

KANSAS FARMER

For the improvement of the Farm and Home

Volume 55, Number 4 // TOPEKA, KANSAS, MARCH 17, 1917. Established 1863. \$1 a Year

CHILDREN BEAUTIFY HOMES

Their Flower Gardens Added Beauty to Town and Brought Cheer to Many

By BAGDASAR K. BAGHDIGIAN

THE "good Samaritans" of Summerfield, about whom we read last year, have their rivals in the boys' and girls' garden contestants of Linn and Palmer, Kansas. The "Chief Samaritan" this year is little Esther Boyer, eight years old, who lives at Linn. She carried a total of 105 bouquets to the church, the sick and the shut-ins. A considerable number of these were carried to ninety-year-old Grandma McAtee, whose father was with Washington at Valley Forge.

Under the motto, "Brighten the corner where you are," the contestants were inspired by their leader, the Rev. A. H. Christensen, to put to test their determination to win against drought, depleted soil, and late beginning.

The members of these garden and flower clubs won.

The home grounds of the contestants were beautiful, the pulpits and the stands in the churches were well supplied with flowers throughout the summer months and early fall, and cheer brought to the hearts of the shut-ins of the neighborhood.

Separate contests were conducted at Linn and Palmer. The towns are about the same size and have a population of 300 each. The contests were divided into two sections according to age. The purpose of the division was to insure equal chances in the competition.

The merchants of both towns responded cordially to the proposition and subscribed willingly to the premium list. Eleven contestants entered at Linn and twelve at Palmer. The prizes were offered on home gardens. Decorating the church and carrying flowers to the shut-ins were extras and the children performed these tasks for the joy of rendering service.

The yards of the homes at Palmer were not well adapted to flower gardens. This was due to the way the town was laid out, and yet some good gardens were maintained there.

Among the contestants of Palmer, Ellen Chase, eleven years old, has a unique experience. Her parents keep the hotel in the town. There was a red clay bank in front of the hotel and a rough grass plot on the north side. These were the only possible places for gardens. The little girl was determined to enter the contest and the one way open to her was to import the loam and build the garden. This she did. She carried black loam from a drainage ditch which had been dug through one of the streets of the town and built her garden from the bottom up—not like the hanging gardens of Babylon in their make-up, but like them in attractiveness. She did all the work entirely on her own initiative and planning.

"The little plot," writes the Rev. Mr. Christensen, "in front of the hotel was especially pretty. Here she planted climbing beans, summer cypress, nasturtiums and petunias, and kept them green through constant watering during the hot, dry days of the summer."

Herman Pfeiffer, the son of a German farmer, who lives west of Linn, showed unusual pluck in his work. He started his garden late and the dry hot weather

injured it before it was well established. By diligent cultivation and abundant watering his flowers not only survived, but made a fine display during the heated spell. Finally his display of flowers at the exhibition won for him the first place.

Constant watering kept the flowers in bloom and fresh during the hot days of July and August. All summer there was not a Sunday when there was less than ten beautiful bouquets at the Linn church.

"One of the greatest advantages in beautifying the home premises is the pleasure of having a beautiful home and keeping the sick and other people well supplied with flowers," wrote little Margaret Pauley in her essay, "The Advantages of Beautifying the Home Premises," for which she won second place in the essay competition.

"When one goes out 'mid flowers at sunset—as then they seem to pour forth the most beauty and perfume—it certainly makes one feel that life is worth living," continues her essay. "A beautiful surrounding brings more respect to one for his home and the town in which he lives. People passing through towns or by country homes that are kept neat and pretty with flowers, notice and admire them. How different are such places from those that are littered and strewn with trash!"

"The more flowers there are, the less chance for rubbish to pile. It is much more pleasant to look upon a yard of flowers than upon a yard of filth. If a home is kept bright with flowers it

is more apt to keep children from the attraction of the town, while a filthy place with its equally filthy surroundings may create the desire in the young people for the city life.

"A small flower for each child will help keep his surroundings clean. Then, for the sake of the child, let every one have a beautiful home."

"A beautiful home—clean inside and outside—means a pleasant place in which to live," wrote Miss Eva Boyer, of Linn, in her essay on "The Advantages of Beautifying the Home Premises," which won for her the first prize in the essay contest.

"Many country homes do not have beautiful lawns. A large share of the small city residences allow weeds to grow around the houses. Where the home is always kept clean its young people are not anxious to go away to stay."

"People seek pleasant and beautiful places for rest. In the cities where they cannot have nice lawns and flowers around the houses, the people go to the parks for enjoyment, and any country home could be made a park!"

"The buildings of many country homes are without paint. The pigs and chickens run around the house and the premises look untidy. Well kept places, rather than the run down ones, attract people who seek to buy homes. Many of the poets spend their time with birds and flowers out in the country where the best homes could be had. Those in large cities who have what they call beautiful homes, still seek the country for pleasure and recreation."

"This little undertaking," commented

the Rev. Mr. Christensen, the leader, "draws the minds of the people away from things which distract and enervate, and direct them to the simple joys of viewing God's living gems which bloom for the poor as well as for the rich. I should like to have the homes of the American people their castle—not in a legal sense, but in a vital sense, with the beauty of flowers and vines and trees around their houses."

These Young People Are Busy

The membership of the Epworth League of Barrett, Kansas, stands for a combination of "punch," plenty of good sense, fine taste, and inexhaustible enthusiasm.

It can safely be said that this young people's organization was the first one in the state to shoulder the responsibilities of a lecture course in order that the neighborhood might spend more profitable evenings during the long winter months, and that the community might be better because of the undertaking.

When the department of rural social life, of KANSAS FARMER, offered its course of four lectures, this league was among the first organizations taking advantage of it. The young people of Barrett eagerly enrolled in the dramatized play festival which was presented with spectacular costumes and the whole neighborhood, with few exceptions, gave hearty support.

The literary department of the league has undertaken something new every year, choosing things of wide interest to the community. One year a course of study was given on the subject of the rural church in its relation to the neighborhood. Another time the economic problems of Barrett were tackled, and this year the lecture course was a new variety. KANSAS FARMER's course was early investigated and members of the league at once surveyed the neighborhood and closed the contract for the lectures.

The league keeps busy its different departments under the competent president, Miss Margaret F. Jones. Aside from its lecture course the organization maintains a state traveling library of fifty books, renewing these every six months.

The social service work of the league is twofold. It looks after church benevolences and local needs. It sends help to the institutions maintained by the Methodists, organizes classes in the study of social questions, and helps supply the local needy with clothes, food, and other necessities.

In addition to its present spiritual and missionary activities, the league is planning to take up sanitary work the coming spring. The flies of the neighborhood will suffer the consequences. Flower seeds will also be distributed to the school children and assistance given them in the care of the flower patches.

Barrett is the oldest town in Marshall County. What is being done there shows that its young people are full of new ideas and through the application of these they are trying to make their community a better place in which to live.



WINNERS IN THE PALMER BOYS' AND GIRLS' GARDEN CONTEST AND THEIR LEADER, REV. A. H. CHRISTENSEN



Escape of Power

How the right oil saves gasoline



THE only thing that sends power through the engine is the gas explosion.

If the combustion chamber is sealed tight the explosion acts with full force on the piston head.

But unless the combustion chamber is kept tightly sealed, part of each explosion escapes. The result is weakened power, and wasted gasoline.

Right here sealing the piston rings comes in as an important factor. Only one thing can prevent escape of power past the piston rings. That is a proper piston ring seal.

Your lubricating oil must provide this seal. But piston clearances vary in different types of motors—from .002 of an inch to .010 of an inch. Different motors therefore demand oils of different body.

Today thousands of cars are wasting power and gasoline with every piston stroke—simply because their lubricating oil does not properly seal the piston rings. Compression is lost. Part

of each explosion escapes past the piston rings.

This power-loss means waste of gasoline on level roads. It means also lessened power on the hills.

In the chart below you will find the correct grade of Gargoyl Mobiloils for your car. Among the many important factors entering into the determination of the correct grade, the piston clearance in your motor was given careful consideration. The oil specified will give your engine a proper piston ring seal.

If your car is not listed, a copy of our complete Lubricating Chart will be sent you on request.

Remember—a proper piston ring seal means more power on the hills—more mileage from your gasoline.

An Economical Demonstration
It will probably cost you less than a dollar to fill your crank case with the correct grade of Gargoyl Mobiloils. The results will speak for themselves.

In buying Gargoyl Mobiloils from your dealer, it is safest to purchase in original packages. Look for the red Gargoyl on the container.

For information, kindly address any inquiry to our nearest office.



Mobiloils

A grade for each type of motor

CORRECT AUTOMOBILE LUBRICATION

Explanation:—The four grades of Gargoyl Mobiloils, for gasoline motor lubrication, purified to remove free carbon, are:

Gargoyl Mobiloil "A"
Gargoyl Mobiloil "B"

Gargoyl Mobiloil "E"
Gargoyl Mobiloil "Arctic"

In the Chart below, the letter opposite the car indicates the grade of Gargoyl Mobiloil that should be used. For example, "A" means Gargoyl Mobiloil "A," "Arc" means Gargoyl Mobiloil "Arctic," etc. The recommendations cover all models of both pleasure and commercial vehicles unless otherwise noted.

Model of	1917	1916	1915	1914	1913
CARS	Summer	Winter	Summer	Winter	Summer
Abbott-Detroit (8 cy)	A	A	A	A	A
Allen (Mod. 33-34-35)	A	A	A	A	A
Apperson (8 cy)	A	A	A	A	A
Auburn (8 cy)	A	A	A	A	A
Avery (Mod. 34 C 1 ton)	A	A	A	A	A
Birney (8 cy)	A	A	A	A	A
Buick (8 cy)	A	A	A	A	A
Cadillac (8 cy)	A	A	A	A	A
Casa (8 cy)	A	A	A	A	A
Chalmers (Mod. 640)	A	A	A	A	A
Chandler Six	A	A	A	A	A
Chevrolet (8 cy)	A	A	A	A	A
Cole (8 cy)	A	A	A	A	A
Dart (8 cy)	A	A	A	A	A
Detroit (8 cy)	A	A	A	A	A
Dodge (8 cy)	A	A	A	A	A
Dorr (8 cy)	A	A	A	A	A
Empire (8 cy)	A	A	A	A	A
Federal (8 cy)	A	A	A	A	A
Ford (8 cy)	A	A	A	A	A
Franklin (8 cy)	A	A	A	A	A
Grant (8 cy)	A	A	A	A	A
Hudson (8 cy)	A	A	A	A	A
Hupmobile (Super Six)	A	A	A	A	A
I.H.C. (air)	A	A	A	A	A
I.H.C. (water) (8 cy)	A	A	A	A	A
Interstate (8 cy)	A	A	A	A	A
Jeffery (8 cy)	A	A	A	A	A
King (8 cy)	A	A	A	A	A
Com'l	A	A	A	A	A

Model of	1917	1916	1915	1914	1913
CARS	Summer	Winter	Summer	Winter	Summer
Kiesel Kar (Mod. 48)	A	A	A	A	A
Lexington (Mod. 48)	A	A	A	A	A
Loomis (8 cy)	A	A	A	A	A
Marmon (8 cy)	A	A	A	A	A
Maxwell (8 cy)	A	A	A	A	A
Mitchell (8 cy)	A	A	A	A	A
Moline (8 cy)	A	A	A	A	A
Moore (8 cy)	A	A	A	A	A
Morgan (8 cy)	A	A	A	A	A
National (12 cy)	A	A	A	A	A
Oldsmobile (8 cy)	A	A	A	A	A
Overland (8 cy)	A	A	A	A	A
Packard (8 cy)	A	A	A	A	A
Paige (8 cy)	A	A	A	A	A
Pathfinder (12 cy)	A	A	A	A	A
Pearless (8 cy)	A	A	A	A	A
Pierce Arrow (8 cy)	A	A	A	A	A
Premier (8 cy)	A	A	A	A	A
Regal (8 cy)	A	A	A	A	A
Reo (8 cy)	A	A	A	A	A
Saxon (8 cy)	A	A	A	A	A
Stearns-Knight (8 cy)	A	A	A	A	A
Stephens (8 cy)	A	A	A	A	A
Studebaker (8 cy)	A	A	A	A	A
Suitor (8 cy)	A	A	A	A	A
Veis (8 cy)	A	A	A	A	A
Westcott (8 cy)	A	A	A	A	A
White (8 cy)	A	A	A	A	A
Willis-Knight (8 cy)	A	A	A	A	A
Winton (8 cy)	A	A	A	A	A

YOUR TRACTOR

also may be lubricated efficiently with Gargoyl Mobiloils. On request we will mail you a separate Chart specifying the correct grade for each make and model of tractor.

VACUUM OIL COMPANY, Rochester, N. Y., U.S.A.

Specialists in the manufacture of high-grade lubricants for every class of machinery. Obtainable everywhere in the world.

Domestic Branches: Detroit, Chicago, New York, Philadelphia, Pittsburgh, Minneapolis, Boston, Kansas City, Kan.

FARM POWER

Items of Interest About Automobiles, Engines, Tractors, and Motorcycles

ONE of our readers asks for information on pulling hedge fences with a tractor. W. H. Sanders, instructor in farm motors at the agricultural college, answers as follows:

"Experimental work in pulling hedge fences was carried out at the agricultural college during the spring of 1915, using gas and steam tractors.

"The steam tractors weighed about ten tons each, and the gas tractors slightly less. The drawbar rating of the steamers was twenty horsepower, while the gas machines ranged from fifteen to thirty horsepower.

"Efforts were made to pull the roots by hitching direct to the stumps with chains, and pulling without the help of pulleys. Wherever the stumps were of a reasonable size, high enough above ground to make a good hitch with the chain, there was no difficulty in pulling stumps up to five or six inches in diameter, without cutting roots, or plowing close to the stumps. We found old stumps that had small shoots only above ground, very difficult to pull even when not very large. We found that an average time required for each pull was from four to seven minutes with one man on tractor and two tending the chain and cleaning away the roots.

"The writer had the opportunity of watching a hedge and stump plow work on an old hedge, during one of the tractor demonstrations last summer. A thirty drawbar horsepower tractor weighing about twelve tons was used. The hedge was an old one, having stumps over a foot in diameter. The plow was capable of plowing twenty-four inches deep and had a cut of twenty-four inches in width.

"The method employed was to have all the tops of the hedge cut to the ground and cleared out of the way. The tractor then turned a furrow close up to the hedge with the big plow, cutting off the roots and tearing out the ends. On the return trip the plow was not put in the ground. The second furrow was turned in the direction of the first, and the plow allowed to just clear the hedge stumps, tearing them loose and throwing them, in most instances, clear of the furrow dirt.

"A third furrow was turned in same manner as the first two, all being twenty to twenty-four inches deep. This tore out practically all the main roots or exposed them enough so that they were easily removed, leaving the ground in condition to be plowed with an ordinary plow.

"About one mile a day of ten hours was torn out. The cost for 320 rods was \$30, or 95 cents a rod. This figure will probably cover the cost of removing the average old hedge fence. Where the ground is too rough or broken to allow the tractor to follow the row from end to end, the cost will be greater.

"For pulling large trees in uncultivated ground, if a hitch can be made to the stump a few feet above ground, and cable and blocks are handy, a moderate-sized tractor will pull fairly large trees.

"From experience with dynamite, the writer thinks for odd tree stumps the cheaper method of removing them is by blasting them out with the proper grade of powder. For hedge rows the big tractor and heavy plow is undoubtedly the best and cheapest."

Starting the Engine

How seldom one sees a private owner start his engine with the switch off, though the professional driver very often adopts this procedure when his motor is cold. The average owner floods his carburetor, or pulls the choke switches on, and presses the starter button ineffectually five or six times. Then he opens the bonnet, perhaps, floods the carburetor again, and at last gets an explosion.

It is obvious that the idea of flooding the carburetor is to obtain a temporary enriched mixture, but the value of the flooding is lost if it be done when the cylinders and induction pipe are full of mixture, any petrol vapor left in this over night having long since evaporated. If the engine be turned over a few times with the switch off, the air is expelled, and a thin mixture of air and petrol inhaled in its place. Flooding then gives

a temporary rich mixture in the cylinders and the engine will start at the first trial.—CHESTER S. RICKER, M. E., in American Motorist.

Engine Investigations

In a paper given before the American Society of Mechanical Engineers, of which he is a member, A. A. Potter, dean of engineering at the Kansas Agricultural College, gave some most interesting results of research work on the internal combustion engine. Dean Potter was assisted in this work by W. A. Buck, who is also joint author of the paper given before the Society at its recent annual meeting.

Attention is directed to the fact that within recent years several of the largest and most prominent builders of machinery began to realize that with the development of farm machinery the traction engine had become of such importance as to offer an excellent field for engineering ability and market for machinery carefully designed and built.

At the present time over one hundred manufacturing concerns in the United States are building traction engines driven by internal combustion motors. The designs differ greatly: some have motors with horizontal cylinders, others with vertical cylinders. In some designs the power of the motor is delivered to one wheel, in others to two, and in still others to all four wheels; several designs are of the so-called "creeping grip" types.

The development of the traction engine for agricultural purposes has been along lines entirely different from those of the automobile. The early engines efficiency of different types of internal combustion motors employed in traction engines, to determine the practicability of using fuels heavier than gasoline, and to compare the rating, valve timing and other details of commercial engines.

Twelve engines, ranging in rating from 16 to 65 horsepower, were tested, and from the results obtained the authors have derived the following conclusions:

Four-cylinder motors are the better adapted to belt work; single-cylinder and two-cylinder motors operate better with fuels heavier than gasoline than four-cylinder motors.

Piston speeds should be lower than in automobile motors, speeds of from 700 to 900 feet per minute giving satisfaction.

The valve-in-head type of motor has the more efficient combustion space and is to be preferred to the T-head or L-head types.

The jump-spark system of ignition is to be preferred on account of its mechanical simplicity.

