOTTES—REGAL STRAIN—Extra layers. Males from Martin's. Eggs, lots to suit. Stock for sale. Mrs. C. C. Brubaker, 709 East Euclid, McPherson, Kan.

SILVER WYANDOTTE EGGS, \$1.00 PER fifteen, \$5.00 per hundred, from good individuals of splendid breeding. Mrs. Cecile McGuire, Pratt, Kan.

SILVER LACED WYANDOTTE EGGS for hatching, \$1.50 per fifteen, \$5 per hundred. Good pure-bred cockerels left. Mrs. Mike Heesch, Randolph, Neb.

COLUMBIAN WYANDOTTES—MISSOURI Poultry Show winners, 1915, first cock, second cockerel, etc. Few choice cockerels for sale. Eggs for hatching. Write Mrs. Mermond, Monett, Mo.

ROSE COMB WHITE WYANDOTTES—Show quality and heavy egg strain, fifteen eggs \$1.25, fifty \$3, hundred \$5. Safe arrival and satisfaction guaranteed. Garland Johnson, Mound City, Kan.

WHITE WYANDOTTES, WORLD'S FAIR winners. Mammoth Pekin White Runners and Buff Ducks. Mammoth Bronze Turkeys. Eggs for hatching. Circular free. Mrs. A. J. Higgins, Effingham, Kan.

QUALITY WHITE WYANDOTTES—THE kind that win the blue, the kind that pay. Why? Because they lay; strong and vigorous, broad backs, round and egg-shaped stout yellow legs, stock and eggs for sale. A trial order solicited. Square Deal Poultry Farm, G. W. Morris, Prop., Exeter, Neb.

WYANDOTTES.

WHITE WYANDOTTE EGGS—SEND FOR catalog. B. M. Stephenson, Cawker City, Kan.

WHITE WYANDOTTE EGGS FROM utility and show birds. G. D. Willems, Inman, Kan.

EXTRA GOOD WHITE WYANDOTTES—Regal strain. Fifteen eggs, \$1.50; thirty, \$2.50. M. L. VanOrnam, Superior, Neb.

PARTIDGE WYANDOTTES—EGGS, \$1.25, from winning stock. Jacob Klassen, Inman, Kan.

"BEAUTIFULITY" SILVER WYANDOTTES, \$1.50 to \$5. Eggs, fifteen, \$1.50; hundred, \$6. Mrs. Edwin Shuff, Plevna, Kan.

PARTIDGE WYANDOTTE EGGS, \$1.00 for fifteen, \$3.00 for fifty. No better ones at any price. Geo. Guilford, Centralia, Kan.

R. C. BUFF WYANDOTTE EGGS, \$1 FOR fifteen. Baby chicks, 15c each. G. G. Wright, Langdon, Kan.

WHITE WYANDOTTES—EGGS, PEN, \$1.50 setting; utility, \$4 hundred. Mrs. J. W. Johnson, Cedarvale, Kan.

COLUMBIAN WYANDOTTES—PRIZE-winning stock, \$1.50 for fifteen eggs. Breeding stock for sale. Mrs. R. L. Hammond, Hope, Kan.

TWENTY-FIVE YEARS A BREEDER OF Silver Laced Wyandottes and Barred Plymouth Rocks. Fine birds for sale. Wm. Nellers, Cascade, Iowa.

WHITE WYANDOTTES—EGGS FROM birds of best strain in state, \$1 setting, \$5 hundred. Cockerels, \$1.25. I. B. Pixley, Wamego, Kan.

SILVER LACED WYANDOTTE EGGS, 75c setting, \$2.50 per fifty, \$4.50 per hundred. Tarbox strain. Rouen duck eggs. Mrs. Andrew Warwick, Scribner, Neb.

GOLDEN WYANDOTTE EGGS FOR SALE from high scoring stock; fifteen for \$1 or 100 for \$4.50. Mrs. Della B. Bilson, Eureka, Kan.

BUY A FEW SETTINGS OF GUTHRIE'S White Wyandotte eggs and improve your flock. \$4 per hundred, \$1 per setting. Geo. Guthrie, Exeter, Neb.

WHITE WYANDOTTE EGGS FROM prize winning stock, \$1.80, thirty; \$4.50 hundred. Some choice cockerels for sale. Mrs. Will Beightel, Holton, Kan.

PURE-BRED SILVER WYANDOTTE eggs, \$1.50 per setting of fifteen; five settings for \$6. Mrs. S. L. Hill, Burlington, Kan.

WHITE WYANDOTTES, GUARANTEED stock. Pen 1, pullets, fifteen eggs, \$2; Pen 2, hens, thirty eggs, \$3; utility flock, \$4 per hundred. Effie Acheson, Palco, Kan.

EGGS—SILVER LACED WYANDOTTES, fifteen, \$1; fifty, \$3. Rouen, Pekin and Muscovy duck eggs, eleven, \$1. Fred Kucera, Clarkson, Neb.

BRAHMAS.

LIGHT BRAHMAS—FIFTEEN EGGS, \$3. Hens, \$2. Nicholas Bach, Hays, Kan.

DARK BRAHMAS—FIFTEEN EGGS, \$3. Pullets or hens, \$2 each. Cockerels, \$1. Nicholas Bach, Hays, Kan.

WARD'S LIGHT BRAHMAS, BARRED Rocks, S. C. W. Leghorns. Send for catalog. Nine yards mated. W. H. Ward, Nickerson, Kan.

BABY CHICKS.

ROSE COMB RED BABY CHICKS, EGGS. Order soon. Lily Robb, Neal, Kan.

YOU BUY THE BEST BABY CHICKS, guaranteed, at Colwell's Hatchery, Smith Center, Kan.

BABY CHICKS—REDS, ROCKS, LEGHORNS, 12c. Eggs also. Request circular. McCune Hatchery, Dept. M, Ottawa, Kan.

BABY CHICKS—FIRELESS HOT WATER brooder—can't freeze water fountain. Get our circular. Kansas Poultry Company, Norton, Kan.

WANTED—20,000 BABY CHICKS, APRIL delivery. White Rocks, White Wyandottes, Black Minorcas only. Write today. Our prices will interest you. Shelton Poultry Company, Alcott Station, Denver, Colo.

LANGSHANS.

EXTRA BIG SCORED BLACK LANGSHAN eggs. H. Osterfoss, Hedrick, Iowa.

BLACK LANGSHAN EGGS AND BABY chicks. Choice stock. Write. Mrs. Geo. W. King, Solomon, Kan.

HIGHEST CLASS LANGSHANS—PEN A is headed by a 96 cockerel. Catalog free. J. A. Lovette, Poultry Judge, Mullinville, Kan.

BLACK LANGSHANS—EGGS FROM blue ribbon and sweepstakes winners; pen and range. Mrs. D. A. Swank, Blue Mound, Kan.

BLACK LANGSHANS—EGGS, FIFTEEN, \$1, \$1.25 by mail; one hundred, \$4, \$5 by mail. Baby chicks, 15c. Mrs. J. B. Stein, Smith Center, Kan.

BUCKNELL'S BIG BLACK LANGSHANS—Show bred and farm raised. Eggs, \$1 for fifteen, \$5 per hundred. Postage or express prepaid anywhere in the United States. R. E. Bucknell, Hardy, Neb.

POULTRY WANTED.

PAYING 13c FAT HENS, TURKEYS 17c. No. 1 capons 16c, guineas dozen \$4. Coops loaned free. The Copes, Topeka.

PAYING 17c EGGS, FAT HENS 14c, turkeys 17c. No. 1 capons 16c, guineas \$1 dozen. Coops loaned free. Selling egg cases 15c. Edw. Withey, Topeka.

When writing advertisers, please mention Kansas Farmer.

(Poultry Ads Continued on Next Page.)

RELIABLE POULTRY BREEDERS

FARM AND HERD.

RHODE ISLAND REDS

ROSE COMB RED EGGS, \$4 PER HUNDRED. Mrs. Eva Frederick, Asherville, Kan.

RHODE ISLAND WHITE EGGS—HUNDRED, \$5. Will Tonn, Haven, Kan.

R. C. RHODE ISLAND RED EGGS FROM prize winning strain, \$1.50 per fifteen. Cary Millard, Thomas, Okla.

EGGS FOR HATCHING FROM R. C. Reds that lay. Splendid color. Fifteen, \$2. Mrs. Lester Lambert, Anderson, Mo.

ROSE COMB REDS—EGGS FROM SE-lected stock, \$1 for fifteen eggs. Bert G. Taylor, Cleburne, Kan.

ROSE COMB RHODE ISLAND WHITES—EGGS, \$1.50 per setting, prepaid. A. N. Peterson, Waterville, Kan.

R. C. RHODE ISLAND RED EGGS—Mating list free. G. D. Willems, Inman, Kan.

SINGLE COMB RED EGGS—HUNDRED, \$3.50; thirty, \$1.50. Mrs. Rosa Janzen, Geneseo, Kan.

ROSE COMB REDS—FIFTEEN EGGS, Pen 1, \$2; Pen 2, \$1.50. Andrew Ketter, Kelly, Kan.

RHODE ISLAND REDS—FIFTEEN EGGS \$3; hens or pullets, \$2 each; cockerels, \$2 to \$15; cocks, \$1. All good ones. Nicholas Bach, Hays, Kan.

FRANK'S SUPERIOR STRAIN ROSE Comb Rhode Island Whites—Eggs for hatch-ling, baby chicks. Louis G. Frakes, Box 7, Huron, Kan.

DARK R. C. REDS—EGGS, \$1 AND \$2 per fifteen; \$5 per hundred. Mrs. Howard Martindale, Hillside Farm, Madison, Kan.

PURE-BRED ROSE COMB RHODE ISL- and Reds, stock and eggs for sale. Mating list free. M. L. Puckett, Puxico, Mo.

SINGLE COMB RHODE ISLAND REDS—Fifteen eggs, \$1.25; 100 for \$6.50. Satisfac- tion guaranteed. Mrs. Fred Schubach, Downing, Mo.

PURE-BRED ROSE COMB REDS—FARM range. Eggs, \$4 hundred. Chicks, 10c, hen hatched. Mrs. Jas. Crocker, White City, Kan.

TRY OUR PEERLESS STRAIN PURE Rose Comb Reds. None better. \$4.50 hun- dred, \$1 fifteen. C. D. Ferris, Elm Creek, Neb.

REDS—SINGLE COMB, EIGHT YEARS prize winners. None better. Eggs reduced to \$2 for fifteen. Chas. E. Lentz, Atchison, Kan.

BRED TO LAY—PURE-BRED S. C. Reds. Eggs from the finest birds I ever raised, \$1 setting; fifty, \$2.50; per hundred, \$4. Guaranteed. Belmont Farm, Box 69, Topeka, Kan.

MEIER'S WINNING SINGLE COMB REDS —Farm range, headed by brothers of my first prize Frisco cockerel. One hundred eggs, \$5; fifty, \$2.75. Write for mating list. H. A. Meier, Abilene, Kan.

ROSE COMB RHODE ISLAND REDS—Healthy, dark red, range flock. Eggs, \$1 per fifteen, \$5 per hundred. Also Rouen Duck eggs, \$1 setting. Mrs. Geo. Schultz, Route 6, Box 14, Haviland, Kan.

GUARANTEED FERTILITY, SAFE DE- liver of low priced hatching eggs, from big boned, good colored, heavy laying strain, both combs, Rhode Island Reds. Mating list free. H. A. Sibley, Lawrence, Kan.

FARM RANGE, DEEP BRILLIANT, BIG- boned R. C. Reds, red eyes, long back, low tail, nice combs. Eggs, 25c each; cockerels, \$2.50, \$5, \$10. Guaranteed to suit. High- land Farm, Hedrick, Iowa.