The fuel economy range is from about 1.3 pounds per brake horsepower per hour at one-fourth load to about 0.7 pound per hour at full load. The fuel consumption in pounds per hour per brake horsepower is very nearly the same for both gasoline and kerosene.

The thermal efficiencies at full load vary from 14.88 to 19.41 per cent for gasoline fuel, and from 13.7 to 15.97 per developed 60 to 80 horsepower on the brake and 30 to 40 horsepower on the drawbar; they were expensive, complicated, and unsuited for any but the largest farms of the country. The present tendencies of manufacturers are to build smaller engines and to standardize the product.

The following abstract gives the main points of the tests:

This investigation was instituted to determine the fuel economy and thermal cent for kerosene.

The results of the tests show the advantages of kerosene as a fuel. For the group of motors developing 26 brake horsepower and under at full load, with kerosene at 10 cents per gallon and gasoline at 20 cents, the cost of operating with gasoline was 1.99 times that when kerosene was used. Similarly, for the group developing 51 brake horsepower and over at full load, the cost with gasoline was 1.62 times that with kerosene. The advantages of the kerosene-burning motor are somewhat offset, however, by the added trouble in handling and by the shorter life of the motor when operating on such fuel.

Editorial, Advertising and Business
Offices, Topeka, Kansas

Entered at Topeka Post Office
as Second Class Matter

Published Weekly by The Kansas
Farmer Company, at Topeka

KANSAS FARMER

THE FARM PAPER OF KANSAS

T. A. BORMAN, President and Editor
S. E. COBB, Vice-President

W. J. CODY, Secretary and Treasurer
G. C. WHEELER, Associate Editor

CHAS. C. YOUNGGREEN
General Manager

CHICAGO OFFICE:
T. D. Costello, Stage Building
MINNEAPOLIS OFFICE:
R. R. Ring, Palace Building

NEW YORK OFFICE:
E. E. Lath, Fifth Avenue Building
ST. LOUIS OFFICE:
C. A. Cour, Globe Building

Established by First State Board
of Agriculture, 1883

Member Audit Bureau of
Circulations

Member Associated Farm Papers

PERMANENT INCOME AMENDMENT

An amendment to the constitution of Kansas looking to the establishment of a permanent income fund for the state educational institutions, will be submitted to the voters of the state at the next election. As now handled, each legislature must go into the needs of these institutions and the appropriation bills are always passed in the rush of the closing hours of the session. The sums appropriated seem large when bunched together as they must be, and there is always more or less capital made of the manner in which the big appropriation bills are handled.

Kansas spends annually about fifteen million dollars in maintaining its school system. The only part of this with which the legislature has to deal is the maintenance of the state institutions. This is comparatively a small part of the total amount expended in maintaining our school system.

The proposed amendment does not contemplate increasing the expenditures for the state institutions. It simply provides that a legislature after making a careful investigation of the needs of the schools, can make a definite levy which will stand until changed by legislative action. This would do away with the uncertainty as to the future, which will exist as long as the present system is followed. No institution can make definite plans for future work because it cannot be certain of the amount of money available until after the legislature meets.

The present valuation of property in Kansas is almost three billion dollars. A levy of less than one mill on the dollar would raise the sum now being appropriated for all the educational institutions of the state. If taxpayers studied the various levies as they appear on the back of the tax receipt, they would know more about where their money goes.

We refer to this amendment at this time because few people know anything about proposed amendments to the constitution until they read their titles on the ballot when they go into the booth to vote. No one can vote intelligently on an amendment without making some effort to study its purpose before going to the polls to vote.

We would suggest that copies of this permanent income amendment affecting educational institutions be secured and some study be given the proposition so that it may be intelligently voted on next fall. We will be glad to receive communications from our readers discussing the plan.

GROW POTATOES THIS YEAR

On account of the high price of seed potatoes some may hesitate to plant the usual amount this year. We believe this would be a mistake. The main potato crop of the country will likely be short for this very reason and also because many commercial potato growers in the various parts of the country have to use fertilizer and have found it almost impossible to get their usual supplies and especially potash.

The demand for potatoes is universal. They are staple articles of food, and the facts given are the reasons for making a special effort to grow them this year.

It is not advisable to use home-grown seed unless it is known to be free from such diseases as scab, dry rot, blackleg, and other diseases carried on or inside the tubers. Minnesota and Wisconsin are using vigorous measures to keep diseased seed from getting on the market. If diseased seed must be planted, give it the necessary treatment to destroy the spores. Soaking seed potatoes for two hours in a solution of one pound of formalin to thirty gallons of water, will destroy scab. Potatoes affected with dry rot or wilt can also be treated in the same manner. In cutting a potato at the stem end, a blackened, discolored ring will show just under the skin if it is affected with the dry rot.

Seed infected with blackleg can also be treated in the same manner. This is a bacterial disease of po-

tatoes that is increasing in this state each year. The affected plants are smaller than those in healthy condition, the leaves are pale and tend to curl upward. The seed potato rots early, thereby producing a weak plant. The rot from this diseased seed goes to the stems of the plant which in turn blacken and rot. The whole plant usually dies without producing tubers.

A rotation of crops is necessary in combating all these potato diseases. The soil itself becomes infected and only by growing some other crop for a year or two can sound potatoes be produced.

BROOM CORN GOOD DRY WEATHER CROP

We note from an item published in the Kansas Industrialist and credited to the Broom Corn Review, that the broom corn trade is eagerly looking forward to the crop of 1917, as practically no brush is available from the old crop. We infer from this that there is no broom corn in stock in the warehouses and that no brush is held by farmers. This condition would indicate that broom corn will be in demand this year.

While the Review probably is thoroughly informed as to the condition of the trade in broom corn, we would call attention to an error in its statement about the planting date for the crop, namely that most of the broom corn planting will be done this month, as February was too cold for seeding. Broom corn belongs to the sorghum group, and like kafir, milo, and others of this group of plants cannot be successfully planted until the soil is thoroughly warm. Its cultural requirements are practically the same as those of kafir, milo, feterita and others of the sorghum group. It can be grown very successfully under light rainfall and for that reason is a good cash crop to grow in Southwestern Kansas and Western Oklahoma. The dry, sunny weather prevailing in these sections during the harvesting period and following, is especially favorable to curing the brush so it will bring a high price on the market.

Even as far south as Southeastern Texas, however, broom corn is not planted before the first of April, and in Southwestern Kansas and Western Oklahoma planting does not begin until well into May.

Broom corn growers should write to the Department of Agriculture, Washington, D. C., for a copy of Farmers' Bulletin 788 on "Broom Corn Growing." This supplies much needed information concerning the growing and handling of this crop.

ACCOUNT BOOK FOR FARM RECORDS

Keeping farm accounts is greatly simplified by the use of the Farm Account Book which has been published by the Kansas Bankers' Association. This book was used by a good many farmers last year. It has been improved somewhat as a result of the experience of the first year's use. It is again being distributed by the banks over the state, although there are many banks that have not yet ordered a supply of these books.

Ask your banker for one of the account books. You probably have wanted to keep some sort of farm accounts for a long time but have not done so because you had no suitable blanks for the purpose. With this book it is a simple matter to make the necessary records and will take only a few minutes of time daily. The knowledge resulting from such work will be worth many dollars by the end of the year.

Making an inventory is the first job and is a necessary part of the work of keeping records. The book explains how to do this. The inventory ought to be made before the spring work opens, but it can still be done.

It is a good plan to start the boys and girls in on the farm records. It teaches them to apply their school work to the practical things of life. They will learn to take more interest in the affairs of the farm as a result of keeping the farm accounts.

If your banker has neglected to supply himself

with some of these books for his patrons, write to W. W. Bowman, secretary of the Kansas Bankers' Association, Topeka. Do not write to Mr. Bowman, however, until you have first interviewed your banker, for only a limited number of the books have been reserved at his office.

APPROPRIATIONS FOR THE BIG FAIRS

We are glad to record the fact that state recognition has been given to the great educational value of agricultural expositions such as are annually given at Hutchinson and Topeka. No agricultural fair worth while can exist without substantial support from other sources than gate and concession receipts. The legislature which has just adjourned appropriated \$30,000 to the Topeka fair for the two-year period, and \$35,000 to the Hutchinson fair for the same period. In addition, \$16,000 of a revolving fund was reappropriated to Hutchinson.

Readers of KANSAS FARMER are vitally interested in these two big fairs, their special interest being determined by the part of the state in which they live.

From the maneuvers which took place in the senate in handling the house bill making appropriations for these two fairs, it looked as though a well organized effort was being made to prevent the Topeka fair from receiving any recognition from the state. There was no evidence of this feeling in the house. The author of the house bill was an ardent Hutchinson booster, but he worked for both appropriations, recognizing that these two fairs were serving two distinct sections of the state and each well worthy of state support. Following this action in the house, the fight in the senate to deprive Topeka of support was most unexpected. In the final wind-up, however, the opposition to the Topeka fair appropriation was overruled and the bill was passed providing for these two fairs as stated above.

CONTAGIOUS ABORTION SERIOUS DISEASE

Contagious abortion in cattle is a germ disease which causes the death of the unborn calf and results in annual losses of millions of dollars. If it continues to increase it will soon surpass tuberculosis, which now probably stands first among animal diseases in point of economic loss.

We have repeatedly called attention to the serious nature of this disease. A single aborting cow may infect a whole herd. Such animals should always be isolated and treated. A cow that has aborted is likely to become immune to the disease, although still capable of spreading it to others.

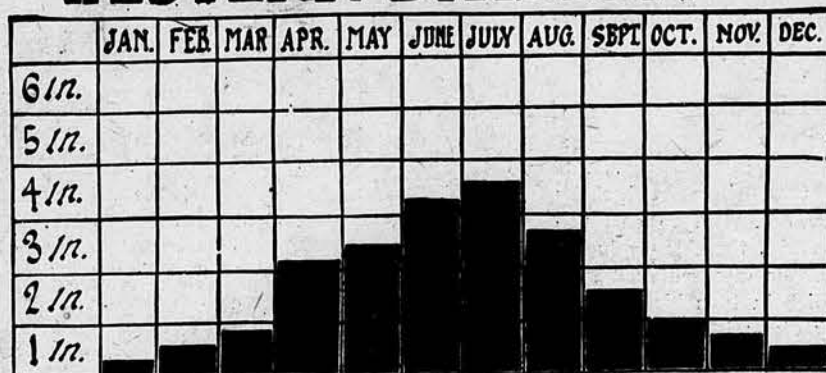
Full details concerning this disease and its treatment are given in Farmers' Bulletin 790, recently issued by the Federal Department of Agriculture, Washington, D. C. This bulletin supplies the very latest knowledge available on this serious disease. Every cattle man should secure a copy.

This year of all years it will pay to save every pig farrowed. It is poor policy in any year to maintain a brood sow for six months or a year and then through carelessness or neglect permit her to lose most of the pigs. It costs money to feed a brood sow and this cost must be charged up to the pigs at birth. If only two or three are saved, it does not require much of a mathematician to figure that the cost of each pig at birth is considerably more than if seven or eight are saved. If the whole litter is lost, the expense put into maintaining the sow during the period previous to farrowing becomes a total loss. The prices being paid for pork is indication of the scarcity that exists. Last week \$15.00 a hundred was paid in Kansas City, a record price for a western market. A man might easily make big wages by sitting up nights occasionally with his brood sows in case some of them should farrow during a cold storm such as is always likely to come during March or April.

GENERAL FARM INQUIRIES

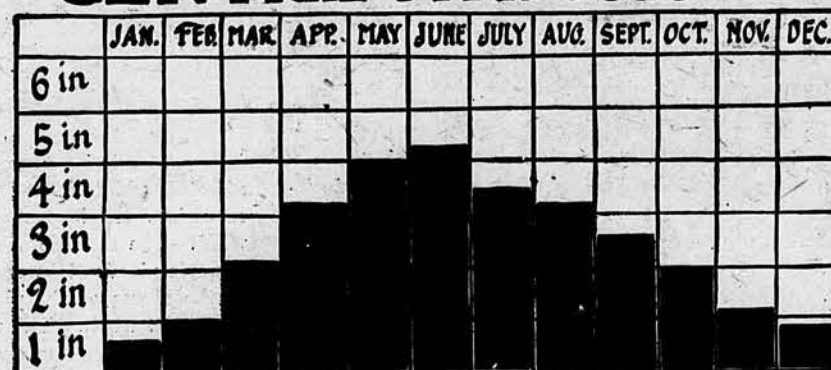
Something For Every Farm—Overflow Items From Other Departments.

WESTERN DIVISION



Average Total Inches 19.34
 Inches April Sept. Inc. 15.13 ^{Per Cent} 78.2
 Inches Oct. Mar. Inc. 4.21

CENTRAL DIVISION



Average Total Inches 26.53
 Inches April Sept. Inc. 19.84 ^{Per Cent} 74.7
 Inches Oct. Mar. Inc. 6.69

AVERAGE PRECIPITATION FOR CENTRAL AND WESTERN SECTIONS OF KANSAS FOR PERIOD 1886-1912 INCLUSIVE

WE HAVE been asked to give further instructions about caring for hotbeds. In our issue of March 3 we gave instructions on making the hotbed for growing early plants. For home use, a bed 3x6 will produce enough cabbage and tomato plants for the average farm garden.

For the first three weeks after the seed is sown the hotbed must be watched carefully. It should be ventilated during the warmest part of the day. Later in the season the glass may be left off most of the day, always remembering to replace it at night.

It is easily possible to get the bed too wet. This tends to cut down the supply of heat and causes the plants to "damp off" as it is called. It is difficult to give set rules about either watering or ventilating.

After the heating process has ceased the hotbed may be used for hardening off plants or growing late cabbage or celery.

Grain for Colt

A. L. T., Chatauqua County, asks how soon he should begin to feed a young colt grain. The colt is from a good mare of draft type and is sired by a registered draft stallion.

It takes feed to make a big horse and the only way to grow out a colt of this breeding is to feed it liberally. The big imported horses are all fed grain from the time they first begin to eat until they mature. Usually a colt will begin to eat a little grain by the time it is four weeks old. Whole oats are the best grain to feed, although mixtures of corn and bran will give good results. While young, a colt should have a chance to nurse every two or three hours if the mother is worked in the field. If the colt is kept from nursing too long, it will not only suffer from hunger, but the mare's udder will fill up and there is danger that it will become injured so that the milk flow will be lessened. There is also danger in permitting the colt to suckle when the mare has been away for a number of hours, and especially if she comes in heated from her work. Under such circumstances let the mare cool off, and if she is very warm, milk out part of the milk before allowing the colt to go to her.

The colt should have a box in its stall so it can eat grain whenever it wishes. When handled in this way there is no set-back when the colt is weaned.

It is absolutely impossible to grow out a draft colt successfully without this early grain feeding.

Sudan for Pasture

E. F., Lincoln County, asks if Sudan grass can be used for pasture and how much seed it will require to the acre.

This crop is growing more and more in favor each year, and especially as a pasture crop. In the western part of the state farm tests conducted under the direction of District Agricultural Agent W. A. Boys have shown that as an av-

erage of all the trials made, three mature animals were pastured on each acre of Sudan grass for an average period of ten weeks. Some fields were pastured as late as November 1. Cattle, horses, hogs and sheep have all been pastured on Sudan grass with satisfactory results. A good way to handle it is to mow the first crop for hay and pasture the second growth.

At the Hays Experiment Station trials have been made to determine the proper rate of seeding. In these trials the seed has been sown at rates varying from four pounds to thirty-five pounds an acre. The report is that there was very little difference in the yields per acre from these different rates of seeding. This is valuable information in view of the present high price of Sudan seed. In using the smaller amounts of seed, however, it is very important that the seed bed be very carefully prepared.

It is our purpose a little later in the season to give more details as to the best method of growing and handling this new crop which has so thoroughly demonstrated its value the past few years.

Study Rainfall

A Western Kansas reader asks us to publish again the precipitation maps showing the average precipitation in the different parts of the state. This reader recognizes the necessity for working out farming methods that fit the climatic conditions and especially rainfall. A type of farming that might be highly successful in Illinois or Iowa, for example, would fail absolutely in Western Kansas. The varieties grown must of necessity be different. Farmers who move from one locality to another must leave behind them many of the varieties and methods they have been using with success. Even in Kansas in the 200 miles north and south and the 400 miles east and west, there exist great varieties, not only in climate and precipitation but in soil.

The moisture variation is perhaps the one that must be given the greatest consideration, and the new settler should make up his mind in the beginning that he must accept the conditions as they exist. The amount of rain that falls and the climate cannot be influenced by man. The oft-repeated statement that "rainfall follows the plow" is not true. Accurate records covering long periods of years have established this fact most conclusively.

For these reasons the question raised by our correspondent is of vital importance to every farmer in the state. In editing KANSAS FARMER, consideration is constantly given to these differences in soil and precipitation. The editors are familiar with all sections of the state and know that practices and varieties of crops that succeed in one section will fail in another.

In "Sorghums: Sure Money Crops," by T. A. Borman, one of the editors of KANSAS FARMER, there is a chapter cov-

ering in considerable detail this phase of farming in Kansas. This chapter alone is worth the price of the whole book to the farmer who wants to secure maximum profits from farming by adapting his crops and methods to the climatic conditions of his locality, and especially with reference to precipitation.

The precipitation of most importance is that which falls during the growing season or from April to September inclusive. From the records of the U. S. Weather Bureau in Kansas, the charts on this page have been prepared. The figures cover the period from 1886 to 1912, inclusively. They show in graphic form exactly how much moisture can be expected on an average in each month of the year for the different sections of the state and the per cent which falls during the growing period. The western third of the state is that portion west of a line running between Norton and Phillips counties on the north, and between Clark and Comanche counties on the south. The central division extends from this line east to a line running between Washington and Marshall counties on the north, and Cowley and Chatauqua counties on the south. The portion of the state east of this line comprises the eastern division. Next week we will show the chart giving the rainfall for this last named section.