SINGLE COMB REDS—STRONG, VIGOR- ous, excellent layers. Yard eggs, \$1.25 to \$2.50, fifteen; range, \$1.50 thirty, \$4 hun- dred. Free catalog. T. C. Benedict, Jet, Okla.

HIGHLY BRED SINGLE COMB REDS—Consistent winners six years. Fifteen eggs, \$1.25; hundred, \$5, prepaid. Twenty-five baby chicks, \$3.00. Live delivery guaran- teed. Karl Spellman, Fredonia, Kan.

ROSE COMB REDS—FINE YARDS, headed by first cockerel Kansas State, and second cockerel Missouri State Shows. Eggs, \$1 per fifteen. Fine farm range flock, all good birds, \$4 per hundred. Free catalog. Mrs. Clyde Meyers, Fredonia, Kan.

SIX GRAND PENS ROSE COMB REDS, mated to roosters costing \$15 to \$35. Fifteen eggs, \$2; thirty eggs, \$3.50; fifty eggs, \$5. Splendid range flock, \$5 per hundred. Send for catalog. W. R. Huston, Americus, Kan.

DUCKS AND GESE.

ENGLISH PENCILED RUNNERS, R. C. Red eggs. Wilson Hinebine, Ruskin, Neb.

DUCKS—PURE WHITE RUNNERS. Eight ducks, one drake, \$10. J. F. Cox, Route 28, Topeka, Kan.

ENGLISH PENCILED RUNNER DUCKS—Eggs, twelve, \$1; hundred, \$5. Frank Hall, Toronto, Kan.

ENGLISH PENCILED RUNNER DUCK EGGS, \$5 per hundred. Miss Pearl Frederick, Asherville, Kan.

PURE WHITE RUNNER DUCKS—STOCK and eggs for sale. Satisfaction guaranteed. Mrs. H. E. Hallie, McCune, Kan.

ENGLISH PENCILED RUNNER EGGS, \$1 per fifteen, \$2.75 per fifty. J. W. War- ner, La Crosse, Kan.

FAWN INDIAN RUNNER DUCK EGGS, \$50, thirteen, \$5 hundred. Mrs. E. C. Wag- ner, Holton, Kan.

ENGLISH PENCILED RUNNER DRAKES —White egg strain, \$2 each. Eggs, \$1 fif- teen, \$6 hundred. Thomas Cunningham, Effingham, Kan.

INDIAN RUNNER RUCKS—GOLDEN fawn and white. Blue ribbon stock, laying pure white egg. Stock and eggs. Eleanora Poultry Ranch, Brighton, Colo.

CORNISH

CORNISH FOWLS—A FEW UTILITY pullets, cockerels, eggs. L. C. Horst, New- ton, Kan.

ORPINGTONS.

CAREY STRAIN WHITE ORPINGTONS—Prize winners. Settings, \$2 to \$5. Mrs. Helen Lill, Mt. Hope, Kan.

S. C. BUFF ORPINGTON EGGS FOR sale, \$1.50 per fifteen. J. W. Falkner, Bel- vue, Kan.

WHITE ORPINGTONS—PRIZE WIN- ners, egg layers, mating free. Craig, Galena, Mo.

SINGLE COMB WHITE ORPINGTON eggs, \$2 per fifteen. Roy Young, Leonard- ville, Kan.

BUFF ORPINGTON DUCKS AND drakes, \$2-\$3 each. Mrs. Chas. Snyder, Ef- fingham, Kan.

WHITE ORPINGTON PULLETS \$1 EACH. Baby chicks in April, May, June, 15c each. Mrs. Barracough, 127 S. Fern, Wichita, Kan.

BUFF ORPINGTON EGGS, FIFTEEN, \$1.25; fifty, \$3.25. Clarence Lehman, New- ton, Kan.

S. C. BUFF ORPINGTON EGGS, \$1, FIF- teen; \$4 hundred. Buff Ducks, \$1.25, thir- teen. Mrs. Frank Neel, Beverly, Kan.

SINGLE COMB BUFF ORPINGTONS—William Cook strain. Stock and eggs. Eleanora Poultry Ranch, Brighton, Colo.

BUFF ORPINGTON EGGS, \$1.50 PER fifteen, from flock winning cup, best dis- play Topeka State Show this year. Pen eggs. H. T. Farrar, Axtell, Kan.

S. C. BUFF ORPINGTONS—THE KIND that win, lay and pay. Good buff color, shape and size. Eggs, \$1.50 per fifteen. A. L. Beall, Green Castle, Mo.

RICH GOLDEN S. C. BUFF ORPINGTON eggs, fifteen, \$1; hundred, \$5. White Pekin Duck eggs, fifteen, \$1. Mary E. Price, Route 7, Manhattan, Kan.

PURE-BRED BUFF ORPINGTONS—Eggs, \$1 for fifteen, \$5 per hundred. Mrs. Minnie Hinshaw, Route 5, Haviland, Kan.

BARGAIN—FINE WHITE ORPINGTON cockerels from Kellerstrass' highest priced stock, \$2.50 each. Satisfaction guaranteed. J. K. Searles, Atchison, Kan.

SINGLE COMB BUFF ORPINGTONS—Eggs from large vigorous farm range birds, \$1 per setting, \$4 hundred. Martha Brown, Parkerville, Kan.

PURE-BRED ROSE COMB BUFF ORP- ingtons, eggs, fifteen, \$1.50; thirty, \$2.50; hundred, \$5. Fannie Renzenberger, Greeley, Kan.

PURE-BRED SINGLE COMB BUFF ORP- ingtons; laying strain. Eggs, \$1 per fifteen, \$5 per hundred. Louis Mueller, Orlando, Okla.

FOR SALE—BIG AND BUFF TO THE hide, Single Comb Orpingtons. Eggs, \$5 per hundred, \$1.50 per setting. Mrs. N. J. Alvey, Meriden, Kan.

EGGS FROM FIRST PRIZE WINNING Buff Orpingtons at Topeka State Fair. Fancy matings, \$2.50 for fifteen. Utility stock, \$6 per hundred. Alvin Miller, Over- brook, Kan.

BUFF ORPINGTONS, S. C. WHITE LEG- horns, Barred Rocks, \$3.50 hundred, 85c set- ting. Bourbon Red Turkeys, \$2.50 setting, prepaid. Chickens on separate farm. Ideal Poultry Farm, Concordia, Kan.

BUFF ORPINGTONS—STRICTLY FANCY matings, splendid winter layers. Eggs, \$1.50 per fifteen, prepaid. White Runner Duck eggs, \$1.25 per thirteen, prepaid. J. F. Cox, Route 28, Topeka, Kan.

SINGLE COMB BUFF ORPINGTONS—Show and utility stock. Eggs and chicks. Eggs from \$1.50 to \$5 per fifteen. Write for free mating list. Pleasant Hill Poultry Farm, Ellinwood, Kan.

SEVERAL BREEDS

RED SUSSEX—STATE WINNERS AND egg layers. Write John Barnes, Galena, Mo.

TWENTY LEADING VARIETIES, EGGS and baby chicks. Write for information. Royal Poultry Yards, Coffeyville, Kan.

WHITE GUINEA ROOSTERS, ONE DOL- lar. Colored Muscovy ducks to exchange. Merle Lamborn, Route 6, Leavenworth, Kan.

EGGS—S. C. BLUE ANDALUSIANS, Blue Orpingtons, Buff Leghorns. Egg-bred winners. Mating list free. Few cockerels. John A. Huber, LaCrosse, Kan.

REDS, BARRED ROCKS, BUFF ORP- ingtons from free range flocks, \$15 per hundred. L. E. Castle, 1920 W. Maple, Wichita, Kan.

SINGLE COMB BUFF LEGHORN AND fawn and white Indian Runner duck eggs, \$1 setting, \$5 hundred. Pearl Haines, Rosa- lia, Kan.

EGGS, \$3 PER FIFTEEN, FROM SIX varieties Plymouth Rocks—Barred, White, Buff, Columbian, Partridge and Silver Pen- ciled. Favorite Poultry Farm, A. P. Moore, Prop., Stafford, Kan.

STOCK, EGGS, BABY CHICKS, LEG- horns, Campines, Orpingtons, Langshans, R. I. Reds, Plymouth Rocks, Wyandottes. Stock, \$2 each; eggs, \$1.50 per 15, \$5 per 100; chicks, 15c each. Miller Poultry Farm, Box K, Lancaster, Mo.

EGGS FOR HATCHING—FROM OUR prize-winning Reds, Rocks, Wyandottes, Co- chins, Langshans, Leghorns, Polish and Bantams. Forty mated yards. Get best at popular prices. Modlin's Poultry Farm, Route 7, Topeka, Kan.

EGGS AND CHICKS FROM FARM- raised Single Comb White Leghorns, Barron and American strains; Single Comb White Orpingtons, Mammoth Pekin and White Runner Ducks, Embden Geese. Beederdale, Appleton City, Mo.

FOR SALE—EGGS FROM PURE-BREDS, Turkeys; geese; Pekin, Rouen, Muscovy and Runner ducks; Pearl and White guineas; bantams; Houdans; Leghorns; Rhode Is- land Reds; Hamburgs; Games; Barred and White Plymouth Rocks; White and Silver Laced Wyandottes; Buff and White Orpingtons; Langshans. Pen eggs, 15 for \$1. Also hares, white rabbits, guinea pigs, fancy pigeons. Write wants. D. L. Bruen, Platte Center, Neb.

Enormous increase in food prices in Euro- pean capitals, particularly those of the Teutonic allies, are shown in a comparative statement completed by the department of labor's bureau of labor statistics. All food is cheaper in the allied countries than in Germany and Austria, but there have been sharp rises in prices also in England and France. Vienna has suffered most of all. Meat which sold a year ago at 30 cents a pound is selling now for 47 cents. Many other foods have gone up in proportion. Bread prices are not given. In Berlin beef rose from 22 cents to 35 cents; veal from 22 to 38 cents, and pork from 20 to 30 cents. Bacon is selling at 64 cents, twice as much as a year ago, and ham has risen to 58 cents. Lard has doubled in price. Eggs at 80 cents a dozen are twice as high as a year ago. Prices in Great Britain are given as 44 per cent more than a year ago. The rise in France has been about 23 per cent. Food, on the whole, costs 3 per cent more in the United States than a year ago, the bureau estimates.

The Missouri Hampshire Breeders' As- sociation sale held at St. Joseph, Mo., Tues- day, March 7, under the management of Isom J. Martin, of Lancaster, Mo., was one of the successful sales of the season. The fifty-eight sows and six boars offered, sold for an average of \$65.68 per head. The gilt, Emma's Quality, consigned by W. F. Davis, topped the sale at \$250; C. O. Robertson, of Rockport, Mo., was the purchaser. The second high priced sow sold for \$150, and one sold for \$140. The top on boars was \$195. T. A. Thornton, Mount Moriah, Mo.; C. I. Ward, Cameron; W. J. Brinegar, Hylthe- dale; Thomas E. Deem, Cameron; George M. Bordeaux, Canton; W. F. Davis, St. Joseph; Isom J. Martin, Lancaster; A. D. Pierce, Ironton, and Mark Whitaker, Miami, were among the consignors. Out-of-town buyers and consignors to the sale were entertained at a banquet at the St. Francis hotel Tues- day night, the hosts being Col. Deem, W. J. Brinegar and E. C. Stone.

Holstein breeders throughout the corn belt will be interested in the sale announcement of F. J. Searle of Oskaloosa, Kansas. Mr. Searle will sell on April 25th, at his farm adjoining town, 110 head of registered Hol- steins, 100 registered cows and heifers and 10 young bulls ready for service. A number of these cows are sired by thirty pound record bulls and most of them are bred to sires with thirty pound records. The 100 head of females range in age from heifers to cows three and four years old. This sale will be the largest number of registered Holsteins ever held in Kansas and promises to be one of the good lots of tested and pro- ducing cows to be sold in a public sale this season.

The Holstein Breeders' consignment sale recently held at Omaha, Neb., under the management of E. M. Little, of Clarke, Neb., was well attended and plenty of healthy Holstein enthusiasm was shown throughout the entire day. The offering was excep- tionally uniform in quality and far above the average in every respect. The high figure of the sale, \$500, was made by three animals. Mantema Kalmuck and Queen Segis Ormsby Enoch, both four-year-old cows consigned by Dr. B. E. Davis, Omaha, Neb., and Nebraska Pontiac Colantha, a yearling heifer consigned by Nelson Bros., Stromsburg, Neb. The heaviest buyers were John D. C. Kruger, St. Anthony, Idaho, who selected some of the highest priced animals for Idaho; C. E. Pearce, Madison, Neb., who took a number of the best cows for a founda- tion herd on his farm at Madison; and Dwight Williams, Omaha, Neb., who has an especially nice herd of Holsteins and is pro- ducing milk for Omaha. The twenty-five head consigned by Badger & Frost, of Central City, Neb., averaged \$203.80 per head. Three head consigned by Leroy Ball, of Albion, Neb., averaged \$368 per head. Four head consigned by O. C. Sparks, of West- boro, Mo., averaged \$204 per head. The consignment of nineteen head by Dr. W. M. Corns, of Hamphrey, Neb., averaged \$248 per head. Seven head consigned by Cameron J. Furry, of Franklin, Neb., averaged \$199 per head. The consignment of three head by the United States Indian school, Genoa, Neb., averaged \$255 per head. J. W. Jen- kinson, of Monroe, Neb., consigned two head that averaged \$223 per head. Four head consigned by Nelson Bros., of Stromsburg, Neb., averaged \$365 per head, and six head consigned by Dr. B. E. Davis, of Omaha, Neb., averaged \$343 per head.

The thirty-seventh annual sale of jacks and jennets held by L. M. Monsees & Sons, of Smithton, Mo., was largely attended by buyers from a number of states. Twenty- five jacks sold for an average of \$619.80, 9 yearling jacks sold for an average of \$422. 33 jennets sold for an average of \$321.51, 12 yearling jennets sold for an average of \$234.53, 2 jack colts sold for an average of \$200 and 3 jennet colts averaged \$233. The eighty-four head sold for \$33,760, or an average of \$401.90 per head. One three- year-old jack sold for \$3,750, and one five-year- old jennet sold for \$2,600, and one yearling jennet sold for \$1,200. The three high prices quoted is a world's record in the selling of jacks and jennets of the ages mentioned at private or public sale. The three highest priced animals were purchased by G. T. Florida, of Sweetwater, Tenn., and will go to his Tennessee herd.

Walter B. Brown, of Perry, Kan., is the owner of a very fine herd of Poland China hogs. Mr. Brown has an ideal location, being just outside the city limits of Perry, Kansas, and is well equipped to handle hogs, having his pastures and barns conveniently arranged. He is a consistent booster for the Big Poland Chinas but he is a stickler for quality combined with size. At the head of his herd is Chief Miami, sired by Miami Chief by Wide Awake by Blue Valley Ex- ception by Gold Mine. His dam way by Wedds Expansion by Old Expansion. This boar has a strong back, his bone measured ten inches at fifteen months old and he now stands on a twelve inch bone as a two year old. The greatest value of this boar is the class of pigs he has sired for Mr. Brown. They are the low down blocky type with broad heads—the kind that grow quick and develop into the large medium type of Poland Chinas. Mr. Brown has a number of extra goods sows to mate with Chief Miami, such sows as Lady Mastodon 97th, a grandmother of Old Expansion, Lady You Tell's Last, and Long Hutch, both by Captain Hutch. There are also a few sows sired by King of Kansas.

Catalogs are out for the big sale of registered Holstein cows and heifers to be held at Howell, Mich., April 26, under the management of Mark B. Curdy, one of the leading Holstein breeders in that state. One hundred head of choice registered Holstein cows and heifers have been cataloged for this sale. They are richly bred and the entire offering tuberculin tested.

A. S. Neale, of Manhattan, Kan., one of the progressive Holstein breeders in Kan- sas, reports his Holsteins doing fine. Mr. Neale has the best blood lines of the breed as well as a choice lot of individuals. They are the kind that are the profit producers.

FARM LANDS FOR SALE

A Modern Topeka Home

TO SELL AT A BARGAIN

Inside location, on a good street, near school. Seven-room house, all modern conveniences. Good barn. This proposition will inter- est anyone wanting a choice loca- tion and a good home. Priced to sell. No trades. Address

BOX 5, Care KANSAS FARMER

THIS WILL INTEREST YOU

Do you want to move to Topeka to educate your children? If you do, this modern five-room home near Washburn College will just suit you. New, only occupied ten months. A choice location. Must sell quick. \$3,200 takes it. Address S. CARE KANSAS FARMER, TOPEKA.

GENUINE BARGAIN—Quarter section 3 1/2 miles from market, no buildings, 120 acres in wheat; average rental for three years, over \$150. Surrounding lands, \$40 an acre. This goes for \$30 for quick sale. Terms. No trade.

JAS. H. LITTLE, LA CROSSE, KANSAS

FOR SALE—220-Acre improved stock farm, 60 miles southwest of Kansas City; 100 acres bluegrass pasture, balance in alfalfa, clover and farm land. Also good level section in Greeley County, Kansas. ROY FLOREY, Owner, Lone Star, Douglas Co., Kan.

Irrigated Alfalfa Land, Upper Rio Grande Valley, \$15 to \$35 an acre including water right. Wheat land Western Kansas, Eastern Colorado, \$5 and up. Call or write. Morris Land Company (Owners), Lawrence, Kansas.

IRRIGATED LANDS FOR SALE

On the famous Twin Falls tract. Write for prices. A. V. MOUNCE, BUHL, IDAHO.

20 Acres, 1/4 mile McAlester, city 15,000; 14 acres fine bottom land in cult.; fair imp. \$35 per acre. Some terms. SOUTHERN REALTY CO., McAlester, Okla.

OKANOGAN VALLEY irrigated land for sale. Write for prices. Owner, C. M. BOTTOMLEY, OROVILLE, WASH.

When writing advertisers, please mention Kansas Farmer.

PURE BRED POULTRY

TURKEYS.

BOURBON RED EGGS, \$2.50 PER 12. Fred Watts, Havensville, Kan.

WHITE HOLLAND TURKEY EGGS, \$2.50 per twelve. W. F. Teague, Collyer, Kan.

EGGS—FAMOUS NARRAGANSETT TUR- keys. Sunlight Poultry Farm, Mt. Moriah, Mo.

BOURBON RED EGGS FROM LARGE well marked stock, \$3 per eleven. Julia Haynes, McDonald, Kan.

NARRAGANSETT TURKEYS, 50-POUND toms. Eggs, \$3.50 per eleven, prepaid. Mrs. John Mitchell, Lafontaine, Kan.

BRONZE TOMS, ONE RED JAP BAN- tam cock, Brahma cockerels. Emma Ahl- stedt, Roxbury, Kan.

MAMMOTH WHITE HOLLAND TURKEYS —Eggs, \$3, eleven. Mrs. C. G. Cook, Lyons, Kan.

EGGS FROM LARGE BOURBON RED turkeys, \$3 for eleven. C. S. Hart & Sons, Milan, Mo.

BOURBON RED TURKEYS—MATINGS headed by my Missouri State, Kansas State and San Francisco Poultry show first prize toms. Eggs, \$3 and \$4 per eleven. Free catalog. Mrs. Clyde Meyers, Fredonia, Kan.

BOURBON RED TURKEY EGGS—FROM two yards unrelated. \$3.00 per eleven. Large, well colored birds. Prize winners. Directions for raising and recipe for home-made lice powder free. Ringlet Barred Rock eggs. Mrs. C. B. Palmer, Uniontown, Kan.

BOURBON RED TURKEYS—WORLD'S best strain. Great big vigorous farm-raised deep-breasted birds, from blue ribbon stock, Denver 1916, and first wherever shown. Stock and eggs. Eleanora Poultry Ranch, Brighton, Colo.

BABY CHICK FEED.

FINE QUALITY BABY CHICK FEED, \$1.75 cwt. 1 c. b. Ft. Scott, Kan. "Brooks Best" Calf Meal, \$3.25 cwt. Brooks Whole- sale Co.

ANCONAS.

SINGLE COMB MOTTLED ANCONAS, heavy layers. Stock and eggs for sale. Write Fred K. Stevens, Seymour, Iowa.

ANCONAS—FAMOUS SHEPPARD STRAIN —Eggs from sweepstakes winners. Quality and prices right. Write for particulars. Frank Glenn, Newton, Kan.

ANCONAS—STRONG, VIGOROUS, FARM- raised stock. Eggs, \$5 per hundred, \$1 per setting. Write for printed matter. C. K. Whitney, Route 9, Wichita, Kan.

ANCONAS OF SHEPPARD'S FAMOUS strain. Eggs all season, \$2, \$1.50, \$1 per eighteen. Mrs. Hulda Hudson, Route 1, Marionville, Mo.

PIGEONS.

AS I AM CROWDED FOR ROOM, WILL sell about 75 pairs of my Mammoth Homer Pigeons at 50c per pair. J. W. Falkner, Belvue, Kan.

COCHINS.

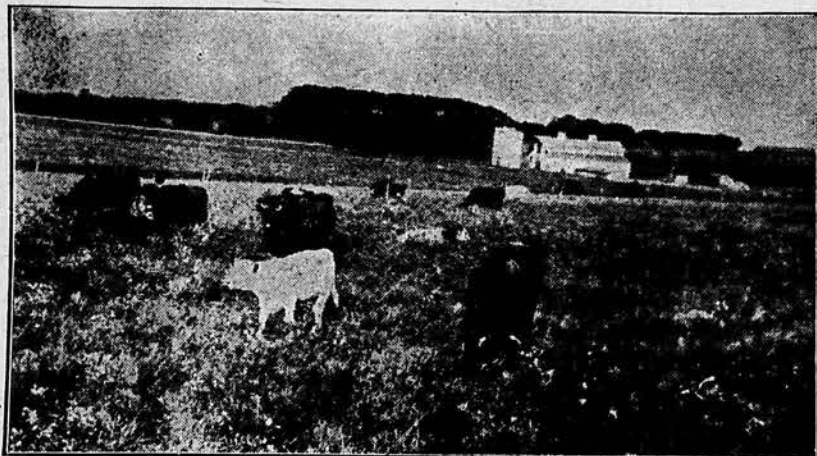
PARTRIDGE COCHINS—ALL FULL- blooded stock, prize winners. Fifteen eggs, \$3. Hens or pullets, \$2 each; cockerels, \$4 each. Nicholas Bach, Hays, Kan.

CENTRAL SHORTHORN BREEDERS ASSOCIATION THIRD ANNUAL SALE OF

SHORTHORN CATTLE

TWO DAYS, APRIL 5, 6, 1916

FINE STOCK PAVILION, KANSAS CITY, MISSOURI.



130 HEAD OF SHORTHORNS drafted from the best herds in the corn belt. Seventy bulls from yearlings to matured sires. Sixty cows and heifers, consisting of cows with calves at side and rebred, heifers bred and open.