Sweet Clover for Pasture

B. M., Osage County, asks for information on the use of sweet clover for pasture.

Over much of Kansas there is probably no other pasture crop that can be sown that will give more satisfactory pasture so short a time after seeding as will sweet clover. It will carry as many animals per acre as any other pasture crop that can be grown and can be pastured with all classes of animals. There is very much less danger from bloat than in pasturing alfalfa or ordinary red clover.

Sweet clover is of special value on rough land. It is the only tame forage plant that has given satisfactory results when sown in native pasture land. It is safely past the experimental stage, thousands of farmers in Kansas having tried it and become enthusiastic as to its value.

Being a legume, it enriches the soil in nitrogen and can be used as a means of adding organic matter to the soil by plowing under the crop.

In Western Kansas sweet clover has been very successfully grown on bottom land soils which were very sandy, containing alkali and having the water table too close to the surface for alfalfa. On the upland in Western Kansas sweet clover has generally proven to be a failure.

Care of Colt at Birth

A. Rice County reader asks how to care for a colt at birth. He has heard of the danger from navel ill, constipa-

tion and scours, and wishes to know how to avoid these dangers.

Navel ill seems to be caused by germs that get into the body through the navel cord at birth. To guard against it, have the colt dropped in a clean stall or in a pasture. Then the navel cord should be cut off about two inches from the body if it has not already been broken that close or closer, a string dipped in a mild disinfectant tied about the end of the cord and the cord painted over with a mixture composed of one part tincture of iodine and three parts glycerine once a day till it dries off. The udder should be rinsed off with a weak disinfectant too before the colt is allowed to suck.

The first milk or colostrum is laxative and usually cleans the digestive tract within six to eight hours. If the bowels do not move, a laxative as two ounces of castor oil can be given and a couple of ounces of warm water with a little glycerine injected into the rectum. It is hard to determine what causes scours or diarrhea in each individual case, but the common causes are changes in the composition of the mare's milk due to nervousness, overwork or changes in feed, allowing the colt to gorge itself from the full udder of a mare that has become quite warm from overwork and from filth in the food.

Wormy Hogs Not Profitable

N. L. S., Jefferson County, asks how to prevent hogs from getting infested with worms and how to treat them to destroy worms.

Hogs become infested with worms by swallowing the eggs in their feed or drinking water. As a preventive measure practice absolute cleanliness about the yards and sheds. Be sure the drinking water is clean and is always supplied in abundance. If hogs are compelled to drink from stagnant ponds or wallows they are certain to become badly infested with worms since the eggs always accumulate in these places. Sprinkling fresh slaked lime about the yards and houses frequently will do much to destroy the eggs of worms and will keep the quarters clean and sweet. By keeping everlastingly at it, the eggs scattered about the yards can be greatly reduced in numbers.

Where hogs have become badly infested with worms, the following remedies will be found most effective: Six grains of santalin and four grains of calomel to each 100 pounds of hog; or two and one-half grains of santalin, one dram areca nut, two grains calomel and two drams of sodium bicarbonate for 100 pounds of hog. In giving worm remedies, the hog should be fasted for twenty-four hours and then fed the remedy in a thin slop. Be sure there is enough trough room so that all the hogs in the lot will get to the trough and get their proper proportion of the remedy. If the hogs are badly infested it is a good plan to repeat the dose in ten days or two weeks.

TILE DRAINAGE PROFITABLE

Decreases Amount of Waste Land and Adds to Value of Whole Farm

*From Address by H. B. Walker, Drainage Engineer,
Farm and Home Week, Manhattan, Kansas*

MANY fertile soils in Kansas are not profitably cultivated, or are not tilled at all, because of the lack of drainage, and much of the best farm land of the state cannot be made to yield the most profitable returns until these conditions are corrected.

Correct soil drainage is an essential factor in successful crop production. Tame grasses and cereal crops do not thrive in wet, compact, sour, or cold soils. They grow best in sweet, warm, well-drained soils. Inadequate drainage is directly responsible for the first mentioned condition.

The physical characteristics of some soils are such that Nature has provided for drainage. These soils are mellow because the excessive soil water cannot compact them, they are warm since this over-abundant moisture escapes by other means than evaporation. Good crops grow upon them because the roots are unhindered in their downward path in search of plant food and moisture. Kansans think of these naturally drained soils as the best agricultural land and it is on such land that the crop returns are most remunerative.

Many farmers are not so fortunate as to possess land with perfect natural drainage. A heavy subsoil, or other natural condition, may interfere with the tendency of free soil water to pass downward by gravity. This results in a saturation of the soil causing a wet depression or a "cat tail" pond or a "seepy" hillside, and all together a bad looking, unprofitable farm. Tile drainage is needed to make such land productive. If Nature has not provided a means for the escape of this injurious water, some artificial method must be employed.

Under-drainage was first accomplished by digging trenches and partly filling them with bundles of sticks and covering these over with earth. Stones were used in a similar manner. The modern under-drain, however, is circular in form and is constructed of burned clay or cement. The first tile drains used in the United States were put in more than seventy-five years ago in the state of New York. These drains are reported still to be in active operation.

MAKES WET LAND PRODUCTIVE

The first and fundamental function of under-drainage is to make wet lands productive. It is evident then that the tile drain must be constructed to act most efficiently; the size of the tile must be adequate; the grade of the line must be perfect to give a free flow of the water; and lastly the drains must be placed at the most economical depths. Correct design, soil conditions, and the general topography of the field will regulate the above conditions. No hard and fast rule can be formulated which will apply to all conditions, and it is only after a careful examination of a field that a plan of drainage can be successfully laid out.

SOILS NEEDING DRAINAGE

We have in Kansas three general types of soil requiring artificial under-drainage; namely, the seepy land in the rolling uplands, the tight soils in the flatter upland prairies, and the black alluvial soils of the river valleys.

Ordinarily seepy land is quite easy to drain if the cause of the wet condition is correctly understood. It is sometimes puzzling to land owners to find that sloping hillsides are too wet for cultivation. Such spots are very annoying and are moreover very noticeable in a field. The natural tendency of free or excess water in the soil is to pass directly downward by the action of gravity. If the soil structure is of such a nature that this water is intercepted or retarded in its downward path, the water is then forced to move laterally down the slope. A ledge of rock or a compact subsoil may cause this condition. The accumulation of the water as it thus moves down the hill slope causes a "wet outcrop" or "seep." This outcropping usually appears near the foot of the slope or where a steep slope changes into a flatter one. These places not unusually appear as a wet band across the hill slope or a wet margin along the sides of a natural depression, and are particularly noticeable to the eye of even a casual observer.

DRAINING HILLSIDE SEEPS

The method of drainage correction is



THIS SWAMPY LAND HAS BECOME HIGHLY PRODUCTIVE AS RESULT OF TILING.
AN ADJOINING FARM HAS SINCE BEEN REDEEMED IN LIKE MANNER

quite simple when understood. The real source of the water is apparently higher up the slope. Consider if you will that this slope is a roof, and like the roof of a building the volume of the water passing over its surface increases the nearer it approaches the lower area. To catch the water from a roof a gutter is placed at right angles or across the slope to intercept the water at every point. No one would think of catching water from the roof by placing the gutter up and down the slope. The same principle is just as applicable to the seepy hillside, since the hill slopes with its substratum of rock or compact clay acts exactly like a roof, shedding its water off to a lower level.

The tile drain then must be located to intercept the water in its downward movement. Moreover it is evident that this water must be intercepted before it outcrops if the seep is to be entirely eliminated. Consequently the location must not only be across the slope but on the upper side of the wet outcrop as well. These two principles of location, however, are not sufficient to insure success. If a gutter is placed several inches above a roof surface, very little water will be intercepted. The same condition will govern the success of a seep drain. If placed too shallow it will fail to intercept all of the seep water, consequently it is very essential to place the tile sufficiently deep to cut off the water as it passes down the slope. Seep drains are sometimes called cut-off drains since if properly constructed they do cut off this injurious water before it has an opportunity to harm the growing crops.

The rule for the location and placing

of seep drains is therefore quite simple. It may be stated briefly as follows: Place the drain at right angles to or across the slope, on the upper side of the wet outcrop, and deep enough to intercept the line of flow. A careful observation of the above rule will ordinarily result in the successful drainage of a hillside seep with a single line of tiling.

TILING HEAVY CLAY SOIL

Soils which are underlain with heavy, compact, and relatively impervious subsoils are usually classed as "hardpans." Strictly speaking much of such land is not hardpan since moisture does pass through it, to a certain extent, but from the standpoint of drainage it may be so classed. The presence of a relatively impervious subsoil very close to the surface of the ground practically precludes the possibility of economical drainage. Usually such soils are not naturally very fertile and the shallow surface soil is affected readily by both the extreme conditions of wet and dry weather. To get any measure of relief by tilling the lines must be placed very close together. This involves a very heavy initial expense and it is very doubtful if the results obtained are commensurate with the investment required. Many Kansas farms, however, have fertile surface soils ranging in depth from twelve to thirty-six inches, but these are supported upon retentive subsoils. A period of wet weather soon saturates this upper soil layer and crops growing thereon are readily injured by the excessive water which entirely fills the soil cavities and crowds out the necessary air. The removal of this water is often hin-

dered by the uneven surface of the subsoil. The subsoil surface may be a series of pockets, or ridges and depressions, which prevent entirely the lateral movement of the excessive soil water. Naturally, there are only two ways to remove this water. One is by the retarded process of percolation through the compact subsoil, and the other by the slow and cooling process of evaporation. It is evident that crops on such land will show the effects of wet weather long before Nature can relieve the condition by these slow methods. Such fields, however, may be profitably tile drained. The underdrain with its sloping flow line offers an outlet for this stagnant water held so close to the surface by an uneven subsoil. Land owners who possess an area of this kind will do well to carefully study and investigate their field conditions with a view of constructing a comprehensive drainage system. Generally speaking, areas of this nature require frequent and relatively shallow drainage. It is not unlikely, however, that a few carefully located and properly constructed tile drains through the worst places will give satisfactory relief.

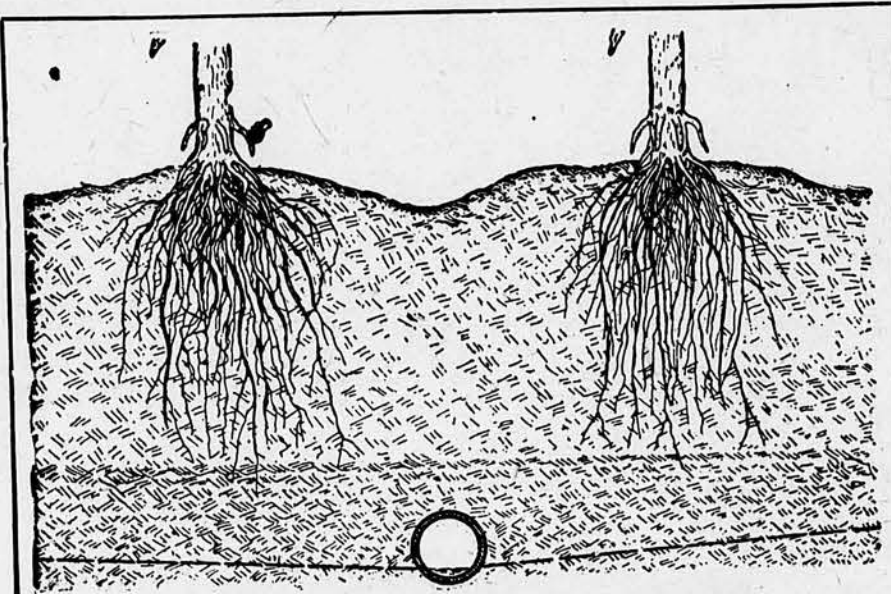
TILING VALLEY LAND

The black alluvial soils of the stream valleys represent a third type of Kansas soil which requires artificial drainage. The alluvial limestone soils usually respond quite readily to tile drainage. Such soils moreover are very fertile and when properly drained produce heavy crops. In most of our stream valleys the soil adjacent to the stream itself is open and porous, and has relatively good natural drainage; however, at points more remote from the channel the soil is more compact, more finely divided, lower in surface elevation, and is of a sticky nature. This type of soil is usually called gumbo. On account of the remote location of such areas from the stream, the facilities for carrying away excessive storm water are usually inadequate. Until some relief is secured for this storm water, tile, or under-drainage, cannot be profitably undertaken. The first important step in the drainage of heavy, black, alluvial soils is to secure above all other things correct surface drainage. Without good surface drainage such soils are not successfully tile drained, but when properly surface drained very good results can be expected from under-drainage. The flatness of the ground surface, together with the difficulties attendant upon securing an adequate outlet necessitate unusual care in the construction of drains for gumbo soils. While it has been generally demonstrated that such land can be successfully drained many disappointments have resulted from lack of care in construction. No system of under-drainage should be undertaken in these areas until a careful and complete drainage system has been planned, and the owner of such land should secure the assistance of an experienced drainage engineer in laying out his work.

TILING INCREASES PRODUCTION

The number of tillable acres in a farm is an index of its value. Wasted area is a direct basis for a discount to farm values. Wet land is waste land. Tile drainage is the agency by which wet and wasted areas are made into productive and useful farm land. The profits from production however, are not the only profits from tile drainage. With less untillable land the value of the farm unit is increased. Tile drainage, therefore, by decreasing the number of wasted acres is the direct means of adding to the value of the entire farm. Wet land, susceptible to under-drainage, always has a soil rich in plant food, but the extreme wetness has kept this fertility unavailable for growing crops. Tile drainage removes this injurious, over-abundant water so that crops may be produced. The crop returns from such land after tiling not infrequently pay for the improvements in one to three years. Moreover with the wet spots removed, fields are "squared up" and cultivated in more efficient units, and the satisfaction of farming is greatly enhanced.

Tile drainage is profitable, and the farmer who has his money invested in fertile, but wet land, cannot afford to neglect such a valuable, permanent improvement.



ROOTS OF CORN PLANTED IN TILED LAND.—INCREASED ROOT SYSTEM SUPPLIES ADDITIONAL PLANT FOOD AND MOISTURE

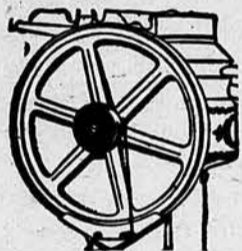
See the Difference BETWEEN THE NEW DE LAVAL AND OTHER CREAM SEPARATORS



YOU can see the difference between a NEW DE LAVAL and any other cream separator right away.

And five minutes spent in comparing the bowl construction, the size, material and finish of all the working parts, the manner of oiling, the tinware and the frames, will surely convince you of the superiority of De Laval construction and workmanship.

Then if you go a step farther and turn the cranks of the two machines side by side for fifteen minutes, running milk or water through the bowl, you will see still more difference.



Every New De Laval is now equipped with a Bell Speed-Indicator, the "Warning Signal" which insures proper speed and uniform cream.

Speed Indicators can be furnished for use on old style De Laval machines at a cost of \$3.00 each.

And if you will run the two machines side by side in practical use, as any De Laval agent will be glad to have you do—the De Laval one day and the other machine the next—for a couple of weeks, you will see still greater difference in the work of the two machines.

There is a De Laval agent near you who will be glad to explain all the improvements and advantages of the NEW De Laval, and who will set and start a machine for you on your farm and let you *prove the difference* for yourself.

Why not see the nearest De Laval agent at once? If you do not know him, write to the nearest office for any desired information.

New Catalog will be mailed upon request

THE DE LAVAL SEPARATOR CO.
165 Broadway, New York 29 E. Madison St., Chicago
50,000 BRANCHES AND LOCAL
AGENCIES THE WORLD OVER

Farm Hands Wanted

Western Canada Farmers Require 50,000 American Farm Laborers AT ONCE!

Urgent demand sent out for farm help by the Government of Canada. Good wages. Steady employment. Low railway fares. Pleasant surroundings. Comfortable homes. No Compulsory Military Service. Farm hands from the United States are absolutely guaranteed against Conscription. This advertisement is to secure farm help to replace Canadian farmers who have enlisted for the war.

A splendid opportunity for the young man to investigate Western Canada's agricultural offerings, and to do so at no expense. Only those accustomed to farming need apply.

For particulars as to railway rates and districts where labor is required, or other information regarding Western Canada, apply to

GEO. A. COOK, 2012 Main Street, Kansas City, Missouri
Authorized Canadian Government Agent

FREE BOOK ON TREES
Tells about large assortment of best trees and plants at lowest prices. Ask for Preferred Customer's Discount. No obligation. Book is Free. Send for it now. Address: WELLINGTON NURSERIES, Desk G., Wellington, Kans.

FREE A pair of Mated Everbearing Strawberry plants, large pkt. of new Cornell Victoria, Saxon Green and Silk Leaf Poppy seed, all Free for 10¢. Send 10¢ for mailing expense, or not, as you please. We offer genuine Progressive Everbearing plants at 50¢ per doz.; 90¢ for 50; \$1.75 for 100; \$5.00 for 250, all postpaid. CATALOG FREE. The Gardner Nursery Co., Box 463, Oange, Iowa

Kansas Farmer Dairy Club

Are You Proving Trustworthy?

QUITE a sensation was created when J. P. Morgan, one of the biggest money men of the country, told a congressional committee that he once loaned a man a million dollars solely on his character. He made the statement that in establishing a credit rating, character was the most important point to consider.

Perhaps you do not realize to what extent your work in the Dairy Club is enabling you to build up for yourself a credit rating which will be invaluable to you when you grow up and need money to conduct your business. In New York City, where a great deal of money is borrowed on the security of stocks and bonds, they do not pay so much attention to the character of the man. They make sure that the stocks and bonds are all right and never look at the man. Here in Kansas, however, and over the country generally, the banker whose business it is to loan money learns to know the people who want to borrow almost better than they know themselves. You can be sure that the banker who loaned you money to buy your cow is forming an opinion of your trustworthiness from day to day as you turn in your reports and make your payments.