CONTRIBUTORS.

J. M. Alexander & Son, Buffalo, Mo.
G. A. Betteridge, Bunceton, Mo.
Bellows Bros., Maryville, Mo.
F. C. Barber & Sons, Skidmore, Mo.
J. E. & D. W. Bronaugh, Nashua, Mo.
H. R. Coffey, Savannah, Mo.
Jos. Duncan & Son, Osborn, Mo.
T. J. Dawe, Troy, Kan.
Ewing Bros., Morrisville, Mo.
J. R. Evans & Bros., Maryville, Mo.
H. H. Holmes, Great Bend, Kan.
Harriman Bros., Pilot Grove, Mo.
E. M. Hall, Carthage, Mo.
L. L. Hart, Burlington Junction, Mo.
N. H. Gentry, Sedalia, Mo.

W. P. Holmes, Parkville, Mo.
Otto Gehlbach & Sons, Trenton, Mo.
Geo. T. Guyton, Pleasant Hill, Mo.
H. C. Johns, Carthage, Mo.
Kansas Agricultural College, Manhattan, Kan.
C. E. Leonard & Son, Bunceton, Mo.
E. Ogden & Son, Maryville, Mo.
Purdy Bros., Harris, Mo.
J. C. Patterson, Jr., Liberty, Mo.
J. W. Rickey & Sons, Winfield, Iowa.
T. J. Sands, Robinson, Kan.
T. F. Stone, Weston, Mo.
Sullivan Bros., Moran, Kan.
C. H. White, Burlington, Kan.

PROMINENT Sires OF CATTLE TO BE SOLD.

Fair Acres Sultan.
The Choice Of All.
Imp. Villager.
Village Flash.
Radium.
Clara's Choice.
The Goods.
Hampton Cumberland.

Marengo's Choice.
Clara's King.
Proud Monarch.
Sultan's Heir.
Rosedal's Choice.
Sultan Standard.
Wood Dale Stamp.
Baron Marr.

Diamond Emblem.
Captain Archer.
Diamond Goods.
Cumberland Again.
Snowstorm.
Standard Goods.
Prince Valentine 4th.
Classical Sultan.

Write today for catalog. Address

W. A. FORSYTHE, Sale Mgr. Greenwood, Mo.

Auctioneers—R. L. Harriman, Carey M. Jones.

HEREFORD CATTLE.

STAR BREEDING FARM

FOR SALE—Herefords and Durocs: 65 yearling and two-year-old bulls by Tophon 4th, Hesslod, Anxiety, March On and other good sires. 25 females, some have calves at foot and bred again. 10 head heifer calves. 30 head of registered Duroc gilts sired by a son of Ohio Chief and son of Buddy K 4th, out of sows by grand champions. Come and see me.
SAM DRYBREAD - ELK CITY, KANSAS

WILLIAMS & SONS HEREFORDS

For Sale—Seven cows bred to drop calves in summer. Sixty bulls from 8 to 10 months old. Priced reasonable. Come and see us.
PAUL E. WILLIAMS, MARION, KANSAS

OHIO IMPROVED CHESTERS

Murray's O. I. C. Chesters

A few choice boars. Forty choice gilts bred for March farrow; thirty for April farrow. All bred to silver cup winner. They are priced low.
CHAS. H. MURRAY, FRIEND, NEBRASKA

CHOICE AUGUST AND SEPTEMBER PIGS
Weight 125 pounds, \$25. Booking orders for spring pigs, \$15 each; pair, \$25; trio, \$35. Registered. Express prepaid anywhere in Kansas. F. C. Gookin, Route 1, Russell, Kan.

RED POLLED CATTLE.

RED POLLED BULLS

TWENTY yearling bulls, big rugged fellows, sired by ton sires; all registered and priced reasonably. Will sell a few females.
E. E. FRIZELL, Frizell, Pawnee Co., Kan.

Coburn Herd Red Polled Cattle

AND PERCHERON HORSES.
A few choice bulls. Eight extra good two-year-old stallions for sale at reasonable prices.
MAHLON GROENMILLER, Pomona, Kan.

RED POLLED CATTLE

FOR SALE—1915 bull calves by Rose's Grand Champion 17998, a 2,400-pound bull; also a few good cows and heifers.
AULD BROTHERS, FRANKFORT, KAN.

RED POLLED CATTLE.

For Sale—Eight choice young bulls from 7 to 11 months old.
I. W. FOULTON - MEDORA, KANSAS

BERKSHIRE HOGS.

BERKSHIRE BRED SOWS

Seventy choice bred Berkshire sows, to farrow every week from March 1 until June. Bred to as good boars as the breed has. Cholera immune.
E. D. KING - BURLINGTON, KANSAS

DUROC JERSEYS.

Sisco's Duroc Jerseys PRIZE WINNING BLOOD

Big, growthy, richly-bred gilts, bred to a choice son of the great boar, A Critic, for spring farrow. Outstanding spring boars. Also a choice herd boar. Prices right.

A. E. SISCO, Route 2, TOPEKA, KS.

DUROC JERSEY HERD GILTS

Twenty spring yearling bred gilts sired by Klondyke and bred to a grandson of B. & C's Col. for May farrow. Price, \$30. First check gets choice. I guarantee satisfaction or money back. Write today, they will sell quick.

H. D. PLUMMER - LONGTON, KANSAS

Bred Sows and Gilts

By the great Duroc Jersey boars, Country Gentleman, Gold Medal and Long Wonder 2d. Bred to Country Gentleman and Gold Medal. All immune. Prize winning blood. We price them right.

W. R. HUSTON - AMERICUS, KANSAS

UNEEDED HERD UNEXCELLED DUROCS 34 BARGAINS

Late spring boars and gilts. Model Cols. and Golden Models, \$15 to \$25 for quick sale. Thirty gilts, \$450; twelve bred to our great Iowa boar, Proud Iowa Chief.
TYSON BROS. - McALLISTER, KAN.

BOARS! BOARS! BRED GILTS!
Eighteen big husky boars, thirty bred gilts, a few tried sows. Crimson Wonder, Illustration II, Colonel, Good Enuff, Defender breeding. Either by or bred to sons of the greatest champions of the breed. Priced for quick sale. Immune.
G. M. SHEPHERD - LYONS, KANSAS

TAMWORTH HOGS.

TAMWORTH PIGS
Of summer birth, from massive, natural immune parents. Sent in pairs not akin. Write Q. I. SIMPSON, Palmer, Illinois.

AUCTIONEERS.

Live Stock and Real Estate Auctioneer

Authorized state agent of Kansas Rural Credit Association. Write me your wants.
H. M. JUSTICE - PAOLA, KANSAS

A Stern Chase.

Robert was home from college for the Christmas holidays and had just left his father and a neighbor.

"Your son," said the neighbor, "is pursuing his studies at college, isn't he?"
"I guess so," said the father; "he's always behind."

FEDERAL ROAD LEGISLATION

CHAIRMAN John H. Bankhead, of the Senate Committee on Post-offices and Post Roads, accompanies the good roads measure reported to the Senate by a memorandum which sets forth the difference between the substitute measure offered and the bill passed by the House of Representatives. Particular emphasis is laid upon the fact that the House legislation did not safeguard completely the expenditure of the joint federal and state money.

Herewith is the commend covering the point:

"The bill H. R. 7617, passed by the House of Representatives, referred to the Committee on Agriculture and Forestry and later referred to this committee, is most seriously defective in its failure to afford reasonable inspection and safeguarding on the part of the federal government of the federal appropriations.

A careful reading of section 3 of the House bill reveals the fact that no power is vested in the Secretary of Agriculture to disapprove the application by a state highway department for aid under the provisions of the act unless the road for which aid is sought fails to come within the provisions of the act. Inasmuch as the act passed by the House brings practically every class of roads in the United States within the provisions of the act, the Secretary of Agriculture would have no power to disapprove the application. Having no voice whatsoever in the selection of the road, he is then required by the terms of the bill to request the state highway department surveys, plans, specifications, estimates, and such other information as he may consider proper. He is given no power of approval or disapproval of the plans, surveys, specifications, and estimates, but is only authorized to examine them and determine what would be a reasonable cost of the proposed investment."

One feature of the House bill which brought forth the greatest criticism, was in connection with a possible use of the money for maintenance purposes. The organized motorists, through the A. A. A. National Good Roads Board, almost unanimously objected to this provision. Eliminating entirely any maintenance expenditure, the Senate memorandum thus sets forth the reason for its objection:

"The House bill carries a provision for aid to road maintenance. This committee believes that the application of federal funds to this purpose would constitute a never-ending drain upon the federal treasury without appreciable results in the form of a greater mileage of improved roads, and would tend to stifle the spirit of self-help on the part of local communities.

"By confining the expenditure of the joint fund supplied by the federal government and the respective state governments to construction rather than to maintenance, tangible and durable roads will be provided to take the place of those upon which untold millions have been expended for temporary patchwork in the past. If year by year a steadily growing mileage of firm, smooth, well-constructed roads exist as evidence to show that every dollar of federal and state money jointly expended has been productive of results, it will not only go far toward proving convenient highways for traffic, but will, like the example of good management and skilled methods already cited, have a most beneficial influence upon the lesser units of govern-

ment in demonstrating the advantages of durable construction."

Dust Prevention.

Dust is one of the nuisances of a road. It is disagreeable both to the traveler and to the one living near the road. In many places the roads are oiled, but this is expensive. The road drag will reduce the dust, and the cost of using it is small. Much of the dust in a road comes from the wearing down of ruts and the ruts were formed in the road because water stood in it. The roadbed that is well crowned in the middle and packed hard will not loosen up much in wet weather, and if no ruts are formed there will not be much material to form dust. The road drag should be run over the road after every rain. In this way the soil is laid on the roadbed in thin layers and is packed on.

Clay or loam will pack hard when it contains the right amount of moisture, when too wet it becomes soft and when too dry the soil grains do not stick together. The best way to keep a fair amount of moisture in the roadbed is to keep it at least 18 inches above standing water. To keep it packed hard and well crowned in the middle and to keep a strip on each side free from weeds. When ruts are allowed to form they will be ground to dust as soon as drying weather sets in. Use the road drag to keep ruts from forming.—W. C. PALMER, North Dakota.

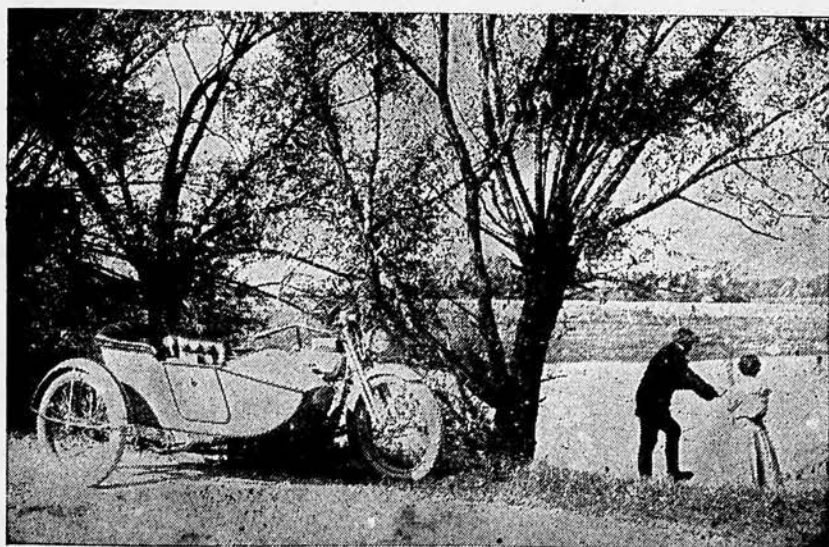
Grades in Road.

The grade in a road determines the size of load that can be pulled over it. A good way to learn the effect of grade is to ride a bicycle on the level and up different grades. It will very quickly be found out how grades effect the pull. One argument against going around a hill is that it makes the distance greater. This is not always the case. The bail of a pail is no longer when laying down than when standing up. One bad grade in a road may easily double the cost of hauling over the road. The work of grading down a hill usually costs more than to buy the land required to go around it.

Laying Out Roads.

In the West the tendency is to run roads on section lines. This is not always the best way. The diagonal road cuts down the distance to town and also uses up less land. The right of way for a four-rod road on two sides of a section is sixteen acres, while it is but 11½ acres for a diagonal road. The diagonal road saves 4½ acres of land and is nearly two-thirds mile shorter. A few diagonal roads will be a great saving. For instance, the person living five miles south and five miles east of a town in making a round trip will have to travel twenty miles if the sections lines are followed and but fourteen if the road runs diagonally. The diagonal road cuts down the distance by over 40 per cent. In other words three trips can be made to town on the diagonal road while two are made on the section line road.

The road drag should be used as early and as often as conditions are right for it. As the frost goes out of the ground, ruts form which should be kept so full that they have no chance to get deep. A well worked road will shed the spring rains so well and save so much work later that early dragging pays better than the old "stitch in time." It saves much of the discomfort of traveling over muddy roads, too.



MOTORCYCLE AND SIDE CAR OPEN UP A WIDE SCOPE OF COUNTRY
—THEIR USE WILL INCREASE AS THE ROADS ARE MADE BETTER

BETTER FARMING WINS

A THIRST for knowledge brings the short-course student to the agricultural college. They come because they feel the need of all the training they can get. They return to the farms and many of them become the successful farmers and the upbuilders of their home communities. In addressing this year's class as they were leaving, President H. J. Waters said:

"Every graduate of the short course, as well as every graduate of the long course of the agricultural college who returns to the farm, is marked."

"Don't expect to reconstruct farm operations too rapidly. Be conservative, at the same time persistent and determined, in your progress. People naturally think in terms of concrete examples and not in terms of averages. Hence it is not uncommon to find that, under certain peculiar conditions, wholly reliable advice given on the basis of the average, may result disastrously. Its exponent is then gloriously denounced. Be cautious, but be not discouraged by an occasional exception to a rule. Better farming will win. Be a student always. Keep in close touch with the agricultural college."

"Don't be afraid to work. Calloused hands do not lower a man's standing in society in any respect. A leader is able, through frankness, sincerity, and capability, to advance, and to take the crowd with him. He doesn't say much about leading, but if he is a clear thinker and if his propositions are right, his influence in a community will steadily increase."

President Waters reminded the young men that the results a man is able to accomplish are dependent on two factors—native ability and work. These factors may be likened to the multiplicand and multiplier in a problem in multiplication. If the native ability and the work are both small, the product may be almost insignificant. If the native ability is medium and the work large, the product may be greater than that of another individual with much greater native ability but with smaller capacity for work. The Creator has given the native ability, and that factor cannot be changed much. But the determination of the size of the other factor—thoughtful, persistent and effective work—lies very much within the control of the individual.

Give Bees Proper Care.

Bees should have plenty of room in the spring for brood rearing, abundance of storer and proper protection. If they have been wintered in a cellar they will not normally begin brood rearing as early as those wintered out of doors. When they are brought out they may or may not be placed on their old stands. If they begin to roam the fields as soon as they are brought out, many of them will be lost. To prevent this, bring them out at night or on a cloudy or chilly day.

It is essential to have a good, strong colony of bees in the spring to insure a good honey harvest. Brood rearing begins before or soon after the new supplies are brought to the hive. The new bees increase the capacity of the colony for brood rearing, thus bringing about a rapid increase in the size of the colony. It is instinctive for the bees to increase their brood at this season of the year, and the bee-keeper in so far as possible should make conditions favorable for them.

Bees which have wintered successfully out of doors and have plenty of honey in the hive will rapidly increase the size of the colony. A full 10-frame Langstroth hive will not ordinarily be too large at this time. The increase may even be so rapid that it will be necessary to place another hive body on the first. They need room at this time and plenty of it.

During brood rearing vast quantities of food are consumed, and if the food supply is insufficient brood rearing will be checked. Even though the bees may bring nectar at this time, they need it all for brood rearing, and will not store much surplus. If they have not enough food, feed them. A syrup made of one-half sugar and one-half water or even thicker than this may be used. This syrup should be fed to the bees while warm.

Hives should be protected from sudden changes of temperature, as the temperature of brood must be kept nearly at human blood heat. If they are well protected they can conserve their muscular activities and will build up much faster. Hives which have been brought out from the cellar should be protected by covering them with paper wrapping or mats to prevent chilling of the brood.

The hives should be opened on some warm day and given a thorough cleaning. It is well at this time to clip the wings of the queen so that she cannot emerge with a swarm. Clipping one wing will

prevent her flying, but if both wings on the same side are clipped, it will be easier to distinguish her from the other bees at future examinations of the brood. If colonies are found without any brood, it usually means that they are queenless, and these should be united with colonies which possess queens. This may be done by placing the queenless colony on top of the one with a queen.

This heavy brood rearing should go on for six or eight weeks before the surplus honey flow.

If the colony is given plenty of room in which to rear brood, has plenty of storer, and is well well protected at this period, the result should be a strong colony capable of storing a large amount of surplus honey.—J. H. MERRILL, K. S. A. C.

Amortization of a Loan.

Amortization as used in connection with credits means that when the interest is paid each year a small payment is also made on the capital. For instance, if \$1,000 is borrowed at 5 per cent to run 15 years on the amortization plan, the annual payments would be \$100 except the last year, when it would be \$21.07. The first year \$50 would be for interest and \$50 on the capital. The fourteenth year the interest would be \$5.72 and the amount on capital \$94.28. If the loan was \$1,000 at 5 per cent for 26 years the annual payments would be \$70.

Amortization of loans is a good principle. If money is borrowed it should be for a productive purpose. And if the production is increased a part of that increase should go to reduce the principle of the loan.

Pulling Stumps.

Stump pullers can be most economically used in clearing land of stumps. This method is rapid and leaves no roots.

Stumps pull better when the ground is dry, as the dirt loosens more readily around the roots. It is not practical to clear land without first chopping away the trees. Longer hitches are necessary and the branches become entangled in the cables, making much more work than if the trees have been removed previously.

Old stumps pull much easier than those pulled immediately after cutting away the trees. The pulling power needed decreases almost one-half, in one year from the time the tree is cut. Also, the longer the stump the easier the pull. A stump three feet long gives much more leverage than one a foot long. Small stumps may be used for wood if desired. It is best to remove the roots from the stump at the end of the hole. All dirt and small roots may then be used for filling the hole. Large stumps should be piled and burned.

Stumps of apple trees are easiest to pull. Ash and maple pull fairly hard. Elm and oak stumps pull hardest. Oaks have long, heavy tough roots, and elms have many long fibrous roots.

Guernsey Records from Six States.

In the last list of Guernsey cows, comprising forty-six records, for which Advanced Register certificates are being written, sixteen gave over 500 pounds of butter fat each, while six gave an average of over 691 pounds of fat.

The cow Mignonette of Rich Neck 36028, re-entry 3054, three and one-half years old, bred and owned in Maryland, gave over 800 pounds fat, this being her second record, and gives her second place in Class D.

Lura Bettina 20725, with a record of 739.58 pounds fat, is owned in North Dakota. Princess of Meadowbrook 25185, with a record of 722.24 pounds fat, which places her at the head of mature cows on the coast, is owned in Owensmouth, California. The other three cows, Nellie Tostevin of Mapleton 2d 26449, First Dawn 19096, and Imp. Fanny of the Mourants 34344, are owned in Massachusetts, Minnesota and Wisconsin respectively.

Scattered as these cows are in as many different states from the extreme east to the far west, it shows the ability of the Guernsey to adapt herself to varying conditions, and that production is not confined to any one locality, family line or method of feeding. With one exception, these are re-entries, or second year records. One is a third record, and has been increased fifty pounds each year.

The desirability of re-entries and demonstrating that cows can not only repeat but increase their records from year to year is becoming more apparent. Yearly Advanced Register work actually develops the dairy capacity and is thus raising the standard of the breed.

Keep the little chicks busy by feeding small grains in fine litter.

FRANK IAMS'

"Mr. Horseman," 1916 is the "Get Rich Quick" year for "up-to-snuff" Horse Breeders. Get into the "Easy Money-Making Game." Don't wait. Do it in 1916. No horse will be imported in ten years. "Big Horse Family," buy big "Black of Iams and wear diamonds. "Iams' kind" are known "world over" as Top-Notchers at Bargain Prices. Try IAMS.



Big, Nifty, Classy "New Horses" are "Town Talk." His 34 years of success in Importing, Breeding and Selling, 5,640 registered horses—his "50 trips" across the ocean—make Iams a safe man to buy stallions from. His "old customers" are "best Page advertisers," his Breeding Guarantee backed by "Half Million Dollars." Iams' Imported and Home-bred horses are "classy, model big drafters" of large bone, fine form, quality, finish and flash movers. Several European

"Gold Medal and State Prizewinners"

"Iams' kind," and in the "Pink of Condition."

Bought at "bargain prices" and must be sold. "Iams sells horses on honor." A lady can buy as cheap as a man. Iams is not in the "stallion trust," and is selling more pounds of "model draft horse" for the money than any competitor. Iams is cutting the middle out of high prices on his

40 PERCHERON AND BELGIAN STALLIONS AND MARES

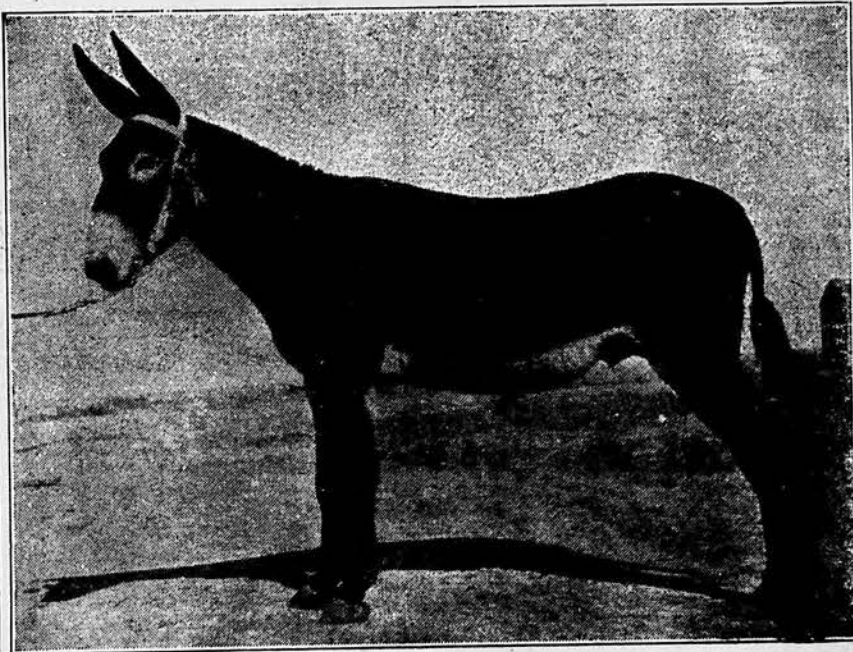
2 to 6 years old, weight 1,700 to 2,410 lbs., all "Branded," "Approved," "Registered and Inspected" by governments of France and U. S. and certificates "stamped" O. K. All "inspected" by a Nebr. Deputy State Veterinarian and certificates of "Health and Soundness" are given with each horse. Iams sells

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

(few higher). "Home-Breds" come cheapest. Registered 1,800 to 2,100-lb. mares at \$700 to \$1,000. Terms cash, or one year's time at 7 per cent; land security at 6 per cent; \$100 less price for cash than time. Iams pays freight and buyer's fare; gives 60 per cent breeding guarantee. Can place \$1,500 insurance. Iams backs up his ads. with a \$500 guarantee that you find the horses as represented. Write for Horse Catalog. It has a "Big Bargain" on each page. References: First National and Omaha National Banks, Omaha, Neb.; Citizens' State and St. Paul Banks, St. Paul, Neb.