You are also in a business that has a high standing among bankers. Last year the State Dairy Association of Nebraska asked Thomas Murray, the president of the Nebraska Bankers' Association, to address the annual meeting and tell what bankers thought of dairymen as credit risks. He told them in the beginning of his address that he felt sure every banker in the state would answer that inquiry by saying, "There is no better risk." Perhaps you have heard the story of the banker who was in doubt as to the standing of a farmer wanting a loan, and who decided whether to trust him or not by looking over the counter to see if he had any milk on his boots. Seeing milk on his boots, the loan was promptly made, because he felt sure he would have the money to repay it at the appointed time.

Mr. Murray explained what is meant by the term "credit risk," by stating that the primary meaning of the word "credit" is "worthy of trust," and when applied to money matters means "worthy of financial trust." It means the ability and willingness of the man who borrows money to pay it back again. The man who loans you money wants to know first of all whether or not you are absolutely honest. To be able to repay a loan you must also be capable and thrifty, or in other words, willing to apply yourself steadily to a task and not be reckless in the use of money that comes to you from your work.

The banker is anxious to have you increase your ability to use money profitably and be able to repay it at the appointed time. He wants his customers to become better credit risks and there is no type of the farming business that is more sure of increasing the ability to pay back borrowed money than is dairying. You have found this out already in your club work. In spite of the high prices of feed, some of you have paid for your cows before the end of the year, using only the money coming from the sale of the product after deducting the cost of all feed.

Mr. Murray said that a Wisconsin banker told him that in his thirty years of experience he had never known of a failure among the farmers of that state who started with dairy cows and kept close to the business of dairying. Wisconsin is generally considered to be the leading dairy state of the Union. The annual returns from the sale of dairy products amounts to a million dollars. Kansas is even better adapted to profitable dairying than is Wisconsin, and dairy farming is on the increase in this state.

You will see that the business of dairying, in which you are engaged, is one of the most substantial and legitimate industries in the state. Bankers so recognize it and are anxious to have it become still larger and more important. They want to loan money to dairymen who need it and thus be partners in building up this important industry. Mr. Murray suggested that a good motto for dairymen would be, "Get acquainted with your banker, you may like him." We wonder if you have tested this out. Won't you write and tell us about what kind of a man your banker is and how

he has helped you in your work? Don't be afraid to tell him all about your business. He is just as much interested in how much milk your cow is giving, and what your feed is costing, as you are. As you grow older, you will find that the more fully he knows about your business the more help he can give you when you need it.

After you have established a credit rating at a bank by proving your trustworthiness and ability to meet obligations, you need not feel that you are asking a favor of the bank when you want a loan to increase the size of your business. If you have the right sort of standing, the banker considers it a favor to have the opportunity to loan you money. Dairying, intelligently conducted, is so sure to bring in a steady income that you need have no fear that you will be refused credit if you have shown that you are capable and worthy.

Remember that credit is based on character more than on any other one thing. Those who have been unreliable, even in small matters, will find that good business men will not trust them. It is worth a great deal to have the chance to establish a business standing early in life, and we want you to make the most of it.

New Dairy Bulletin

We have just received from the U. S. Department of Agriculture, Farmers' Bulletin 777 on "Feeding and Management of Dairy Calves and Young Dairy Stock."

Each of you should write the department at Washington for this free bulletin, as it contains much information that will be valuable to you. Ability to raise well the calves produced is one of the tests of success in dairying. Even the best pure-bred calf may be made worthless by poor care. There are many things to learn about feeding and managing calves and the more you learn about it the easier it will be for you and the greater will be your success.

The following bulletins relating to dairy farming can also be obtained free by writing the department at Washington:

Farmers' Bulletin 206, "Milk Fever and Its Treatment"; Farmers' Bulletin 345, "Some Common Disinfectants"; Farmers' Bulletin 350, "Dehorning of Cattle"; Farmers' Bulletin 413, "Care of Milk and Its Use in the Home"; Farmers' Bulletin 473, "Tuberculosis"; Farmers' Bulletin 481, "Concrete Construction on the Live Stock Farm"; Farmers' Bulletin 490, "Bacteria in Milk"; Farmers' Bulletin 578, "Making and Feeding of Silage"; Farmers' Bulletin 589, "Home-Made Silos"; Farmers' Bulletin 602, "Clean Milk—Production and Handling"; Farmers' Bulletin 623, "Ice Houses and Use of Ice on Dairy Farm"; Farmers' Bulletin 689, "Plan for a Small Dairy House"; Farmers' Bulletin 743, "The Feeding of Dairy Cows"; Bureau of Animal Industry Circular 179, "Cow Testing Associations."

We think No. 602, No. 623, and No. 743 would be of special interest to you while you are doing the Dairy Club work.

Some of the earlier bulletins are charged for because the demand has been great and the supply has been shorted. The department will send any of these on receipt of the price named:

Farmers' Bulletin 55, "Dairy Herd, Its Formation and Management," price five cents; Farmers' Bulletin 106, "Breeds of Dairy Cattle," price five cents; Bureau of Animal Industry Bulletin 128, "Influence of Type and of Age Upon Utilization of Feed by Cattle," price thirty cents; Bureau of Animal Industry Bulletin No. 143, "Maintenance Rations of Farm Animals," price fifteen cents; Department Bulletin 49, "Cost of Raising a Dairy Cow," price five cents.

Of these we would suggest that you try to get No. 55, No. 106, and No. 49. This may seem like we want you to do a great deal of reading, but every boy and girl should read as many good things as possible and these bulletins are all well written besides containing information which will help you in your Dairy Club work. And you will find them interesting, too.

My cow is doing fair now. She sure is eating. It will not be very long until I finish my year in the first great Kansas Farmer Dairy Club.—GLEN ROMIG, Shawnee County.

FARM LOAN INQUIRIES

MANY questions are being asked about the operation of the Federal Farm Loan Act. These inquiries have to do with the obstacles that arise in connection with the actual formation of farm loan associations. We give below a list of the questions most frequently asked, with the answers furnished by the board:

What constitutes an "actual farmer"?

An actual farmer is one who conducts the farm and directs its entire operation, cultivating the same with his own hands, or by means of hired labor. An owner, to borrow under the Farm Loan Act, must be responsible in every way, financially and otherwise, for the cultivation of his land.

What is the meaning of "equipment"?

Equipment consists of the implements needed in the conduct of a farm to facilitate in its operation. It might consist of teams as well as machinery, tools and like articles.

What is the meaning of "improvement"?

Anything in the form of beneficial structure, or any useful, permanent physical change tending to increase productive value, such as clearing, tiling, draining, fencing, buildings, etc.

Has a Farm Loan Association the right to appoint an attorney to draw up abstracts and pay him out of its official funds, or should the members of the association club together as individuals and have this done?

Each borrower is required to furnish his own abstract and the applicant must stand the expense of preparing this abstract. An association has no right to employ any of its corporate funds to pay for the preparation of abstracts for its members. This must be an individual charge, and if members of an association club together to have this work jointly done they must do it as individuals and not as an association. Each borrower is free to make his own choice in the selection of an attorney or abstractor.

What will be the rate of interest?

Not exceeding 6 per cent. The exact rate cannot yet be told; 1 per cent more than the interest rate farm loan bonds will bear.

May members of a partnership borrow?

Yes, if one or both are farmers and engaged in the cultivation of the land mortgaged. Partners must join severally in executing the mortgage and one should give the other authority to represent him in the Farm Loan Association, as only one can have membership.

Will the Federal Land Banks make any charge for examination of abstracts of title?

The examination of abstracts, when furnished, will be made by the bank's general attorney at its office, and for this examination no charge will be made. In districts where abstracts are not obtainable except by examination of the records, the borrower will have to bear the cost of such examinations.

When a husband and wife execute a joint mortgage, should one give the other power of attorney to be the representative in the Farm Loan Association?

Both husband and wife should sign the mortgage, but the one in whose name the title stands should be the member of the Association.

What is the basis for appraising lands?

The appraisalment of a farm should represent the best judgment of the members of the loan committee as to the value of the land in question, the principal factor being the productivity of the land when used for agricultural purposes, but taking also into consideration the salability of the land and prevailing land prices in that community.

What will be the size of the bond of the secretary-treasurer?

This will depend upon the size of the Association. The bond need not be large enough to cover the aggregate amount of money borrowed by the members of the Association, because this money will be transmitted in such way as never to be in the exclusive control of the secretary-treasurer. It should be large enough merely to cover the interest and amortization payments, called the installments, as well as the deposits likely to be in the hands of the secretary-treasurer at any one time.

What is the judgment of the Farm Loan Board as to compensation for the loan committee?

This depends so much on the size of the Association that no fixed rule can be made. Since this is a co-operative banking system, the Farm Loan Board

desires that the work, as far as possible, be done without expense. The Board believes that in a small association it will not be necessary to pay the loan committee any fees. The Board believes that in very few cases will it be necessary to pay the loan committee more than actual expenses.

What is the judgment of the Farm Loan Board as to the compensation to be paid the secretary-treasurer?

This also depends so much upon his relative duties as fixed by the size of the association that it is difficult to name an amount. This compensation should be based upon the time actually required to perform the work of the Association.

May one man, by owning two pieces of land, become a member of two associations and borrow in excess of \$10,000?

He may become a member of two associations, but the total amount of his loans may not exceed \$10,000.

May an association operate across state lines even if both states are in the

same bank district?

No; no association may designate territory in two states in which loans can be made.

In a general way, what sort of abstracts will be required? Must they be prepared by bonded abstractors, or is this a matter for the judgment of the land bank officials?

It is a matter for the Federal Land Banks to determine. Any abstract of title sanctioned by ordinary sound business usage in the community will be sufficient under this act. The Federal Land Banks will recognize any system of title registration approved by the law of the state in which the land is located.

• Mass the Shrubbery

With but few exceptions, shrubbery gives its best effects when massed. Single specimens often appear well, but as a rule a considerable number of them growing together in one clump will add strength and naturalness to the planting. Where we find one oak tree, there will be, unless destroyed by man, a num-

ber of them. Instead of one sumac, we see a whole colony of them. We should follow Nature's suggestions when she gives them to us.

The mass may be made up of a single kind of shrub or tree, or several. They should be set far enough apart to give freedom for growth. Where several kinds are used, those smaller in ultimate stature should stand in front of the taller ones.

If no more than a dozen plants are to be purchased, get only two or three rather than a dozen different sorts, and mass the similar ones.

Congress has made the usual appropriation to enable its members to remember the constituent at home with a few vegetable or flower seeds of the same kind, no better and we hope no worse than can be purchased from any dealer. In order to be reasonably safe it is better to buy the seeds needed from a reliable seed dealer than to trust to the congressional seed; and, incidentally, why not insist that this congressional free seed graft be stopped?



Here's Proof of What the OIL PULL Saves-

"On four gallons of kerosene it does more work than my neighbors' rigs do on five gallons of gasoline. Gasoline costs just twice as much as kerosene here."

—THOS. TAYLOR, Earl, N. D.

That is *real* saving—the kind that puts money in your pocket. And not only this man but *every* owner of an OILPULL has that kind of a cost cutter.

You want a kerosene burning tractor—make sure you get a *real* one.

We know what the OILPULL will do and for your protection we give an absolute written guarantee with every OILPULL tractor.

But cut-in-two fuel bills is only one OILPULL advantage.

It is built strong and will *last*. It is throttle governed—the power is steady and uniform. Oil cooling does away with hauling water and prevents freezing. A pre-heater means full engine efficiency in coldest weather. The self starter makes starting easy.

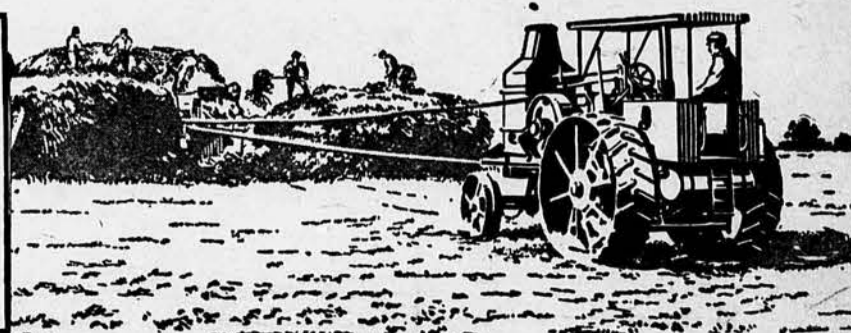
You can count on the OILPULL to handle all your farm jobs—draw-bar and belt—better work and lower costs at every operation. Two sizes, 15-30 and 30-60 h. p.

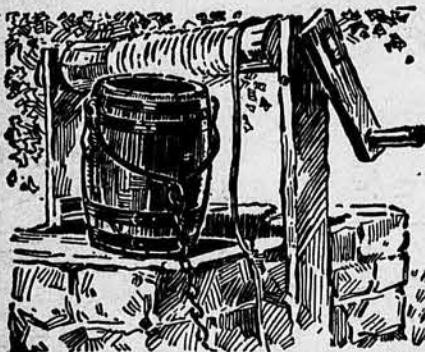
We have a special catalog on the OILPULL—ask our nearest branch.

The same shops that build the famous OILPULL make the Advance-Rumely "8-16" two-plow tractor, the "12-24" three-plow and the well-known Rumely Ideal Separators, Hullers, Huskers, and Engine Gang Plows.

ADVANCE-RUMELY THRESHER CO.
LA PORTE (Incorporated) INDIANA

Address the branch nearest you
Kansas City, Mo.—Wichita, Kan.





How Old was The Old Oaken Bucket?

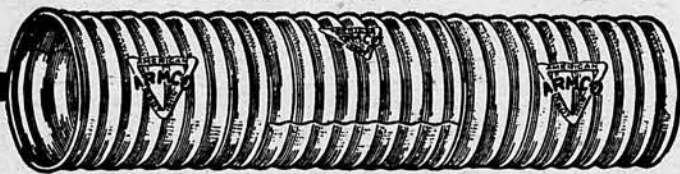
THE "iron-bound" bucket that hung in the well was covered with moss but the hoops were always tight and the bale was always secure. Time left its impress on the wood and on the metal but rust did not eat through the iron although the bucket was subjected to the severest of exposures. The iron was pure iron and pure iron resists rust.

"ARMCO" IRON CORRUGATED CULVERTS

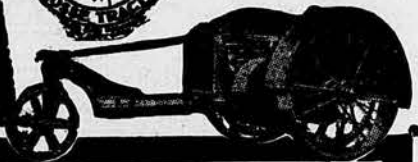
By chemical analysis these are purer iron than were the hoops of the old oaken bucket. Under similar conditions "Armco" Iron should outlast even the old-fashioned iron. Under highways and railroads all over the country, "Armco" Iron Culverts give service like that of the old oaken bucket. They are the only metal culverts that can be counted on to outlast the generation that installs them.

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

ARMCO IRON CULVERT AND FLUME MFRS. ASSOCIATION
CINCINNATI, OHIO



La Crosse Happy Farmer Tractors



LOW PRICE—GREAT VALUE

SO low in first cost and upkeep that any farmer can afford to buy one or more. Simple in construction—with highest quality materials. Only 1/2 the parts used by other tractors, 88% of weight on two drive wheels.

Write for Catalog La Crosse Happy Farmer Tractors are now doing great work in farmers' fields. Model "A" pulls 2 or 3 plows—1500 lbs. guaranteed drawbar pull—16 h. p. on all belt work—extremely light and simple. Use gasoline or kerosene. Model "B"—12-24 h. p. guaranteed—weighs only 2700 lbs. Many exclusive features. Burns kerosene perfectly—Hyatt Roller Bearings throughout. We have a distributor in your territory for prompt service. Write for catalog. Also get literature on the La Crosse Happy Farmer line of tractor-drawn implements.

MODEL "A"
8-16 H. P.
\$585.00

LA CROSSE TRACTOR CO., Dept. 5, Minneapolis, Minn.
Live Dealer Agents Wanted

MODEL "B"
12-24 H. P.
\$735.00

Moline Power Lift Gang

Operated Direct From the Tractor By One Man

A combination Two-Three and Three-Four bottom plow for light tractors. Easily changed from one form to the other.

Can be hitched to any style tractor—hitch is semi-rigid, so that plows may be backed even when in the deepest furrow.

By Pulling a Single Cable

driver raises or lowers plows while in operation—from extreme depth to clear out of the ground—or a little at a time in difficult plowing, to prevent stalling of motor.

Rear wheel locks automatically for plowing or backing, casters for turning or transporting.

Equipped with Moline Quick attachable shares. See the Moline Power Lift Gang at your dealer's, or write us for free illustrated literature.

Moline Plow Co.,

Dept. 10, Moline, Ill.

THE MOLINE LINE INCLUDES
Corn Planters, Cotton Planters, Cultivators, Corn Binders, Grain Binders, Grain Drills, Harrows, Hay Loaders, Hay Rakes, Line Mowers, Listers, Manure Spreaders, Mowers, Plows (chilled and steel), Reapers, Scales, Seeders, Stalk Cutters, Tractors, Farm Trucks, Vehicles, Wagons.



Clutch Pencil Given For 8 Boys' Names

REGULAR size, 5 inches long, nickel plated. Complete with pocket grip. Should last a life-time. Always sharp and ready for use. No broken points. Pencil sent postpaid for names and addresses of 8 reliable boys ages 8 to 18 years living on R. F. D. routes or in the country in any of the following states: N. D., S. D., Minn., Ohio, Ind., Ill., Wis., Mich., Ia., Neb., Mo., Kan., or Okla. Give correct names and addresses. Write plainly. This offer is open only to one person in each family. Only one list of 8 names wanted from each person; no one person may receive more than one pencil. Offer not open to those who sent list of names last fall, unless different names are sent. SUCCESSFUL FARMING, Building Des Moines, Iowa



Pasture Problems in Eastern Kansas

THE live stock situation in Miami County cannot well be discussed without also discussing the pasture problem. This statement is made by O. C. Hagans, agricultural agent in Miami County, in his annual report. In discussing the pasture problem for that county he goes on to say that the value of Kentucky bluegrass, white clover, red top, timothy and red clover is well known to most farmers, and so far as is known these pasture grasses and clovers form the basis for our pasture mixtures. But so long as there is room for weeds to thrive in the pasture of this county there is also room for more good pasture grasses and clovers to grow and thus increase the carrying capacity of our pastures.