ST. PAUL, NEB.

KENTUCKY JACKS AT PRIVATE SALE



THE firm of Saunders & Maggard, Poplar Plains, Ky., has shipped twenty head of jacks to Newton, Kansas, and they will be for sale privately at Welsh's Transfer Barn. This is a well bred load of jacks, including one imported jack, and they range in age from coming three to matured aged jacks; height from 14 to 16 hands. We will make prices reasonable, as we want to close them out in the next thirty days. Anyone wanting a good jack will do well to call and see them. Barn two blocks from Santa Fe Depot, one block from Interurban. Come and see us.

SAUNDERS & MAGGARD, Newton, Kan.

READ KANSAS FARMER'S CLASSIFIED ADVERTISING PAGE FOR READY BARGAINS

JERSEY CATTLE.



The Giant Of The Dairy

Grade up with a Jersey Bull! He is half the herd, and the breed determines half the profits. Breed him to your grade cows and bring the herd average near the Jersey average—489 pounds of butter fat per year. Your calves will be beauties. They'll mature quickly into gentle, hardy, vigorous and persistent milkers, long-lived and adapted to any climate. Let us tell you more about them. Send for our book, "The Story of The Jersey." It's free and it's a dandy.

Write for it now.

The American Jersey Cattle Club
335 West 23rd Street - New York City

PUBLIC SALE
60-HEAD JERSEY CATTLE-60

May 20, 1916.

Send for catalog.

ROBERT I. YOUNG

Route 5 - St. Joseph, Mo.

Must Reduce Herd

Forty head of registered cows, heifer and bull calves for sale. Of the best blood lines among the breed.

I am a member of the Southwest Jersey Cattle Breeders' Association.

SWEET SPRING STOCK RANCH
Box 241 Monett, Missouri

JERSEY CATTLE AND
CHESTER WHITE HOGS

Two registered Jersey bulls ready for service. Richly bred.

DORNWOOD FARM, Route 1, Topeka, Kan.

SUNSET "CORRECT TYPE" JERSEYS

The famous Blue Belle-Golden Rosebay breeding. A few bred heifers and young bulls for sale, singly, pair or trio. Send for circular giving description of herd, breeding, production, etc., and mention your wants.

The Ennis Stock Farm, Horse Station, Mo.
(Just South of St. Louis.)

DICTATORS EMINENT 117710

\$125.00. Best Bull for the Money. Born Sept. 20, 1913. Solid fawn; gentle; sure, guaranteed. Dam granddaughter Eminent 2d, sold for \$10,000. Eighty-eight tested daughters.

R. J. LINSKOTT - HOLTON, KANSAS

JERSEYS BACKED BY RECORDS.

Calves, yearlings and two-year-old bulls, sired by Sultan's Trinity King, Fern's Baby Boy and Majesty Western King. From dams that will give 1,000 pounds of 5 per cent or more, a month. Also some choice young Poland China boars.

DR. J. H. LOMAX, Station D, St. Joseph, Mo.

REGISTERED JERSEYS.

Ten high class young bulls and one aged bull. Can furnish anything in registered cows and heifers. 100 head to select from. Write for special prices or come and see the best herd in the Middle West.

H. C. YOUNG, Wineland Farm, Lincoln, Neb.

JERSEY BULLS

For Sale—A few great young bulls, ready for light service. Splendid individuals of most popular breeding, sired by Blue Belle's Owl 19641 and H. F. Golden Fern's Lad 9th 101728, all out of great dams. Only bulls from our very best cows, raised and offered for sale. You must buy a good one if you buy here. Address

ROLLA OLIVER, Box 701, St. Joseph, Mo.

SMITH'S JERSEYS

One 2-year-old, two 1-year-old bulls, choice individuals. Thirty cows and heifers, solid colors, a nice lot. Come or write your wants and about the amount you wish to pay. Will describe the best I have for the price. No cows under \$100.

S. S. SMITH, CLAY CENTER, KANSAS.

Breeders' Directory

PERCHERON HORSES.

M. E. Gideon, Emmett, Kan.

ANGUS CATTLE.

Geo. McAdam, Holton, Kan.

SHORTHORNS.

E. E. Heacock & Sons, Hartford, Kan.

C. H. White, Burlington, Kan.

HOLSTEINS.

C. E. Bean, Garnett, Kansas.

DORSET-HORN SHEEP.

H. C. LaTourette, Route 2, Oberlin, Kan.

JERSEY CATTLE.

J. B. Porter & Son, Mayetta, Kan.

If on the market for pure-bred stock, read KANSAS FARMER live stock advertisements. You will find what you want.

Bonding by Petition.

In some counties in Kansas the building of roads is being taken up in a systematic manner.

At the present time Labette County is planning a system of 120 miles of improved county roads, and it is proposed that the county vote to increase the levy for county roads from 1 mill to 3 mills per year. The work is to be done under the Hodges law, and the cost of the improvement is to be assessed 25 per cent against the benefit district, 25 per cent against the township, and 50 per cent against the county.

Special assessments against benefit districts satisfactorily solves the problem of equalizing the cost of highway improvements as between the taxpayers along the road, but in order to equalize the cost as between the taxpayers of each succeeding year, bond issues are necessary.

Fort Scott and Fort Scott Township and the cities of Kansas were able to pave their roads and streets because the legislature by special act had provided an equitable distribution of the expense of these improvements and a business-like method of financing the work. The cities were granted authority to issue special improvement bonds and the property owners were given ten years' time in which to pay their assessments if they so desired.

The people have not opposed this method of financing street paving, for they have not thought of it at all as a bond proposition. The improvements have been initiated by petition of a majority of the resident property owners whose property abuts the street to be paved, and the option is given of paying all the assessments when the work is complete or in ten annual installments, bearing 4 1/2 to 5 per cent interest.

Under this act the city of Manhattan has issued bonds amounting to more than \$600,000 for street paving during the last five years, and has paved practically all of the principal streets of the city. Concordia in the past four years has issued about \$400,000 in bonds for street paving, and similar amounts have been invested in street improvements in the cities all over the state.

The people who are getting the benefits and who are paying for these fine paved streets feel that it is one of the best investments they ever made and that the expense is not a burden. However, if a \$600,000 bond proposition had been voted on directly for street paving in any of the cities it would almost certainly have been overwhelmingly defeated, but by doing each year such an amount as could be properly handled, and providing a definite and equitable method of paying for the work at a low rate of interest, the cities have paved their streets with little if any more effort than was necessary to put in the concrete sidewalks.

But you say you are opposed to bonds and that posterity will have its own problems to solve. Will not the improvement of the public highways, however, be one of these problems for the future generations and are we going to continue to wallow through the mud in order that they may have more miles of road to improve? If not, when and where are we going to begin and how is the money to be provided?—W. S. GEARHART.

It is impossible to buy a farm and run it on short time loans, yet it would be foolish to adopt any system that would injure legitimate business or weaken our present banking system whose ability to mobilize credit is one of the strong features of our American business system. Our present banking system is probably very well adapted to the needs of those whom it was organized to serve and if it is inadequate to meet the farmers' needs something additional should be secured, instead of trying to injure a good system that we have by making it do things it was never intended to do.

FARM AND HERD.

J. H. Becker, of Newton, Kan., is one of the progressive Poland China breeders and his herd is one of the good ones in this state. He has a very fine herd of sows of Mastodon and Perfection breeding and at this time has a very fine lot of young stock including summer boards by the good sires Hadley's Wonder, a grandson of A Wonder and Orphan Boy by Orphan Chief.

C. L. Brown, of Beloit, Kan., one of the good boosters in this state for improved live stock and who with P. H. Brown owns one of the goods herds of Holstein cattle, writes that they have recently purchased a very fine bull to head their herd. His dam has a semi-official yearly record of 630.55 lbs. butter and 13,681 lbs. milk at two years and two months of age, a seven day record of 25.69 lbs. butter as a three year old. She has nine junior two year old half sisters whose semi-official yearly records average 546.6 lbs. butter and 12,626 lbs. milk. His granddam on the sire side has a seven day record of 29.59 lbs. butter and 548.7 lbs. milk; 30 day record, butter 122.36 lbs., milk 2,598.7 lbs.; year record, butter 964.88 lbs., milk 23,109.6 lbs. These records were made as a four year old. The granddam on dam's side; seven day record, butter 24.98 lbs.,

HOLSTEIN CATTLE.

TWO REGISTERED HOLSTEIN BULLS READY FOR SERVICE.
DAMS HAVE A. R. O. RECORDS OF 21 POUNDS AND 23.91 POUNDS BUTTER IN SEVEN DAYS.
No. 1—Sir DeKol Lillith Pauline 169477, born December 10, 1914. Sire, Tehee Lillith Pauline DeKol, who is also the sire of Lillith Pauline DeKol with A. R. O. record of 29.59 pounds milk and 920 pounds fat in 365 days and 23.82 pounds butter in seven days. Dam, Clothilde Peep Pride, with 21 pounds butter record in seven days. This cow is in our herd and promises to increase her record. This bull has a full sister in our herd that has just made 25.87 pounds butter from 567.7 pounds milk as a junior 3-year-old. He is well marked, being about two-thirds black, and a good individual.
No. 2—Fobes Canary Homestead 169479, born February 5, 1915. Sire, Canary Fobes Beale Homestead, whose dam has A. R. O. record of 31.14 pounds butter in seven days. Dam, Johanna Clothildes 3d Canary, butter in seven days 23.91 pounds; A. R. O. dams and sire's dam average 27.57 pounds butter in seven days. This cow is also in our herd. He is two-thirds white and a good individual.
We also offer two bull calves with splendid breeding, having A. R. O. dams. Write for pedigrees and prices. Satisfaction guaranteed.
WM. A. HOOVER, GOSHEN, INDIANA.

100—REGISTERED HOLSTEIN FRIESIAN FEMALES—100
Howell, Livingston Co., Mich. Sixth Annual Sale, April 26, 1916
Tuberculin tested. Best families of the breed. Send for catalog.

MARK B. CURDY, SECRETARY - HOWELL, MICHIGAN

Regier's Holsteins

Holstein-Friesian A. R. O. bulls ready for service. World's record blood flows in their veins.
G. REGIER & SONS, WHITEWATER, KAN.

IN MISSOURI

Eight bulls, 2 to 8 months, \$100 to \$175 each. Always have a few good cows and bred heifers for sale. Nothing but registered Holsteins.

S. W. COOKE & SON - MAYSVILLE, MO.

BUTTER BRED HOLSTEINS

Registered bull calves. Prices reasonable. Write today. These bargains will not last long.

J. P. MAST - SCRANTON, KANSAS

REGISTERED HOLSTEINS

We want to cut down our herd. Will sell ten or twelve choice cows, most of them young, also a few heifers.

M. E. MOORE & CO. - CAMERON, MO.

CORYDALE FARM HERD

Jewel Paul Butter Boy No. 94245
One of the best bred bulls in the state. We offer three bulls ready for service out of good producing dams.

L. F. CORY & SON, Belleville, Kansas.

milk 456.7 lbs., as a three year old. Ten of the fifteen dams in the pedigree have A. R. O. records of 25.7 lbs. butter in seven days.

The Jack and Jennet sale held by Bradley Bros., of Warrensburg, Mo., March 15th, was well attended. Eighteen jacks sold for an average of \$577. The twelve jennets sold averaged \$109. The top of the sale was a three year old jack that went to Charles L. Foot of Osceola, Mo., at \$2,200. Twenty-four head of the fifty-four cataloged were withdrawn.

The classification for the National Swine Show, to be held at Omaha, Neb., the week of October 2 to 7, has been prepared. The classifications and prizes will be the same for all breeds participating, the amount of money hung up for each breed being approximately \$2,000. In the race of pigs provided for in the individual classes and herds and seven in the get of boar and produce of sow. In the classes for aged boars, senior yearling and junior yearling boars, aged sows and senior and junior yearling sows the money is \$25, 20, \$15, \$12, \$10, \$10, \$10 and \$8. In the classes for senior and junior boar pigs and senior and junior sow pigs the money is \$20, \$15, \$12, \$10, \$10, \$10, \$8 and \$7. In the classes for get of boar and produce of sow the money is \$35, \$25, \$20, \$15, \$12, \$10 and \$7. In the class for herd, any age, bred by exhibitor the money is \$35, \$30, \$25, \$20, \$10, \$10 and \$7. In the classes for aged herd and herd under one year old the money is \$30, \$25, \$20, \$15, \$12, \$10, \$10 and \$8. The four championship prizes are \$35 each and the two grand championships will draw \$50 each.

W. B. Wallace, the well known Poland China breeder of Buncheon, Mo., purchased the great boar, King Joe 70282, in the recent dispersion sale held by Ed W. Cook and J. B. Gurthett, of Pattonburg, Mo., for \$1,250. This is the record high price for a big type Poland China boar at public auction.

R. J. Linscott, of Holton, Kan., owner of Rosedale Stock Farm, and the only Register of Merit Jersey herd in Kansas, writes that the herd is doing fine. This is one of the great Jersey herds now in existence, and the young stock in the herd at this time is a choice lot of richly bred individuals. Among the lot is the great young bull, Diploma's Eminent. His sire is Diploma's Dictator, whose first, second and third dam have official Register of Merit tests, the fifth and sixth dams have weekly tests of 16 pounds 3 ounces and 16 pounds 9 ounces each. His full sister is a Register of Merit cow, his sire and dam both chuck full of great butter tests—is close up to many of the greatest butter test cows America has ever seen. The dam of Dictator's Eminent is Eminent's Little Golden Fern 281433, a splendid daughter of Eminent's Coronet 79462; his sire was Eminent 2nd P. 2532, H. C., who sold at auction for \$10,000; he has 86 tested cows and 22 sons that have sired Register of Merit cows. The dam of Eminent's Coronet was one of the best Flying Fox daughters—Flying Fox has 36 tested daughters and 44 of his sons have daughters in the Register of Merit—a record never equaled by any other sire—balance of his blood is 25 per cent Remembrance 2nd P. 8270, H. C., a granddaughter of Golden Lad, and 25 per cent Golden Beatrice 2nd, test 22 pounds butter seven days.

Ben Schneider, of Nortonville, Kan., owner of one of the good herds of registered Holsteins, writes that his herd is doing well. He has one of the heavy producing herds in this state. The young stock in the herd are a very fine lot including a number of choice young bulls from A. R. O. dams.

At a recent meeting of the board of directors of the Percheron Society of America, the registration fee on imported horses was increased to \$100 per head, taking effect July 1, 1916. The object sought is to discourage the importation of inferior horses, and it is believed this high fee will have the desired effect. Provision is further made to refund \$5 of the \$100 paid to importers, on horses that are good enough to win at fairs recognized by the Percheron Society of America. It is believed this action will effectively bar inferior horses, without interfering with the importation of really valuable animals. Members of the Percheron society have already been advised of this action, and breeders generally appear to be heartily in accord with the new

HOLSTEIN CATTLE.

Choice Holstein Bulls

Grandsons of the King of the Pontiacs, also of Pontiac Korndyke, from A. R. O. dams. Write for prices and pedigrees. Senior sire, son of the King of the Pontiacs. Junior sire, son of Pontiac Korndyke.

LOVER'S LANE DAIRY

ST. JOSEPH - MISSOURI

HOME FARM OFFERS

Two fine sons of Sir Sadle Cornucopia, who has 35 A. R. O. daughters, four of them averaging over 30 pounds. No. 1, born December 5, 1915, dam has 7-day record of 22 pounds and yearly of 641 pounds. No. 2, born January 5, 1915, six nearest dams average over 27 pounds in 7 days.

A card will bring you descriptions and pedigrees.

W. B. BARNEY & SONS, CHAPIN, IOWA

Albechar Holstein Farm

Offers young bulls, bred cows and heifers for sale. Write for breeding description and prices. Our herd absolutely free from tuberculosis. Satisfaction guaranteed.

ROBINSON & SHULTZ, Independence, Kan.

23—HOLSTEIN-FRIESIAN BULLS—23

Best of sires. A. R. O. dams, fourteen over 20 pounds. Seven of the others from heifers with records of 14.89 to 19.2 pounds. The kind you want. We have only two cows in the herd with mature records less than 20 pounds.

Breeders for Thirty Years.

McKAY BROS., Waterloo, Iowa

Golden Belt Holstein Herd

Canary Butter Boy King No. 70508 In Service.

Herd has won more prizes from Holstein-Friesian Association for yearly production than any herd in Kansas. Young bulls for sale from heavy producing cows.

W. E. BENTLEY, MANHATTAN, KANSAS

CEDARLANE HERD HOLSTEIN-FRIESIANS

T. M. Ewing, Prop., Independence, Kan.

Herd headed by a grandson of Pontiac Korndyke. The average record of his dam and sire's dam, 7 days, 29.4 pounds butter; 30 days, 117.3 pounds.

Several bull calves for sale sired by the above bull and from cows that produce as much as 80 pounds milk per day.

Better buy now while you can get choice.

CHOICE HOLSTEIN BULLS

Five registered bulls, out of A. R. O. cows. From 1 month to 2 years. Best breeding. Choice individuals. Price reasonable.

BEN SCHNEIDER, NORTONVILLE, KAN.

HOLSTEIN HEIFER

For Sale—Registered Holstein heifer calf. Well bred, almost white, a splendid individual.

A. S. NEALE - MANHATTAN, KAN.

QUALITY, BREEDING, RECORDS

All combined in the registered Holsteins we offer for sale. Bulls, cows, heifers. Send for bull catalog. 300 in herd. Also 200 Shetland ponies.

WOODLAWN FARM - STERLING, ILL.

BRAEBURN HOLSTEINS

Do you want a yearling bull, first cousin to the sire of Duchess Skylark Ormsby, year's butter 1,506 pounds, at \$125?

H. B. Cowles, 608 Kansas Ave., Topeka, Kan.

TRUE—We have registered Holsteins rich in the blood of the great sires, but the big end of our profit comes from the milk and fat they produce.

TREDICO FARM

Route 44 - KINGMAN, KANSAS

HOLSTEIN CALVES, both sexes, fifteen-sixteens pure, \$20 each, crated. Also carload heifers 1 and 2 years old. Write us for Holsteins. Edgewood Farm, Whitewater, Wis.

REGISTERED HOLSTEIN BULL CALVES My herd bull grandson Old King Segis, fine animal. E. VIOLETT, Altoona, Kansas.

HOLSTEIN BULLS, "REGISTERED" Two ready for service. Smith & Hughes, Breeders, Route 2, Topeka, Kansas.

GUERNSEY CATTLE

A GUERNSEY BULL is a sure way to increase your profits. Grade up your herd by using a pure bred Guernsey Bull and you will be surprised at Results. Send for free literature.

Guernsey Cattle Club,
Box E, Peterboro, N.H.

MONEY TO LOAN ON CATTLE

We make a specialty of buying stockers and feeders on the market. Write for information. This paper or any market paper sent free to customers.

Lee Live Stock Commission Co.
Kansas City and All Markets.

HORSES AND MULES.**JACKS AND JENNETS**

10 Large Mammoth Black Jacks, ages from 2 to 6 years; large, heavy boned. Special prices. A few good jennets for sale. Come and see me.

PHIL WALKER

Moline, Elk County, Kansas

SHORTHORN CATTLE.**Tenneholm Shorthorns**

For Sale—A number of good bulls 8 to 18 months old. Some Scotch, others Scotch-topped. Some herd headers among them. Two outstanding ones. Can spare a few females. Farm one mile from town.

E. S. MYERS - CHANUTE, KANSAS

SHORTHORN BULLS.

Twelve head bulls, breeding age, all sired by a pure Scotch bull. Reds, whites and roans. Herd headed by Scottish Monarch by New Goods by Choice Goods, out of Morning Glory, a granddaughter of imported Lady Star. Will sell a few females.

KELLY BROS. - GARDNER, KANSAS

HILL'S SHORTHORNS

Two Shorthorn bulls. One red, 11 months old, sired by Bettie's Albion 399451. One white, eight months old. Extra fine and priced low.

C. E. HILL - TORONTO, KANSAS

Sycamore Springs Shorthorns

Master of Dale by the great Avondale heads herd. A few young Scotch bulls and bred heifers for sale.

H. M. HILL - LAFONTAINE, KANSAS

RIVERSIDE SHORTHORNS

For Sale—Fifteen pure Scotch and Scotch-topped cows and heifers. Five pure Scotch and Scotch topped young bulls. Prices reasonable. Come and see them.

H. H. HOLMES - GREAT BEND, KANSAS

SHORTHORN COWS AND HEIFERS

Thirty head of good registered Shorthorn cows and heifers. Cows with calves at foot, others to calve soon, open heifers by Braithair 351808. Priced to sell.

E. E. HEACOCK & SON, HARTFORD, KAN.

Doyle Park Shorthorns

Scotch and Scotch-topped, 50 per cent roans. Bulls 8 to 20 months old, sired by old Double Champion and by Alfalfa News.

ROMAN & SONS - PEABODY, KAN.

GALLOWAY CATTLE.**GALLOWAY BULLS**

Forty yearling and two-year-old bulls, strong and rugged; farmer bulls, have been range-brown. Will price a few cows and heifers.

E. E. FRIZELL, Frizell, Pawnee Co., Kan.

ANGUS CATTLE**ABERDEEN ANGUS**

We Offer For Sale Bulls and Heifers, Any Number, Single or Carload Lots. These cattle have size and quality and are bred in the purple. See them at Lawrence—four miles from Kansas City, on Santa Fe and Union Pacific railways.

SUTTON & PORTEOUS

Phone 8454. Route 6, Lawrence, Kan.

POLAND CHINAS.**POLAND CHINA Boars and Bred Gilts**

Five July boars sired by Sir Dudley, the junior champion at the Kansas State Fair, Hutchinson, 1915. Five good gilts by same sire and bred to a son of Smooth Columbus (out of head of Belcher & Bennett herd). Price for boars, \$20; gilts, \$25. First check gets choice.

C. B. PALMER, Route 5, MARION, KANSAS

POLAND CHINA BOARS

And open gilts of fall farrow sired by Big Orphan and out of sows by Expansion Too and Mammoth Orange. These are the making of a lot of useful boars and sows. Price, \$15 to \$18. Farm near Sibleyville.