In the spring of 1915 a demonstration of the use of sweet clover as a pasture crop for seeding rocky pastures where the stand of pasture grasses was too thin, was planned at D. M. Lauver's. The sweet clover was seeded and made a fair growth during the season of 1915 and furnished some pasture late that season. During the season of 1916, this sweet clover made a good growth and as the pasture was not heavily stocked besides furnishing some pasture it made seed so that it could re-seed this rocky point for 1917. W. E. Hays and K. McLain, of Osawatimie; Ersel Reed, Louisville; A. L. Lingle, Richland, and F. C. Atwood, of Sugar Creek, are co-operators who have used sweet clover for pasture purposes and all report that it proved satisfactory, especially on the rocky hills and abrupt slopes where other pasture clovers had failed to grow.

Ersel Reed reports that he lost eight lambs from bloat on sweet clover in June, 1916. The sheep were turned on the sweet clover early in the morning while the plants were wet with dew.

There are several thousand acres of rocky pasture land in this county, which at the present time are producing practically nothing, and which if seeded to sweet clover would produce good pasture returns.

Alsike clover has been making a name for itself in this county during the past few extremely wet and extremely dry seasons. Ramey Brothers, of Spring Hill; A. L. Lingle, of Wellsville; L. B. Hefebower, of Bucyrus; L. L. Gardner, of Louisville; and Joseph Grother, of Fontana, are some of the men who have allowed the alsike clover to demonstrate to them that it has a place on the upland soil as well as on the wetter bottom soils. These men have found that the alsike seeds more plentifully than the red clover and once a stand is secured there will be enough alsike seed formed to re-seed the field through the winter or drouth may injure the stand. In the demonstration test of seeding red clover and alsike at Joseph Grother's, where the clovers were seeded the first of May, 1916, on the 28th of July, we found that the alsike was well filled with seed.

For pasture and meadow purposes, all information available shows that at least one pound of alsike clover should be seeded with every four pounds of red clover on the upland soils. On the wetter soils a larger proportion of the mixture should be alsike.

A small flock of sheep would be beneficial to the pastures on practically every

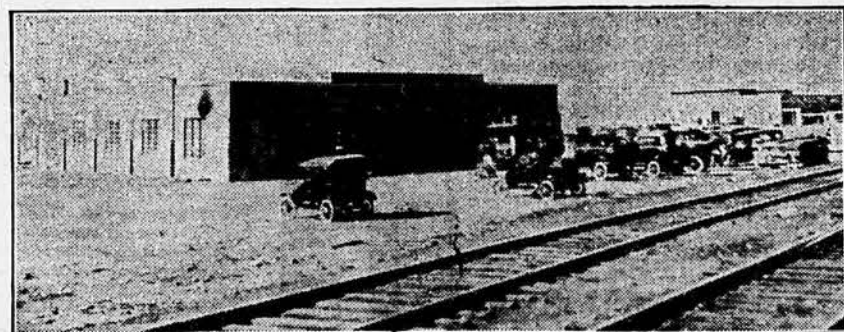
farm. Since sheep will eat over 600 different plants and prefer a large variety including most common pasture weeds, while cattle and horses eat only about sixty different plants, it may easily be seen that a few sheep would benefit most pastures. Also as the sheep destroy the weeds and shrubs, the pasture clovers and grasses will replace them, thus increasing the carrying capacity of the pasture.

The silo is a benefit to many Miami County pastures. It enables farmers to take their stock off the pasture earlier in the fall and feed them later in the spring, thus allowing the pasture plants to get a good growth before the stock is turned on in the spring.

Itinerary of Lecture Train

Monday morning, March 19, the Santa Fe dairy and poultry demonstration and lecture train will be in Gridley for the first stop of the day. The itinerary for the remainder of the trip follows:

MONDAY, MARCH 19		
Arrive.	Station.	Depart.
8:25 a.m.	Gridley	10:15 a.m.
10:45 a.m.	Burlington	12:30 p.m.
1:20 p.m.	Waverly	2:50 p.m.
3:20 p.m.	Williamsburg	4:50 p.m.
TUESDAY, MARCH 20		
8:30 a.m.	Ottawa	10:15 p.m.
10:45 a.m.	Baldwin	12:30 p.m.
12:45 p.m.	Vinland	2:15 p.m.
2:45 p.m.	Lawrence	4:30 p.m.
WEDNESDAY, MARCH 21		
8:25 a.m.	Olathe	10:15 a.m.
10:30 a.m.	Gardner	12:00 p.m.
12:15 p.m.	Wellsville	1:45 p.m.
2:15 p.m.	Pomona	3:45 p.m.
4:40 p.m.	Lebo	6:10 p.m.
THURSDAY, MARCH 22		
8:30 a.m.	Emporia	10:00 a.m.
10:30 a.m.	Reading	12:00 p.m.
12:25 p.m.	Ossage City	1:55 p.m.
2:40 p.m.	Lyndon	4:10 p.m.
5:00 p.m.	Melvern	6:30 p.m.
FRIDAY, MARCH 23		
8:30 a.m.	Saffordville	10:15 a.m.
10:35 a.m.	Strong City	12:05 p.m.
12:30 p.m.	Clemence	2:10 p.m.
2:35 p.m.	Florence	4:20 p.m.
4:45 p.m.	Peabody	6:15 p.m.
SATURDAY, MARCH 24		
8:30 a.m.	Marion	10:10 a.m.
10:35 a.m.	Hillsboro	12:05 p.m.
12:30 p.m.	Canton	2:00 p.m.
2:35 p.m.	McPherson	4:10 p.m.
4:50 p.m.	Little River	6:20 p.m.
MONDAY, MARCH 26		
8:30 a.m.	Webber	10:00 a.m.
10:30 a.m.	Courtland	12:00 p.m.
12:40 p.m.	Concordia	2:10 p.m.
2:25 p.m.	Aurora	3:55 p.m.
4:15 p.m.	Miltonvale	5:45 p.m.
TUESDAY, MARCH 27		
8:30 a.m.	Barnard	10:15 a.m.
10:40 a.m.	Ada	12:10 p.m.
12:40 p.m.	Minneapolis	2:25 p.m.
3:30 p.m.	Manchester	5:15 p.m.
WEDNESDAY, MARCH 28		
8:30 a.m.	Salina	10:15 a.m.
10:45 a.m.	Solomon	12:15 p.m.
12:35 p.m.	Ablene	2:10 p.m.
3:05 p.m.	Hopewell	4:35 p.m.
5:05 p.m.	Burdick	6:35 p.m.
THURSDAY, MARCH 29		
8:30 a.m.	Alma	10:00 a.m.
10:35 a.m.	Esksridge	12:05 p.m.
12:40 p.m.	Burlingame	2:10 p.m.
2:30 p.m.	Carbondale	4:00 p.m.
4:35 p.m.	Topeka	6:15 p.m.
FRIDAY, MARCH 30		
8:30 a.m.	Meriden	10:15 a.m.
10:45 a.m.	Valley Falls	12:30 p.m.
12:55 p.m.	Nortonville	2:40 p.m.
3:20 p.m.	Atchison	5:20 p.m.
SATURDAY, MARCH 31		
8:30 a.m.	Potter	10:00 a.m.
10:35 a.m.	Leavenworth	12:35 p.m.
1:30 p.m.	Bonner Springs	3:00 p.m.
3:25 p.m.	De Soto	4:55 p.m.



HUNDREDS OF AUTOMOBILE PARTIES CAME TO INSPECT EXHIBITS AND HEAR LECTURES AT TWO-DAY MEETING HELD IN FREDONIA BY SOUTHEAST KANSAS LIVE STOCK ASSOCIATION

General Farm Inquiries

KANSAS STATE AGRICULTURAL LIBRARY
16 MAR 17

Well-Bred Heifers Valuable

A KANSAS FARMER reader who has been selling some of his dairy-bred heifers, writes that many who come to buy seem to expect him to sell them at what they call "farmers' prices" of six or seven cents a pound and refuse to buy unless he will so price them. This is rather discouraging to a man who has made some effort to develop a herd of high producing dairy cows.

Not all dairy-bred cows are profitable producers, but a large proportion of them are and if given a chance these well-bred heifers will return a profit on a valuation many times greater than that suggested. This man further says that he was ridiculed when he first started to build up a Holstein herd five years ago. There has been some change of opinion in his neighborhood, however, since his neighbors have seen the results he is getting. There is nothing like actual demonstration to prove the value of good stock of any kind. He states that during the past few years several of his neighbors have bought pure-bred bulls as a result of what he has done with his herd. There are now over a hundred Holstein cattle in that community.

Flavors in Milk

M. T. L., Greenwood County, asks what causes the various disagreeable flavors in milk.

Milk naturally has a pleasant flavor but it can have many acquired flavors that are decidedly unpleasant. Among the commonest kinds of disagreeable flavors are those resulting from things the cow eats. Wild onions or garlic quite often cause a good deal of trouble in the spring when the cows first go to pasture. Ragweeds which are sometimes eaten by cows when the grass is short, give a bitter flavor.

Another source of disagreeable flavors in milk is the absorption of these flavors from the air of the stable or place in which the milk is kept. Milk will very quickly take on these flavors. It is therefore important that the milk be removed as quickly as possible from the stable or other place where it might become so contaminated. Some bad flavors are the result of specific bacterial action. Certain kinds of bacteria produce bitter milk. This is not an uncommon source of trouble in cold weather, this particular form of bacteria apparently being at work at comparatively low temperatures. Absolute cleanliness about utensils and the barns in which the cows are milked is necessary to avoid this source of bad flavors.

Growing Broom Corn

J. R., Grant County, asks how to improve the quality of the broom corn he is growing. He finds that the price paid for the brush depends very largely upon its quality.

Probably one of the most important points in the improvement of broom corn is the matter of seed selection. Broom corn crosses with cane, feterita, kafir, and others of the sorghum group. Seed from fields that have been mixed with these other sorghums will produce a very poor quality of brush. In order to bring about any improvement it is almost essential to make a specialty of growing seed. Good seed cannot be obtained from the threshers because practically all broom corn gathered for the brush is harvested before the seed is

mature. Even if the seed is mature enough to grow, it is likely to be badly mixed, because so little effort has been made to improve this crop and keep the seed pure.

Some growers plant a seed patch each year and exercise a great deal of care in keeping the crop in this patch up to standard. If our correspondent could secure some seed from a grower who has made some effort to improve the crop and keep it pure, he will have made a most important step in producing brush of better quality.

We would advise every grower of broom corn to plant a seed patch of his own unless someone in his neighborhood is already doing this on a large enough scale to supply seed to his neighbors. This home seed patch can be planted at one side of the main field, using the purest seed obtainable. As the plants come to the heading stage the hybrids and those not true to the desired type can be removed before they scatter their pollen. As the brush begins to come out of the boot another culling can be made with profit. All the plants showing spiky brush or having a strongly developed central stem should be removed before they can cross-fertilize other plants having desirable brush. If this work is well done the first year it will be much easier in the following years to improve the crop and keep it up to standard.

Broom corn is a crop well adapted to the southwestern part of our state and if any attempt is made to grow it, it is well worth while producing brush of good quality and learning how to care for it so as to bring it to market in the best condition possible. Special skill is necessary in order to handle broom corn successfully. Many fail after growing a good crop, because they do not know how to harvest it and market it in first class condition.

Farmers' Bulletin 768, recently published by the Federal Department of Agriculture, takes up the growing of broom corn in considerable detail. Every broom corn grower should secure a copy of this bulletin.

Now is the time to plant seeds for early vegetables. This may be done in a sunny window, a hotbed, or a greenhouse. Vegetables usually forced in this manner are the tomato, cabbage, cauliflower, pepper, musk melon, and occasionally the onion. The seed should be sown either broadcast or in shallow drills. When the plants have formed from one to four leaves they should be transplanted from two to four inches apart in other boxes, and when the weather conditions are suitable reset in the field.

Methods of planting corn by which one or two rows of an early-maturing variety alternate with one or two rows of a later-maturing variety have given

Cornell Wood-Board

Easy to Buy and Apply

GUARANTEED SATISFACTORY When Properly Installed

Another Bedroom

That "storeroom" can be turned into a very handsome bedroom, easily, quickly, and at very small cost. Simply use Cornell-Wood-Board for the walls and ceilings. Nails right over the old walls or

direct to the studding. Transforms the room.

Besides its supreme merit as a modernizer of dwellings Cornell-Wood-Board is ideally suited for the MILK HOUSE, DAIRYBARN, CHICKENHOUSE, GARAGE, STABLE, SUMMER KITCHEN, PORCH CEILING, CLOSETS and for ALL ALTERATIONS and REPAIRS.

A non-conductor of cold, heat and moisture; keeps buildings warm in winter, cool in summer, dry all the time. It is a wonderful fire resistant—almost impossible to burn it. Comes in boards of standard sizes packed in bundles. Every farmer should keep a bundle on hand for emergency use.

Cornell Wood Products Company
C. O. Frisbie, President
173-175 W. Jackson Blvd., CHICAGO

Panel Suggestions FREE!

Send us dimensions or blue prints of any room or rooms and we will draw up beautiful, distinctive Panel Suggestions with Cost Estimate. This service is free—no obligation on your part. We will also send sample, views and complete information. On Special Request we will send plans for Model Dairy Barn, 51 x 72 feet. Mention the Kansas Farmer

Cornell Wood Products Co.
Dept. F. 10 Chicago

Coupon

Send me Panel Suggestions and Cost Estimate as per dimensions enclosed, or, just send sample and Complete Information about Cornell-Wood-Board.

Name.....

Address.....



Enter Helps

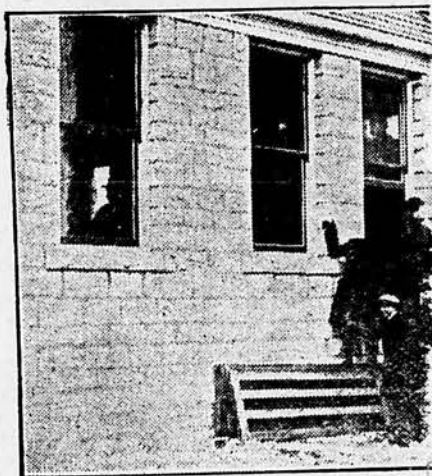
ad to grow a record crop
Would you not buy the
find—one that would surely
? Why not do that anyway?
International or C B & Q

urately, whether used with
full hill drop plates; whether
grilled. The drop clutch can be
is working, to drop 2, 3, or 4 kernels
asily adjustable to the height of the
lever makes head row planting easy.
International or C B & Q planter,
arker, a handy feature that saves
There are fertilizer attachments if
ion pea and corn planting hoppers,
r planter will be equipped just as
rows 28 to 44 inches wide by
distances between hills.
you will want to know all about
st us send you full information.

ter Company of America
orporated)

U S A

mick Milwaukee Osborne Plano



OWING TO CROWD AT MANHATTAN CON-
ARRIVALS HAD TO ENTER PAVILION TH

BETTER PRICES BROADER MARKETS

Part Played in Problem by Transportation — National Treatment for a National Enterprise.

IN every part of the country the farmers are turning their attention to questions relating to the handling of their products after they leave the farm. Transportation is a part of this problem. The cost of reaching their markets and the ability to reach them promptly at the right time are important factors in determining the returns from their crops.

Low Freight Rates

Fortunately the American farmer has at his command the lowest freight rates in the world. It costs no more to move a load of wheat 500 miles by rail than it does to haul it five miles from farm to station by team. A ton of farm produce of any kind can travel almost twice as far for the same charge on American railroads as on the government-owned roads of other lands.

The cheapness of transportation is not the whole issue. To meet the needs of the farmer transportation facilities must be ample. There must be plenty of tracks and cars and locomotives, and sufficient terminals.

Billion a Year Needed

The railroads are anxious to provide means to take care of all the business they can obtain. But a vast outlay of money is required. A billion and a quarter dollars a year for the next ten years or more must go into railroads to provide the necessary transportation facilities.

During the past few years it has become more and more difficult to obtain even in part, the money required for this purpose. This has been due partly to the poor promise of a satisfactory return on the investment; partly to the uncertainty created by numerous and conflicting regulations.

Regulate For All the People

Nobody seriously proposes that the public regulation of railroads shall be weakened. Certainly the railroads themselves do not. But it is a reasonable proposal that the regulation of this great national business should be handled by national agencies, on national lines, in the interest of all the people, and not by local agencies to serve local or sectional ends.

Regulation at cross purposes by 49 masters—48 states and the federal government—now imposes upon the railroads an annual burden of many millions of dollars of wasteful expense, from which the public derives no benefit. It is of primary importance to the farmer to cut down this waste in order that his products may be moved to market at the least expense and with the greatest possible expedition.

The farmer's interest demands free trade among the states.

RAILWAY EXECUTIVES' ADVISORY COMMITTEE

61 Broadway New York City

FRANK TRUMBULL, Chairman
FRANCIS H. Sisson, Assistant
ALFRED P. THOM, Counsel

B. F. BUSH Receiver Mo. Pacific Ry.	R. S. LOVETT Ch. Union Pacific R. R.
A. J. EARLING Pres. C. M. & St. P. Ry.	C. H. MARKHAM Pres. Ill. Cent. R. R.
HOWARD ELLIOTT Ch. N. Y. N. H. & H. R. R.	SAMUEL REA Pres. Penn. Ry.
W. J. HARAHAN Pres. Seaboard Air Line Ry.	A. H. SMITH Pres. N. Y. Central Lines
WALKER D. HINES Ch. A. T. & Santa Fe Ry.	FRANK TRUMBULL Ch. C. & O. Ry.
HALE HOLDEN Pres. C. B. & Q. R. R.	P. D. UNDERWOOD Pres. Erie R. R.
L. F. LOREE Pres. D. & H. Co.	H. WALTERS Ch. Atlantic Coast Line R. R.

DANIEL WILLARD
Pres. B. & O. R. R.

GENERAL FARM NOTES

If one is arranging a garden on paper, the location of the vegetables should be planned in such a way as to keep those of similar cultural conditions together. The perennials such as rhubarb, asparagus, horseradish and winter onions should be located at one side, with such full season crops as parsnips, salsify and Swiss chard. The shorter season cool crops, such as early cabbage, onions, spinach, lettuce, radishes, beets, carrots and peas, come next in order of their planting, and finally the warmer plants such as sweet corn, beans, tomatoes, peppers, eggplant, cucumbers and melons.

Keep the Lawn Open

When attempting to beautify a lawn, do not break it up with flower beds, scattered shrubbery, unnecessary trees, walks or drives.

An open area with no obstructions gives the effect of greater size; a broken one seems to be smaller than it really is. The former is preferable in landscape work. The broken lawn is impractical because it is more difficult to take care of properly. Except in formal plantings, the flower bed, no matter how beautiful, is plainly artificial and out of place. Usually, too, the flower bed after the blooming season becomes an ugly spot and hardly improves the appearance of the lawn. The isolated flower bed does not blend or harmonize with the lawn and is, therefore, inartistic.

There is nothing more restful than a stretch of good lawn, while one which is cut up with scattered shrubs and beds looks cluttered and disorganized. Keep the lawn open and unbroken.

The best location for an early garden is a southeastern slope. Early vegetables, raised and recommended by the agricultural college are stringless green pod and bush lima beans; Crosby's Egyptian beets; black seeded Simpson and improved Hanson lettuce; early scarlet turnip and white Strassburg radish; Victoria spinach; premium flat Dutch and early Jersey Wakefield cabbage; Nott's excelsior and Gradus peas; mammoth white Cory, Stowell's evergreen, and country gentleman sweet corn.

Business Side of Farming

Farming is a business. The successful farmer is the one who understands his business.

Keeping farm accounts means more than keeping a record of your farm receipts and expenditures. That record is worth but little without an inventory at the beginning and end of each year. The completed record shows the total profits and losses, and it is valuable.

The farm bureau of this county has for its object the improvement of the farming business. Crop yields are only one part of the farming business. A

farm with large yields is not necessarily successful. Most farmers know far more about their business than many believe, yet very few can keep the details in mind unless they have a system of more or less definite records for reference.

The successful farmer wants to improve his methods, enlarge his labor income, "stop up the leaks," and profit by his mistakes. Can he do that without adopting business methods? We doubt it.

Bradstreet and Dunn report that the life of the average business in towns and cities is short. Competition is very stiff and for a business in a city to last it must be adapted to conditions. The city business man must study his business, be wide awake, and use the most modern methods.

Just so nowadays with farmers. Land is rapidly increasing in value, labor is getting more scarce, and machinery is doing nearly everything our fathers did by hand. Every day it is becoming more important that a farmer use better business methods and study his business.

When men are farming in the same region, on the same kind of soil, raising the same crops and are selling their products on the same markets, it is startling to find that one of five farmers in almost every community is making over \$1,000 more than any of the other four. After paying all farm expenses and subtracting the interest that the money invested in the farm business would earn, that man is getting over \$1,000 more for his year's work than perhaps the neighbor across the road. The paint on the barn or the automobile in the shed do not always prove a farmer is making money. The year's labor income is the true measure of a farmer's success.—AMBROSE D. FOLKER, Agricultural Agent for Jewell County.

Organic Matter in Soil

S. L. M., Bourbon County, asks if organic matter such as straw, cornstalks and similar material adds any considerable amount of plant food to the soil, or is it valuable simply because it makes the soil loose and mellow.

In soil which has been farmed for a good many years perhaps the most important effect of the organic matter added is that it causes it to become more porous and light. It therefore not only takes in water more readily but has greater capacity for holding it. A soil very deficient in organic matter usually runs together when wet and bakes hard when it dries.

Decaying organic matter also adds plant food to the soil and in the process of its decay furnishes food for the many forms of bacteria which are essential to unlocking soil fertility. No farmer can afford to waste the straw and other organic matter produced on his farm. Every effort possible should be made to get it back into the soil.

DREW STALLS



All Steel
Indestructible
Convenient

Reasonably priced.
Economical because durable and trouble free.

Drew Steel Stalls are better because they're equipped with a sure-stop on each side to guide the animal's head into the open stanchion.

Another important feature about the new DREW Stall is that the stanchion lock is always connected. Even when the stanchion is open there is still a solid connection between lock and arm. Every sanitary feature, every time, labor and money saving device that has proven best in cow stall construction has been included in the new DREW Stalls and Stanchions.

Your cows will be healthier, your barn work easier, your satisfaction and profit greater, if you fit out with Drew Stalls. Complete list of other Barn Equipment.

WRITE for large illustrated book on Dairy Barn Equipment.
Drew Carrier Co. Dept. 123 Waterloo, Wis.



Beat it with a
FISH BRAND
REFLEX
SLICKER
\$3.50

Keeps out all the wet
DEALERS EVERYWHERE

Waterproofs, Absolute, are Marked thus — TOWER'S FISH BRAND
A. J. TOWER CO. BOSTON

WANTED MEN! \$75 TO \$300 A MONTH!

Demand for capable automobile and tractor men far exceeds the supply. Our graduates secure good paying positions as Salesmen, Demonstrators, Factory Testers, Garage Managers, Drivers and Tractor Experts.
\$50 Course FREE
Only six weeks required to train you in this great school. Most complete instruction. Instructors all experts. Enroll now and receive \$50 Course in Tractor and Lighting Engineering Free. Write today for our big Free Book and \$50 Free Scholarship Certificate.
RANE'S AUTOMOBILE TRAINING SCHOOL
Largest Auto Training School in the World.
11096 Locust St., Kansas City, Mo.

I CAN Make YOU The BEST PRICE On a Better Engine

Your choice of WITTE High Grade Engines—Gasoline or Kerosene—5 to 22 H.P.—all styles—stationary or on trucks, law mowers, etc., with or without magneto—List or catalogue free.
WITTE ENGINES
are made in the latest exclusive engine factory in the U.S., selling direct. 30 years' experience proves WITTE Engine quality. Immediate shipment. Book Free.
WITTE ENGINE WORKS
1608 Oakland Ave., Kansas City, Mo.
1609 Empire Bldg., Pittsburgh, Pa.

MAKE YOUR BIKE A MOTORCYCLE

At a small cost by using our attachable outfit. FITS ANY BICYCLE. Easily attached. No special tools required. Write today for bargain list and free book describing the SHAW Bicycle Motor Attachment. Motorcycles, all makes, new and second-hand, \$35 and up.
SHAW MANUFACTURING CO.
Dept. 149 Batesburg, Kansas.

KEROSENE ENGINES

Durable, Powerful, Reliable, Maintenance. Built to last; to do hard, heavy work. Uses Cheapest Fuel. Full 1/2 to 1 1/2 horse-power more than rated. 3 Months Trial. Easy Terms. Sized 1/2 to 22 H.P. Easy to start. No Cranking. No batteries. 10 Year Guarantee. Most practical engine ever built. Engine book free. A Postal brings it.
THE OTTAWA MANUFACTURING CO.,
661 King Street, OTTAWA, KANSAS

A "Review and Album of the 1916 International" has been prepared by the management of this big live stock exposition. It is bound in cloth, is profusely illustrated, and furnishes a complete history of the show. This can be obtained by sending fifty cents to B. H. Helde, Union Stock Yards, Chicago, Illinois.

Feeding Young Dairy Calves

FEEDING the calf should begin before it is born, says Farmers' Bulletin 777, "Feeding and Management of Dairy Calves and Young Dairy Stock," recently issued by the U. S. Department of Agriculture. Poorly nourished cows give birth to weak, puny calves which are hard to raise. Cows which have an abundance of palatable and succulent feed and are in good body flesh and healthy, thrifty condition at calving time, are most likely to produce well-developed, strong and sturdy calves which will respond normally to proper feed and care.

The calf should always receive its mother's milk at first, as the colostrum, or first milk, stimulates the calf's stomach and other digestive organs to action. Most dairymen prefer to keep the calf with the cow for about forty-eight hours immediately after birth. It may be best to allow a weak calf or one that does not gain strength readily to remain a longer time, but it is sometimes difficult to teach the calf to drink after sucking the cow for a time, and serious trouble may result from its failure to obtain food.

Successful raising of calves requires absolute cleanliness. Calf pens should always be kept clean and be supplied with plenty of dry bedding. Discarded feed should be removed from the feed boxes, which should be thoroughly brushed and cleaned each day. All milk fed should be fresh and clean, which is true also of other feeds. Milk pails should be scalded thoroughly with boiling water, or sterilized with steam if possible.

Milk from cows having a communicable disease, as tuberculosis, should be pasteurized—heated to 145 degrees F. and held at that temperature for thirty minutes—before it is fed to calves. Separated milk from a creamery also should be pasteurized, because it is practically impossible to know that such milk is free from infection.

Better results are obtained by feeding young calves three times a day, with the periods between feeding as nearly equal as possible. When fed in this way the calf does not overload its stomach, and the digestion of the feed is more evenly distributed throughout the twenty-four hours. Regularity in feeding is important. When calves are fed but twice a day, the feeding should be as nearly as possible twelve hours apart.

At birth a fifty-pound calf should have about eight pounds of whole milk a day, while a hundred-pound one should have about twelve pounds. For the first four days milk from the dam should be fed, then that from any of the other cows in the herd, preferably not from any that are nearly dry. Milk containing not more than 4 per cent butter fat is considered best.

At the beginning of the third week separated milk may be substituted for whole milk at the rate of one pound a day. The daily ration may be increased from two to four pounds, depending upon the vigor of the calf. When the calf does not drink eagerly what is offered, the quantity should be cut down. The ration at the end of the third week usually should be approximately one-half whole and one-half separated milk. During the fourth week the change should be continued until by the end of the week only separated milk is fed, unless the calf is very delicate. With especially vigorous calves the change to separated milk can be made about a week earlier. The quantity fed can be increased gradually to eighteen or twenty pounds a day.

Six months is probably a good average age at which to wean calves from milk. The age depends upon the cost of the milk in relation to the value of the calf, its breed, size, vigor, etc. The season of the year and the other feeds available also must be considered. When the best of hay, silage, and a good variety of grains are available, or when good, succulent pasturage can be provided, the calf can be weaned earlier; also the stronger and more vigorous the calf, the earlier it can be weaned. On the other hand, the more valuable the calf, the more expense the owner is warranted in developing it, and the later it will probably be weaned. If skim or separated milk is plentiful, calves may be fed profitably until eight or ten months old.

When the calf is in its second week it should begin to receive grain, and when one month old it should eat about half a pound a day. After this time

the quantity of grain may be gradually increased, feeding all that the calf will eat until three pounds a day is reached, probably during the third month. Grain fed to supplement separated milk should never be mixed with the milk. It is questionable whether the preparation of grain in any way, such as soaking or boiling, is advisable under most circumstances.

Wheat bran is eaten readily by young calves. Corn has an excellent physiological effect and to a great extent may take the place of fat removed from skim or separated milk. Experiments tend to show that corn fed to calves should be

cracked rather than finely ground. Ground oats are good in grain mixtures when available, but in many cases cost much more per unit of feed than corn and bran. The following grain mixtures are recommended in the bulletin:

Three parts cracked corn and one part wheat bran.

Three parts cracked corn, one part wheat bran, and one part ground oats.

Three parts cracked corn, one part wheat bran, one part ground oats, and one part linseed meal.

Five parts cracked corn, one part wheat bran, one part ground oats, and one part blood meal.

Oats, ground.

Clover hay, alfalfa hay, or the most palatable roughage available should be given the calf after the second week.

Alfalfa is liable to cause scours, and should be fed sparingly at first and increased only after the calf gets accustomed to it. At first, hay should be furnished only a handful at a time and be placed so that it cannot be soiled. For the first six months, at least, the calf should receive all the roughage of good quality that it will eat up clean. When the calf has access to good pasture during the first six months, it need not receive other roughage. It is not advisable, however, to have the calf under two months of age on pasture in the early spring.

Fences, outhouses and unsightly spots can be screened and improved in appearance by a judicious planting of shrubbery.

SPREAD NOW! HARVEST BIGGER CROPS THIS FALL!

A new 1917 model Galloway Spreader used to get the manure crop out on the land between now and planting time means bigger crops this fall. Prices were never better. The producer is having his inning! Now is the time to get that big manure pile out on the land because every load spread means cash in the bank next fall for farm improvements, pleasures or other things you want. Get your manure crop out on land where you plan to grow corn next year—top dress the winter wheat—get it on the soil where you are going to sow oats! Top dress the meadows—the alfalfa, the clover! Every manure pile is a pile of gold! A spreader used steadily for one to two weeks means that it has paid for itself because its use represents money at harvest time that you otherwise would not get. Quit spreading by hand—using old broken down spreaders, when you can buy the best spreader on earth—the Galloway new 1917 model Low Down No. 8—and still save \$25 to \$50 by buying direct from factory to farm! I mean every word of it! You can own the best spreader built and save from \$25 to \$50 over prices usually paid for spreaders not as good—not as down to date in design—as light in draft—made of as fine materials, nor covered by the eleven Galloway spreader patents found exclusively on the Galloway. These features and many others make the Galloway 1917 Models No. 8, No. 1A and No. 5.

WORTH \$50 MORE THAN ANY OTHER SPREADER

New steel beater and wide-spreading V-rake pulverizes and tears the manure to shreds—worth \$15 more on any spreader; my positive, inviolable, irrefutable, patented roller feed—the secret of our light draft (exactly the same principle as moving a house on rollers) worth \$25 extra on any spreader (exclusive feature on the Galloway); patented automatic stop, uniform clean-cut push-board, worth \$10 extra on any spreader (exclusive on the Galloway); new over-riding pressed steel, unbreakable tongue, worth \$5 more on any spreader; all these valuable features cost you nothing extra when you buy the Galloway at my new SPECIAL 1917 PRICE.

Remember I sell on terms to suit you—Cash, Bank Deposit, Half Cash Half Note, All Note, Installment Plan or one year to pay—and I sell direct at less than wholesale from factory to farm at actual cost of material, actual cost of labor and only one small profit based on the transaction here at Waterloo. I am a manufacturer—not a jobber or dealer. I give you thirty days' field trial and any Galloway spreader is returnable to me within one year if you are not perfectly satisfied. Try this spreader at our risk without obligating yourself in any way. Buy a Galloway.



ASK FOR MY BIG NEW 1917 FREE BOOK

It is a big book of 280 pages. A printed in many colors. It tells the least labor. How a run-out, turned into a goldmine crop producer, sure pit to preserve fertility. How to your corn crop from 15 to 25 bu. per acre. How a Galloway Spreader will pay for itself in one year by increasing crop profits and leave money to put in the bank besides. How I save you \$25 to \$50 on a spreader. How with the 10-pound steel and malleable mechanism we accomplish the same results as others do with 400 pounds of brittle gray iron. How a Galloway Spreader handles easier with two horses than other spreaders with three and often four horses.

postal gets it. Handsomely how to handle manure with unproductive farm was increase

NOTE THESE 1917 SPREADER IMPROVEMENTS

Built stronger and better than ever! Beater bolts are 1-16 in. larger, with lock nuts. Beater bar bolts increased in size and strength. Beater teeth longer and stronger than ever, which means they now tear the toughest manure finer than ever and spread it easier. Heavier bolts hold the beater bars in the beater head. Rear shaft increased in strength—higher carbon steel used. Additional bolts strengthened (beyond actual necessity) the beater bracket.

from rear wheels. All metal parts thoroughly coated with asphaltum weatherproof paint. Adjustable from 4 to 24 loads per acre. Spreader box better finished and painted. Galloway wide-spreading V-rake on every machine. Don't buy a spreader of any make or kind until you have tried a genuine Galloway 1917 model No. 8, No. 1A or No. 5 at our risk without obligating yourself in any way. This spreader should not be compared or confused with



"I built my reputation as a manufacturer on good manure spreaders."—WM. GALLOWAY.

Larger drive sprockets, which means lighter draft than ever. Fifth wheel castings larger and increased in strength—makes spreader box easier in turning. Rear conveyor shaft now made of No. 40 carbon steel. All steel tongue. Double chain drive direct

users) that are found on the Galloway. Beware of cheap, absolutely worthless imitations of the genuine Galloway—at any price! Buy a Galloway direct from Galloway at Waterloo and you will be safe. Spreaders are shipped from Waterloo, St. Paul, Kansas City, Chicago or Council Bluffs—whichever is nearest your station.

UNDENIABLE PROOF!

I saved \$29 by ordering a Galloway. I know it is a better spreader than I could have bought here for \$125.—Geo. A. Kralik, Olathe, Okla.

There are six Galloway spreaders in my neighborhood. They tried my spreader first. All are more than pleased. Have had no repairs in seven years.—Edw. Semmelroth, Tekonsha, Mich.

I saved \$39. Believe I got a better spreader than was offered me here for \$125.—A. M. Kralik, Olathe, Okla.

WM. GALLOWAY, Pres., WM. GALLOWAY CO. 219 Galloway Station WATERLOO, IOWA



The Facts About the

United States Government Authorities Show by Excerpts Not Advanced in Proportion to Other Countries

Herewith are Excerpts from the Official Report Just Issued by W. B. Greeley of the National Forest Service, With a

Are You a Home Owner?

If you are a farm or a home owner, or ever expect to become one; if you have ever bought any lumber or ever expect to buy any, you certainly should be interested in the contents of this page.