F. S. COWLES, Route 2, Lawrence, Kansas

BECKER'S POLAND CHINAS

Seven choice summer boars, ready for service, sired by Hadley's Wonder and Orphan Boy. Priced to sell.

H. BECKER, Route 7, NEWTON, KAN.

FITZSIMMONS' BIG BONED POLANDS.

Choice September and October boars and gilts by King of Kansas Jr. and Big Ben. Priced right.

O. H. FITZSIMMONS, WILSEY, KAN.

LANGFORD'S SPOTTED POLANDS.

Choice fall boars. Also boars for service. Must sell.

T. T. Langford & Sons, Jamesport, Mo.

OLD ORIGINAL SPOTTED POLANDS.

Booking orders for spring pigs.

A. S. ALEXANDER, R. 2, Burlington, Kansas

GOOD STRETCHY POLAND CHINA FALL BOARS

Priced to sell.

ED BEAVERS, Junction City, Kansas.

HORSES AND MULES.**Dr. McChord****CLIMAX STOCK FARM**

Home of the Famous Dr. McChord.

Fifty Head in Herd. If you want an extra good jack, you can buy him here. I raise the good kind and guarantee them as represented when sold.

W. D. GOTT - BRONSON, KANSAS

Belgians and Percherons

A few extra good Belgian and Percheron Stallions and Mares from two to six years old. All priced reasonably. Come and see them.

W. H. BAYLESS & SONS

Blue Mound, Kan.

DUNHAMS' PERCHERONS

For Fifty Years the Best.

Send for fine photographic catalog.

DUNHAMS

Wayne, Dupage Co., Ill.

REGISTERED JACKS and PERCHERONS

A few tried imported black Percheron ton stallions; Brilliant blood, good enough for herd headers. Twelve big black registered jacks, two to five years old, 14½ to 16 hands high, well broke and quick performers. Good herd of registered jennets headed by large Spanish jack.

J. P. & M. H. MALONE, CHASE, KANSAS

Rice County.

FAIRVIEW STOCK FARM

Home of World's Grand Champion Jack, Kansas Chief 9194

More registered jacks and jennets than any farm in the West. Jacks to 1,240 pounds. Prices and terms reasonable. Written guarantee with every jack. Car fare refunded if stock is not as represented. Young jennets bred to Kansas Chief. Reference, any bank in Dighton.

H. T. HINEMAN & SONS

Dighton - Kansas

PRAIRIE VIEW STOCK FARM

Has 40 big, black Mammoth jacks and jennets. Every jack my own raising; two to six years old, 15 to 16 hands high, extra heavy bone, big bodies. I can sell you a better jack for \$500 to \$600 than most speculators can for a thousand. Come and see for yourself. They must sell.

E. BOEN, LAWSON, MO.

35 MI. N. E. of K. C. on C. & St. P. 40 MI. S. W. of St. Joe, on Santa Fe

Jacks for Sale

I have three good young jacks for sale and worth the money. Also a few very fine jennets.

JOHN A. EDWARDS

Englewood - Kansas

For Sale or Trade—Mammoth Jack

Registered, 7 years old, 15 hands, 1,150 pounds, plenty of bone and quality, prompt server on mares; colts to show. Will sell or trade for high grade mares, nothing under 1,600 pounds wanted. Also three good jennets, will trade on same proposition. Address

J. W. MEARS, Route 3, RANDALL, KANS.

F. S. Cowles, of Lawrence, Kan., reports his herd of pure-bred big type Poland China hogs doing well. He also reports a good demand for strictly high class boars and gilts. He raised a large number of fall pigs last year and the bunch of fall boars and gilts in the herd at this time are a choice lot. They are sired by such boars as Big Orphan and out of dams by Expansion Too and Mammoth Orange.

HORSES AND MULES.**The Champion Breeder—Missouri Chief 8365**

Sire of the World's Grand Champion Jack, Kansas City 8743
In public service at our ranch south of Ellinwood. Excellent facilities for handling any number of healthy jennets.

Write Us for List of Winnings of His Get.

Most liberal terms and other information about this sire possessing excellent size, quality, bone, finish, and unexcelled style and action. Winner first as sire at Kansas State Fair, Hutchinson, 1915.

M. E. RICHARDSON - STERLING, KANSAS

ROBISON'S PERCHERONS

Forty young stallions from two to six years old. A few young mares for sale.

J. C. ROBISON, Towanda, Kans.

**LAMER'S PERCHERONS**

Have just received a new shipment. Also have a barn full of my own raising. A choice lot to select from.

WRITE, WIRE OR PHONE.

C. W. LAMER, SALINA, KANSAS

OFFICE, LAMER HOTEL.

**HORSES AND JACKS**

FOR SALE—Six coming two-year-old fillies, big growthy fillies, dark steel greys; one black mare, three years old in April; stud colt, two years old; all extra good; all out of imported sire and dams; Percheron Society of America. Twenty-two head two-year-old jacks; all raised on the farm; all priced to sell, cash or time. You can see the sire and dams of all this stuff. These are the blacks with meaty noses, the color that all breeders raise. I am now breeding white-faced jacks that will produce white-faced mules, and in a few years the breeding of white-faced jacks, alone, will be continued on this farm. Since running my advertisement every man who came to the farm found what he wanted and bought.

OAKLAND STOCK FARM, Box 207, CHILLICOTHE, MO.

**PERCHERON and BELGIAN STALLIONS**

Twenty head, imported and home-bred. I give a gilt-edge two-year guarantee with every horse sold. Come and see them. Priced to sell quick. Barn four blocks from Santa Fe depot.

W. H. RICHARDS, Emporia, Kans.

**DEIERLING STOCK FARMS**

Have fifteen large, heavy boned, black, registered jacks, 15 to 16 hands high, good heads and ears, good style, good breeders. I have a number of jacks sired by the champion, Pride of Missouri, also several other good herd prospects. In my 1914 sale, sold the champion of Kansas State Fair, 1915, Eastern Lightning, also Demonstrator, first prize aged jack Missouri State Fair. Reference, Peoples Bank. Written guarantee with each animal. Have a number of Percheron stallions for sale, also saddle stallions. Barn in town.

Wabash Railroad. WM. DEIERLING, QUEEN CITY, MISSOURI.

**Percherons, Belgians and French Draft Stallions**

We want to sell at once three registered Percheron stallions, one French Draft, one Clydesdale, three young Belgian stallions, and forty of both registered and high grade Shetland Ponies. Also a few Percheron and French Draft mares. Come and see our stock. We mean business.

MRS. L. SHORT & SON, Hamilton, Kansas



FOR SALE—PERCHERON, STANDARD BREDS, AND A FEW HOLSTEINS.

BLACK PERCHERON STALLION—Seventeen hands high, weight 1,950 pounds, 5 years old, big bone, works single and double, name Fusain 24, No. 79947, P. S. A.
STANDARD BREDS—Miss Maggie Miller, 16 hands, weight 1,125 pounds, 4 years old, brown color, shows lots of speed, now on the track; sired by Pactolus Ellwood 2:27, he by Pactolus 2:12, No. 9102; dam Bessie Miller by Tom Miller 2:10. Fred Miller, 3 years old, black, 15.3, weight 1,100 pounds, broke single and double, was tracked a little last fall, shows speed; is a full brother to the above filly. Luta Miller, black filly coming 3, fair size, sired by same sire, dam Estan Selotta by Blackie 2:17, he by Symboler 2:09; second dam Bessie Miller. Ted Miller, black colt, coming 2 years old, good size, a full brother to Luta Miller.
FIVE HOLSTEIN HEIFERS—One 3 years old, giving milk, ¾ bred; two head 2 years old, highly bred and in calf; two yearling heifers, highly bred. Two bull calves 11 months old, one very highly bred, other ¾ bred.
O. L. THISLER - RIVERSIDE STOCK FARM - CHAPMAN, KANSAS

THE SAUNDERS JACK COMPANY

U. G. Saunders, of Lexington, Ky., and Bruce Saunders, of Holton, Kan., have shipped a carload of registered Mammoth Jacks from Lexington, Ky., to Holton, Kan. Two to six years old, 15 to 16 hands high. Come to Holton and see as good a load of jacks as ever left Kentucky. Write your wants to **BRUCE SAUNDERS, HOLTON, KANSAS. PHONE 589**

MAMMOTH JACKS AND PERCHERONS

Forty big, black, mammoth jacks, 15 to 16 hands standard. Young, black, Percheron stallions and mares, extra quality. Also jennets in foal. Mares in foal to 2,400-pound horse. Reference, banks of Lawrence.

AL E. SMITH, R. R. 1, LAWRENCE, KANSAS. Forty Miles West of Kansas City.

EWING BROTHERS

Stallions from 2 to 5 years old, good ones, the kind that make ton horses. Mares in foal and few yearling fillies. Young bulls, 6 months to 3 years old, some top notchers. A few good cows and heifers for sale. A few Shetland ponies for the children. All priced to sell at let live prices. Come and see us before you buy.

EWING BROTHERS - PAWNEE ROCK, KANSAS

PERCHERON STALLIONS FOR SALE

A pair of coming fours and a coming three-year-old, two blacks and the other a bay, sired by the herd stallion Siroco (51358), which we sold to go to Northern Nebraska. They have the size, bone and quality, and are priced to sell.

A. M. DULL & SONS - WASHINGTON, KANSAS



Type, Stamina, Prepotency in our

TRUE MORGANS

Send for our private sale catalog of stallions and females for sale.

BECK STOCK FARM

Maplewood - Missouri

**TWO LARGE MAMMOTH JACKS**

15½ hands, weight 1,100 pounds. Prices reasonable. Come and see them.

W. O. JENKINS

Centralia - Kansas

**CHOICE PERCHERON STALLIONS**

One coming 3 years old, black, imported sire and dam, weighs over 1,800; good individual, making of a ton horse. Also 6-year-old imported stallion, ton horse. Both guaranteed breeders.

M. E. GIDEON - EMMETT, KANSAS



Reg. Percheron Stallions—Twenty-nine black ton and 2,200-pound 4 and 5-year-olds, 44 black coming 3's, 41 black coming 2's, 29 registered mares for sale. 19 Belgian stallions. Just above Kansas City.

FRED CHANDLER PERCHERON FARM

Route 7, Charlton, Iowa

ONE HUNDRED

Registered Percheron, French Draft, Belgian and Shire stallions and mares for sale cheap.

A. LATIMER WILSON, CRESTON, IOWA.

THIRTY HEAD MAMMOTH JACKS

And Jennets for sale. The big kind. Priced to sell.

J. D. HOLMAN - CURRYVILLE, MO.

Imported and Home-Bred Registered Percheron, French Draft and Belgian Stallions for sale cheap. Hart Bros., Osceola, Iowa.



United States Tread 'Usco' Tires

Why 'Usco'—

Make something wonderfully good and you say, "This is mine,"—you call it by your name. That is exactly our case.

We have made a tire so fine, so sturdy, so *responsible* that we want it known as ours. So we named it 'Usco' (U. S. Co.).

Because we have put our name on this tire—because its success was a matter of business pride, of business honour—we pledged ourselves to see that it "made good"—and it *has*.

Think of it—a really wonderful new anti-skid tire priced at only a little more than plain treads.

New Prices of 'Usco' Tread Tires

30 inch x 3 inch, -	\$10.40	34 inch x 4 inch, -	\$22.40
30 inch x 3 ½ inch, -	13.40	36 inch x 4 ½ inch, -	31.55
32 inch x 3 ½ inch, -	15.40	37 inch x 5 inch, -	37.30

United States Tire Company

'Usco' 'Chain' 'Nobby' 'Royal Cord' 'Plain' Tread