95% of the lumber consumed in the building of new homes and barns, and in repairs, and for general purposes, is sold through the retail lumbermen. The purpose of this advertisement is to show that lumber is not sold by the retailer at an exorbitant price, and we offer the Government Forest Service report herewith quoted to prove the statement. Upon the broad conclusions of the report herein quoted the Federal Trade Commission is also in agreement.

Learn the Facts for Your Own Profit

It will profit directly every man and woman to learn the facts about lumber—its cost, its adaptability and its intelligent use. The Forest Service report has spoken the last word and we invite your critical examination of the facts and figures as set out in the center of this page. It has remained for the National Government to prove to you the utter untruth and insinuations concerning a "Lumber Trust;" that on the contrary, competition has been so keen that these products have been marketed at a small profit, and frequently at a loss during a greater part of the time in recent years past. The Government did not compel or demand of the manufacturers or retailers of lumber that they furnish information for the Forest Service report herein quoted. On the contrary, they requested it, and the government officials were overwhelmed with offers of the lumbermen to furnish information. The lumbermen were more than gratified that the Government intended to publish the facts about the Lumber Industry. A volume has been compiled, and some of the essential facts are set out in the center of this page. We ask of you your candid judgment. You have been led to believe that every time you went to a local lumber yard you paid an exorbitant price. Do you believe it is possible to assemble lumber in your community from the South, North and West and distribute it to the consumer, from a fence picket to a house or barn bill, at a lower cost

To get lumber from the manufacturer to the consumer at the lowest cost, it should come with but one freight paid. Manufacturers being unable to furnish all kinds of wood used in the average building, the local retailer is the only agency thru which this service can be rendered to the consumer. This retailer is, therefore, in position to render a service possessed by no other agency. He is always in position to furnish what the consumer is unable to obtain in mixed shipments.

to do business, or at a less profit? We believe the consumer never objects to paying a fair and reasonable profit on what he buys when he knows it. You now have the unbiased facts and statement of the Federal Government, and it is herewith submitted to you with the belief that it will be accepted as the truth, which it is.

How Lumber Is Distributed

Remember 80 per cent of all of the lumber sold in the average community is sold in wagon loads or less, not in carlots. It is possible for a lumber yard to do a fair amount of business and not sell as much as a carload to any one consumer in a whole year. If it were possible for all consumers of lumber (which it is not) to buy it in straight carlots it would cost less per thousand feet to sell it, as a matter of fact, but not 10 per cent of the lumber consumed in the average community can be sold in carlots, and no mill—either North, South or West—can fill an order for the average house even

Read These Verbatim Excerpts from

RETURNS IN LUMBER

"Competition in manufacturing is not only keen, but often destructive."

"Ups and downs have been the portion of sawmills. Occasional years of high prices, 1914 and 1915 being the most extreme of these."

"The prices received for lumber at the mill in each of the four regions studied during the past few years have followed similar market conditions at the same time. The fluctuations reflect similar market conditions at the same time. The prices followed 4 years of comparatively low prices; a rising market for 12 years until late in 1915. During 1916 lumber prices have traversed a complete cycle, again rising toward their former mark in September and October."

"Taking the years from 1907 to 1915, the average price of Southern Yellow Pine as a base, Yellow Pine prices were under it during 5 out of 9 years, in prices ranging from 2 to 16 per cent. Similarly compared with the average during the same period, prices were 4 per cent above this figure in 1907 to 9 per cent below it in 1911, 14 per cent below it in 1914, and 10 per cent below it in 1915."

RETAIL RETURNS

The government report covered an investigation of 1000 operations (one operation in Missouri, Kansas and Oklahoma during the years 1912, 1913, 1914 and 1915, and 999 in other parts of the country). The average return was 7.53 per cent (7.53%) on the investment, which is seven and two-hundredths per cent.

\$2.08 profit per thousand feet is two and two-tenths (2.2) of a cent profit on a 22-cent cost. Returns were obtained also from eighty-eight town and country yards operated in the same period, which averaged seven and forty-six hundredths per cent (7.46%) on investment.

"One of the objects of our inquiry was to clear up misunderstanding about the lumber business as far as we could get them, and so lay the basis for better understanding in the regions where the study was conducted the lumber business for the past few years. The changes and conditions in the industry, during the past few years have tended to increase the intensity of competition."

We Submit These Facts As An Answer to All the Charges

"Their operating costs (108 Southern pine mills) in 1914, including depreciation, amounted to \$14.54, whereas the average price received for their cut was \$13.68. The book loss on operating capital. No interest is included in the figures of cost."

"The year 1915 was no better than 1914 for manufacturers of Southern Yellow Pine. Profits on manufacture in that region were good in 1912 and 1913, amounting to 50 cents per thousand feet of lumber. In 1911, with an average return of about 50 cents per thousand feet of lumber. The southern pineries; 1906 and 1907, on the other hand, were years of high profits."

"Lumber manufacture in 1913 netted some profit to the majority of Douglas fir operators."

"A contrast is found in the conditions during 1914 and 1915. Lumber production was high in 1914, but the price received for it was low. Operators of exceptional ability or location were able to work out their operating capital and without earning interest on borrowed money."

Freight The Largest Single Item of Cost

"A fifth or more of the cost of lumber to consumers is eaten up in railroad freights, and farther from the bulk of consumers is an important factor in the increasing cost of lumber. Labor costs, and in the decreasing purchasing power of money. At that, the rise in lumber prices from that of most commodities; and since 1907 lumber has fallen behind."

"Since lumber freights are uniform for all grades and based on weight, the railroads are able to charge higher grades."

"The large part of the price paid for lumber by consumers in the Middle West which is eaten up in freight."

If there is a better way to manufacture and distribute lumber than from the manufacturer through the retailer method offering equal service and economy to take its place. Build with Wood, because it is the best.

Lumber Business!

Investigative Investigation That the Price of Lumber Has Commodities or Other Building Materials

at Talk to Home Builders by J. R. Moorehead, Secretary-Manager of The Southwestern Lumbermen's Association

from The Government Report: MANUFACTURE

ings have been followed usually by longer periods of small profits or losses—

ing periods of from 8 to 27 years prior to 1916 are indicated by comparative practically the country over. In general, 1906 and 1907 were years of high in 1912 and 1913, and a sharp and continued slump from the middle of 1913 ching the 1912-13 levels in the early spring, depressed in midsummer, and

shows a range of from \$12.50 to \$16.50, or 32 per cent of the lower rate. bread of 58 per cent of the lower rate. Taking the average price of the entire ns ranging from 5 to 12 per cent. They exceeded it in 4 years by amounts period, the prices received for Douglas Fir lumber have ranged from 28 per it 4, and 20 per cent below it in 1915."

PROFITS

ing one full year's business) of line yard companies doing business in Mis- ws a net profit of \$2.08 per thousand feet, or seven and fifty-three hun- per cent (7.02%) on total sales.

een feet long.

ndependent retailers on the business transacted in 1914. Their net profit even and thirty-one hundredths per cent (7.31%) on total sales.

er industry on the part of the public, by giving the public the straight facts co-operation in the future * * * * Our investigation has shown that part is competitive; and that its restraints upon trade are localized and ent development in the business, including various phases of lumber dis- etition within the industry."—W. B. Greeley.

at Exorbitant Profits Are Made By Retail Lumbermen.

d an average charge for timber of \$4.11 per thousand feet, lumber tally, totaled cents per thousand feet represented 5.8 per cent on the investment in plant and

e Lumber. General data obtained by the Forest Service indicate that the average hing over \$1.50 per thousand feet in the first year, and \$2.00 in the second; and years 1908, 1909 and 1910 brought loss or low profit to the average operator in ceeding \$3.00 per thousand feet."

ve the market value of timber, which averaged about \$1.50 per thousand feet. * * * * er cent under that of 1913, and prices shrank so heavily that, regionally considered, de a small profit; others lost money or incurred the cost of shut-downs. Numerous con- vested in manufacturing."

ost in the Distribution of Lumber

* * and rising costs of transportation as timber shortage has moved the mills farther Other causes lie in the greater demands made upon the retailer by the public, in higher es, though very marked during the 10 years before 1908, has not been greatly different

a much larger part of the retail price on lumber of low value than in the case of the n up in transportation stands out strikingly." * * * *

local retailer to the consumer, American brains will find it out and adopt it. As yet, there is no oth- leat expensive, the best appearing, and the universal all-purpose building material now as in the past.

if a carload is required, for the reason that the average home today contains from two to six or eight species of wood, all growing in and manufactured in widely different parts of our country. Lumber must come direct from the manufacturer to the nearest point of consumption to be economically distributed. The retailer assembles it in his yard in carlots and distributes it to his customers. He can buy in carlots as cheap as

Don't be deceived by statements to the effect that you pay four or five profits when you buy lumber from retailers. Most large mills have their own selling force and sell their lumber to the retailer direct. Many smaller mills which cannot maintain their own selling force sell their entire out- put to the wholesaler, who sells it to the retailer in com- petition with the large manufacturer who sells his own lum- ber through his own office. The large manufacturer and the wholesaler are active competitors for the retail trade. Low price and good quality always get the business.

the cheapest. He buys it direct from the manufacturer. He only pays one freight and one profit (your informa- tion to the contrary notwithstanding) and that to the manufacturer. Lumber is a heavy, bulky and compara- tively cheap product.

Freight adds largely to the cost for even a short haul. You cannot ship it twice any more than you can ship coal twice and distribute it economically.

Why Houses Cost More

A recent comparison made between the present cost of a modern home and the cost of that same home had it been erected without modern improvements and con- veniences, shows the following result:

The present cost of this modern seven-room house, with all conveniences installed, was \$3,450. The de- ductions for full excavated basement, with concrete floor, hot water heat, sewers, gas, water and electric light connections and fixtures, paving, bath room and fixtures, closets, etc., etc., were \$1,550.00 of this cost,

The small town enjoys the same freight rates as the large city, and is, therefore, at no disadvantage in buying on ac- count of a higher freight rate, or on account of the quantity purchased. The carload is the economic unit in the purchas- ing of lumber always, and the country dealer can buy a car- load, or two carloads, or five carloads as low as the large or city buyer.

which shows that in order to install these modern im- provements 82 per cent was added to the first cost of this house, and that 44 per cent of the total cost of this modern house was in improvements and conveniences, very little of which was due to the use of lumber.

It is not a question of the high cost of building, but the cost of high building. This does not refer to sky scrapers, but is due to the greater buying ability of the public, and a demand for better living conditions made possible by modern improvements, about most of which our fathers knew nothing. When your father built the house in which you were born he not only did not include these now considered necessities, he absolutely knew nothing about them. Instead of adding these to the cost, and making them a part of the house, he went to the hardware and furniture stores and bought his heating plant in the form of stoves; his lighting plant in the form of a coal oil lamp, and his closets and pantries in the shape of wardrobes and kitchen cabinets. There was a time when most people slept in the house and had the bathroom in the shape of a tub in the kitchen and the children fought for the first chance at the hot water. The toilets were in the back yard. We have now reversed this order. We have the toilets in the house and sleep out of doors.

A consumer in North Missouri recently paid \$105.00 freight on a single carload of lumber shipped from Bay City, Mich- igan. This was money thrown away because he refused to give his home dealer an opportunity to save it for him.

Your Opportunity

All the consumers of lumber in the Missouri and Mississippi Valleys have a greater choice of building woods than in any other section of our country. They also enjoy greater competi- tive conditions among these several woods and a difference of two to five cents in the freight rate often determines the species of wood used or sold.

Destroy Disease Germs!

Make springtime your cleaning-up time. You can't do a better thing to guard against contagious diseases than to make a liberal use of

Dr. Hess Dip and Disinfectant

1 gallon can \$1.00
Smaller packages as low as 25 cents (except in the far West and Canada)



Sprinkle freely about pens, wallows, troughs, chicken yards. Just as good for use about the house—in garbage cans, sinks, drains, cess-pools. One gallon makes 70 to 100 gallons strong solution. Your dealer will refund your money if it does not do as I claim.

Call on the dealer in your town. If he does not handle Dr. Hess goods, write us.

DR. HESS & CLARK, Ashland, O.

Will Your Subscription Expire In March?

We have several thousand subscriptions expiring in March. It would be a saving of much time to us and avoid missing copies by the subscriber if the renewal could reach us before the expiration. The best way to do is to send in \$2 when you renew and have your subscription paid three years in advance.

Stack Your Hay The Easiest Way—The Jayhawk

Stackers and Sweep Rakes
MAKE YOUR HAY-STACKING EASY—
with the Jayhawk. Time money
and men saved. Lightest in weight,
easiest to operate—delivers hay any
where—no ropes or pulleys—cane
fully guaranteed. Made of
wood or steel. Solid directly
Manufacturers price.
WRITE QUICK FOR
CATALOGUE
AND
PRICE
LIST.

F. WYATT MFG. CO. 910 N. 5th St. Salina, Kans.

SELF-OILING WINDMILL
With INCLOSED MOTOR
Keeping OUT DUST and RAIN—Keeping IN OIL
FLASH OILING
SYSTEM

Constantly flooding
Every Bearing With
Oil, Makes It Pumps
The Lightest Breeze
And Prevents Wear.

OIL SUPPLY
REPLENISHED
ONLY ONCE A YEAR

DOUBLE GEARS—Each Carrying Half the Load
Every feature desirable in a windmill in the
AUTO-OILED AERMOTOR

WHITE AERMOTOR CO. 2500 12TH ST. CHICAGO

WHEN WRITING TO ADVERTISERS
PLEASE MENTION KANSAS FARMER

Canada Offers 160 Acres Land Free to Farm Hands

Bonus of Western Canada
Land to Men Who Assist
in Maintaining Needed
Grain Production.

The Demand for Farm Labor in Canada is Great. As an inducement to secure the necessary help at once, Canada will give one hundred and sixty acres of land free as a homestead and allow the time of the farm laborer, who has filled on the land, to apply as residence duties, the same as if he actually had lived on it. Another special concession is the reduction of one year in the time to complete duties. Two years instead of three as heretofore but only to men working on the farms for at least six months in 1917. This appeal for farm help is in no way connected with enlistment for military service but solely to increase agricultural output. A wonderful opportunity to secure a farm and draw good wages at the same time. Information as to low railway rates may be had on application to

GEO. A. COOK
Canadian Government Agent
2012 Main St., Kansas City, Mo.

SUBSCRIPTION BLANK.

Kansas Farmer, Topeka, Kansas.

Gentlemen: Please find enclosed \$.....for which send me

KANSAS FARMER.....year.....

One year for \$1.00; two years for \$1.50; three years for \$2.00.

Name

Post Office

State..... R. F. D. No.....

Are you already taking KANSAS FARMER?



PORK WITH LESS GRAIN

EXPERIMENTAL results at the Missouri Experiment Station show that, on forage, it required an average of 3.18 pounds of grain to produce one pound of pork, as compared with 5.11 pounds, the average from five dry lot feeding trials conducted under similar conditions. This would mean a saving of 38 per cent in the amount of grain fed. With hogs worth ten cents a pound the average return per bushel of corn fed to hogs grazing on forage was \$1.84. With hogs at the same price the average return per bushel of corn fed in dry lot was \$1.10. These results emphasize the economy of feeding grain on pasture.

Forage crops make cheap pork, because they permit cutting the grain allowance to the minimum. A system of management which will furnish forage through the entire grazing season should be planned early.

Rye and bluegrass will furnish pasture early in the spring and may be followed by alfalfa or clover. Hogs have been turned onto alfalfa at Columbia, Missouri, where the experiment station is located, as early as April 10, although it will usually be several weeks later before it is ready. Clover is usually ready for pasture during the last half of May.

These crops must be seeded the year previous to that in which they are to be grazed. Perhaps the best spring sown forage is Dwarf Essex rape, or a mixture of rape and oats. Rape may be seeded for hog pasture as early as the ground can be worked at the rate of four to six pounds per acre. When the season is favorable it will be ready to pasture during the last half of June.

Cane or Sudan grass will furnish a considerable amount of forage during the hot dry time of summer when other crops are not growing well. If sown the latter half of May or the first of June, these crops should be ready for pasturing in six to eight weeks.

Hogs which have been pastured during the grazing season on crops already mentioned may be finished by allowing them to hog down corn and soy beans. These crops may be grown together or in separate fields. If grown in separate fields they should be arranged so that the hogs can have the run of both fields at the same time, since the two crops make a better ration than either alone.

New Blackleg Remedy

Blackleg in calves seems to have become more virulent of late. Vaccination will prevent the disease in most cases but not all. Another difficulty lies in the fact that after administering the vaccine, calves are not protected against the disease for a period of about two weeks, and in the meantime, if the herd is infected, many of them may die.

There is now a blackleg serum on the market which will give immediate protection and combined with the virus will give lasting immunity. The serum also has curative value if given early in the course of the disease.

The Kansas Experiment Station developed this new method. It has shown that a highly potent blackleg serum can be produced from the horse. The claim is also made that the filtered fluid taken from the diseased tissue of the shoulder has great immunizing properties.

This marks a great advance in the control of blackleg but does not in the least detract from the importance of absolutely destroying the carcass of every animal that dies from blackleg and adopting all other possible preventive measures.

Hog-Feeding Experience

John Kemmerer, of Jewell County, who is president of the farm bureau of that county, is well known for his success with hogs. Last summer while visiting in Iowa he spent a day at the Iowa Experiment Station. On his return home he wrote a most interesting and instructive report of this visit and it was published in the Farm Bureau News. This of course only reaches the farm bureau members of that county, and as his observations are of value to

every man growing hogs, we quote from his letter as follows:

"The first comparison of feeding methods of interest was that of hogs self-fed, fed three times a day, fed twice a day, and fed once a day. There were five spring shoats in each group and they were of the same breeding and weight when the test began. The feed used was shelled corn and tankage placed in a self-feeder, each feed separate; by this I mean it was not mixed until the hog mixed it. Each group had about one-fourth acre of pasture, a small house for shelter, the feeder and a box of rock salt. All were given water by using an iron automatic waterer on a barrel. Three different kinds of pasture were being tested; alfalfa, rape and bluegrass, and right here is where my surprise came in. I have never valued rape very highly as a hog feed, but hogs on this rape pasture looked fully as well as did those on the alfalfa. Professor Evvard, who had charge of the work, said they were eating a little less tankage than those on the other pastures. Those on the bluegrass did not compare with those on the other pastures.

"Those that had the feed by them all the time showed the best gains, while those fed three times daily were next best; those fed twice daily were third best, and those fed once a day were not looking very good. Of course they were not getting as much grain and were perhaps eating more pasture, but it looked then as if the self-fed hogs were making the cheapest gains, as the difference in the length of time they would have to be kept to get ready for the market would have to be considered as a big saving.

"To my notion the self-fed hogs would get a little too fat for best results from a breeder's standpoint.

"For once-a-day feeding, my personal experience has been to feed at noon for the best results. There once-a-day feeding was done in the morning. Any hog man knows when pasture comes on that hogs are out early in the morning and if the feeding is done at that time some will be away and will stay out until they get their fill. If called in they will likely stay in after being fed, as they don't care to go out in mid-day. They also begin to move out about 4 o'clock in the afternoon, and will stay out until night, if the pasture is good and they are left alone, but if called in, the chances are they will not go out after being fed. At noon they are always in and each hog will get his share. This would not do, however, with fattening hogs, when the weather gets warm, unless they can be fed in the shade.

"I think it would be worth while to sow odd corners, corrals and vacant patches to rape or Sudan grass. These are catch crops and can be sown quite late and may make good feed and will be much more sightly than weeds.

"When it comes to laying out the premises as to location of buildings, yards, etc., the distances apart and directions from one to the other make a big item and one cannot be too careful, for when once these buildings are set, they may stay a long time. Sometimes you see a place just about as unhandy as it can be. The yard and feed lot fences should be made with as few corners as possible, as such places are hard to keep up and tedious to cultivate or mow and are unsightly if left to grow up in weeds."

Stock Share Lease

A few weeks ago we gave some suggestions regarding a proposition in which the owner of a farm and the renter owned the live stock in common. We referred to a form of lease prepared under the direction of the farm bureau of Winnebago County, Illinois. We received so many letters asking for copies of this lease that we printed it in full in our issue of February 24. It is evident that owners of land who rent, as well as the renters themselves, are coming more and more to recognize that some provision must be made whereby more live stock can be kept on rented

farms. The following letter from a land owner in Graham County tells how he has been trying to solve this problem:

"This question of making a fair and equitable arrangement with a renter whereby stock farming can be followed, has been puzzling me for some time. I would like to go into an arrangement with a renter on a stock proposition that would be fair to both of us. I have 760 acres of land all in one body, being one section with 120 acres from an adjoining section. About 250 acres of this is in grass and is fenced. The rest is broken and is good level wheat land and in most years the wheat can be pastured. The whole place is under fence. I also have 270 acres one and a half miles away from this place, which is a good alfalfa farm. It is rented separately now.

"For the past two years I have had some stock of my own running on the place and the renter has also had some stock, but it is not satisfactory to run two bunches of stock on the same farm. A year ago I made the proposition to the renter that we appraise all the stock we both had and put it into one herd, the renter to furnish two-thirds the cost of the stock and I one-third, since he is farming the good land as a third for rent. By this method we could divide the cattle and hogs in the same way when we sold. The renter would get two dollars of the net profits of the herd while I would get one. The work horses owned by the renter were to have free grass and roughage raised on the place. By handling stock in this way the hay, roughage and grass would be divided in the same way as the other crops grown, the renter getting two parts for his work of farming and caring for the stock, while I would get one part of the profits in return for furnishing the land and the improvements such as fencing, etc. In addition, the tenant would get free grass and roughage for his work stock, free milk and butter, and all the poultry he cared to raise.

"I thought this was a reasonable proposition, but the tenant wanted me to stand all the losses of cattle or other stock, such as might occur from disease or injuries. I thought it was not just to assume the full risk, so we let it go last year without coming to any agreement.

"This year, however, we want to make a change so as to have only one herd of stock on the place. I would like to receive a copy of the lease referred to in KANSAS FARMER and would be glad to have any comments or suggestions from others who may have had experience in working out a plan of this kind. I have always been insisting that all the manure and straw should go back to the land and be plowed under, but my tenant does not seem very anxious to put much effort into getting the straw back on the land."

We would be very glad to hear from others who are interested in working out a system for handling live stock on rented farms. There are two parties to be considered and we hope to hear from renters as well as from land owners. Where satisfactory arrangements can be made and the farm can be handled long enough under one management, both are equally interested in taking care of the third party to the contract, which is the soil of the farm. Too often both landlord and tenant fail to give much consideration to the importance of maintaining the producing capacity of the soil.

Farrowing Time Hints

Exercise the sow daily before farrowing. Decrease the corn ration and increase the tankage rather than the middlings.

For twenty-four hours after farrowing do not feed the sow, or feed lightly. Water should be supplied.

Care should be taken not to feed the sow too rich a ration. More milk may be available than the pigs can take, and milk fever may result.

After farrowing, the pigs should be given plenty of exercise to prevent thumps.

Rails about the sides of the pen will keep the sow from lying on the pigs.

If individual houses are used, a lighted lantern hung inside on very cold nights will help to keep the houses warm.

Newly planted evergreen trees are subject to extensive injury by the winds immediately after they are planted. To protect them from such injury, set two boards up at the south side of the newly planted trees. These boards should be

from four to six inches in width and they should be long enough to extend to the top of the tree after being driven into the ground. A barrel stave cut in two and both pieces driven into the ground will give about the required protection.

Contagious Abortion

Stockmen and dairymen are urged in a new farmers' bulletin, No. 790, to inaugurate a systematic campaign against contagious abortion.

Already the annual losses from this disease amount to millions of dollars, and unless its ravages are checked it is apt to equal tuberculosis, which is now thought to stand first among animal diseases in point of economic loss.

Details of the disease and its treatment are given in the bulletin referred to, which may be secured upon application to the United States Department of Agriculture, Washington, D. C.

The hog powder formula given below is usually spoken of as the government remedy. This mixture costs about one and one-half cents per pound in thousand-pound lots: Wood charcoal, 100 pounds; sulphur, 100 pounds; sodium chloride (salt), 200 pounds; sodium bicarbonate, 200 pounds; sodium hyposulphite, 200 pounds; sodium sulphate, 100 pounds; antimony sulphide (black antimony), 100 pounds.

Kansas Farmer's Big Magazine Bargain Offers

For a limited time we are able to offer you an assortment of the greatest money-saving clubs ever put before the public, all high class literature, no trash. Look them over, pick out a club of your favorites, and order today. This order is open to every one. If you are already a subscriber to one or more of these publications, your subscription will be extended one year.

CLUB NO. 90
KANSAS FARMER \$1.00
Today's Housewife50
Boys' Magazine 1.00
Farm and Home25
Home Friend25
Our price, **\$1.60**
Save \$1.40

CLUB NO. 91
KANSAS FARMER \$1.00
Boys' Life 1.00
People's Popular25
McCall's75
Our price, **\$2.00**
Save \$1.00

CLUB NO. 92
KANSAS FARMER \$1.00
Gentlewoman25
Poultry Success50
Home Life25
Our price, **\$1.25**
Save 70c

CLUB NO. 98
KANSAS FARMER \$1.00
Modern Priscilla 1.00
Boys' Magazine 1.00
Everyweek 1.00
Our price, **\$2.00**
Save \$2.00

CLUB NO. 88
KANSAS FARMER \$1.00
McCall's Magazine75
Pearson's (5 months)75
Our price, **\$1.50**
Save \$1.00

CLUB NO. 96
KANSAS FARMER \$1.00
Everyweek 1.00
Boys' Magazine 1.00
Needlework Magazine50
Woman's World35
Our price, **\$1.95**
Save \$1.90

CLUB NO. 97
KANSAS FARMER \$1.00
Woman's World25
People's Popular25
Farm and Home25
Home Friend25
Our price, **\$1.40**
Save 70c

CLUB NO. 95
KANSAS FARMER \$1.00
Little Folks 1.00
Today's Housewife50
Woman's World35
Our price, **\$2.10**
Save 75c

CLUB NO. 100
KANSAS FARMER \$1.00
Woman's World35
Needlework Magazine50
Our price, **\$1.25**
Save 60c

CLUB NO. 101
KANSAS FARMER \$1.00
McCall's Magazine75
Today's Housewife50
Pearson's (5 months)75
Our price, **\$1.75**
Save \$1.25

KANSAS FARMER, TOPEKA, KANSAS.

I accept your BIG MAGAZINE OFFER NO. and enclose remittance of \$.....

NAME

ADDRESS

Here's The Way To Buy Trees!

Direct From Grower to Planter

Order your trees, vines and plants direct from my big PLANTERS' NURSERY CO. I not only save you all useless profits of wholesaler, retailer and agent, but I give you the benefit of my low operating expense. No high salaried bosses around my nursery. I plant and dig myself—every man on the place is a worker. This means lowest prices on selected trees, vines and plants.

Compare my prices with others, then decide. Note my big bargain collections—you'll be surprised how much you can save by ordering right from this page. Remember my absolute guarantee—complete satisfaction or your MONEY BACK QUICK.

Trees by the Million at Unparalleled Prices. These Bargains Save You from 50 Per Cent to 75 Per Cent.

10 SELECT APPLE TREES—2 year 5 to 6 ft. trees. 1 Delicious, 2 Stayman, 2 yr. 5 to 6 ft. trees. 1 Delicious, 2 Stayman, 1 Black Ben, 2 King David, 1 Jonathan, 3 Winesap. Agents ask \$5. Collection No. 1 \$1.50

20 SELECT APPLE TREES, extra size—2 yr. 5 to 6 ft. Stayman, Black Ben, Winesap and other standard varieties. Big extra heavy trees. Agents ask \$8. Collection No. 2 \$2.50

10 SELECT PEACH TREES, 4 to 5 ft. trees. 5 Elberta, 1 Chinese Cling, 1 Belle of Georgia, 2 Champion, 1 Carman. Agents ask \$3. Collection No. 3 \$1.25

20 SELECT PEACH TREES, 3 to 4 ft. 10 Elberta, 3 Champion, 2 Mamie Ross, 5 Belle of Georgia—cream of good varieties. Agents ask \$5.00. Collection No. 4 \$2.00

20 PEACH COMPLETE FAMILY ORCHARD, 2 to 3 ft. stock well rooted. 2 Early Wonder, 2 Mamie Ross, 2 Champion, 7 Elberta, 3 Belle of Georgia, 2 Heathie Cling, 2 Late Elberta. Earliest to latest. Agents ask \$4.50. Collection No. 5 \$1.60

5 APRICOT TREES, 3 to 4 ft. 5 Moorpark, 5 Royal. Hardest and best varieties. Agents get \$2.50. Collection No. 6 \$1.10

10 SELECT PEAR TREES, 2 yr. 5 to 6 ft. 8 Keiffer, 2 Garber. Biggest money-makers for the middle west. Agents ask \$5. Collection No. 7 \$1.60

10 SELECT PLUM TREES, 4 to 6 ft. Burbank, Abundance, Red June, and Wickson. Fine, quick-bearing varieties. Agents' price \$5. Collection No. 8 \$2.00

10 SELECT CHERRY TREES, 4 to 5 ft. 4 Montmorency, 4 Early Richmond, 1 English Morello, 1 Wragg. Agents want \$6.50. Collection No. 9 \$2.90

10 CHOICE GRAPE VINES, 2 yr. 1 Catawba Red, 3 Concord Black, 2 Niagara White, 1 Moore's Early Black, 3 Worden Black. Agents get \$2.00. Collection No. 10 75c

25 CONCORD GRAPE, BIG VINES. Most widely planted black grape. Everybody loves 'em. Easily cultivated. Agents get \$2.50. Collection No. 11 90c

100 EVERBEARING STRAWBERRIES. Best variety Progressive. Bear until snow flies. Hardy, vigorous. Agents ask \$5.00. Collection No. 12 \$2.00

300 EVERBEARING STRAWBERRIES. 200 Progressive, 100 Superb. Bear till frost. Big bargain. Agents ask \$15. Collection No. 13 \$4.50

ORDER RIGHT FROM THIS LIST

Order now—TODAY. No agent or tree peddler can begin to give you values like these. I do it because I have small expense and don't tie up my small profit in pretty catalogs and picture books. I put any money I make right back into my nursery so I can continue to offer my friends and customers the biggest bargains of all—bargains like the above and like I offer in my new 1917 catalog—without colors and fancy printing.

READ THIS GUARANTEE

Safe Delivery, Quality and Satisfaction Guaranteed or Money Back. If you don't find the stock exactly as described—equal or better than trees costing two to five times as much, you may have your money back, including all transportation charges. Certificate of Health with every shipment.

CHAS. DUNBAR, Grower

The Planters Nursery Company, 732 Harrison St., Winfield, Kan



Samples from Catalog

Apples

	Each	10	100	1000
Two year, 5 to 6 ft.	\$0.20	\$1.80	\$17.00	\$160.00
Two year, 4 to 5 ft. ....	.15	1.40	13.00	120.00
One year, 3 to 5 ft. ....	.16	1.40	13.00	110.00
One year, 2 to 3 ft. ....	.12	1.00	9.00	80.00

Yellow Transparent, Grimes Golden, Delicious, Winesap, Liveland Raspberry, Early Harvest, Cooper's Early White, Jonathan, Home Beauty, Winter Banana, Gano, Arkansas Black, Red June, Maiden Blush, King David, Stayman Winesap, Black Ben Davis and twenty others.

Hotties Elberta Peach

	Each	10	100	1000
2 to 3 feet.....	\$0.20	\$1.70	\$15.00	\$ 80.00
3 to 4 feet.....	.25	2.20	19.00	110.00
4 to 5 feet.....	.30	2.70	24.00	160.00

Strawberry Plants

	By Mail Postpaid	By Exp. Charges Collect f.o.b. Arkansas
	25 50 100	250 500 1000
Excelsior \$0.30	\$0.65 \$0.80	\$1.50 \$2.25 \$4.00
Klondyke ..... .30	.65 .80	1.50 2.25 4.00
Senator Dunlap ..... .35	.70 .85	1.80 2.50 4.00
Warfield ..... .30	.65 .80	1.50 2.25 4.00
Aranda ..... .30	.65 .80	1.50 2.25 4.00
Gandy ..... .30	.65 .80	1.50 2.25 4.00

3,000 to 5,000 plants, 5% discount
5,000 to 10,000 plants, 10% discount
10,000 to 25,000 plants, 15% discount
25,000 to 50,000 plants, 20% discount

Everbearing Strawberry

	Prices Postpaid	Prices f.o.b. Kansas and Iowa Farms, Charges Collect
	25 50 100	250 500 1000
Progressive \$1.00	\$1.50 \$2.50	\$4.00 \$8.00 \$15.00
Superb 1.00	1.50 2.50	4.00 8.00 15.00

Big block of shade trees, all varieties, ornamental shrubs, roses, vines, peonies. These are just a few items taken from my 1917 catalog. SEND FOR IT TODAY.

13 Years of Big Hatches For Less Than 20c Each

—And Good For Many Years More

Our oldest Old Trusties are now 13 years old and still in use. For example figure Old Trusty at \$10. Thirteen years' use would be about 77c per year and if four hatches per season were made, each hatch would cost about 19 1/4c per hatch. That makes a pretty low cost for big hatches in

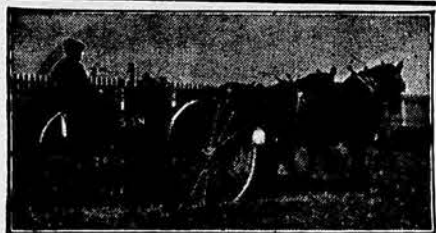
Old Trusty

And big hatches are easier than ever with the new conveniences in Old Trusty. Note the handy thermometer holder and the big oil drawer that is instantly removed but doesn't have to be removed to fill, nor is it used as a leg brace. Saves time and work. Quick shipment from factory at Clay Center, Neb., or warehouses in St. Joseph, Mo. or Seattle, Wash. We pay the freight and guarantee safe arrival.

Book Free

\$9.60 Buys our Old Trusty "Special" with redwood case, freight paid east of Rockies. A trifle more farther west. Write today.

The M. M. Johnson Co.
Clay Center, Neb.



Drill Seed at Even Depth Bigger Crops

E-B patented extension spring pressure plants grain at uniform depth. Closed delivery opener deposits it in bottom of furrow. E-B patented feed cup prevents grain bunching or cracking. Dust proof disc bearings. Write for catalog and ask dealer to show you the E-B Drill.

Look for the E-B trade mark on the implements you buy. It's our pledge of quality and your guide to more profitable farming.



Emerson-Brantingham Implement Co. (Inc.) 31 W. Iron St., Rockford, Ill.

Please send me free literature on articles checked:

- | | | |
|--------------------------------------|---|--|
| <input type="checkbox"/> Plows | <input type="checkbox"/> Hay Tools | <input type="checkbox"/> Tractors, Gas |
| <input type="checkbox"/> Harrows | <input type="checkbox"/> Listers | <input type="checkbox"/> Engines, Gas |
| <input type="checkbox"/> Cultivators | <input type="checkbox"/> Box Engines | <input type="checkbox"/> Tractors, Steam |
| <input type="checkbox"/> Mowers | <input type="checkbox"/> Wagons | <input type="checkbox"/> Threshers |
| <input type="checkbox"/> Spreaders | <input type="checkbox"/> Ruggies | <input type="checkbox"/> Corn Shellers |
| <input type="checkbox"/> Drills | <input type="checkbox"/> Auto Trailers | <input type="checkbox"/> Saw Mills |
| <input type="checkbox"/> Planters | <input type="checkbox"/> Potato Machinery | <input type="checkbox"/> Gelling Presses |

Name _____

Address _____

\$9.25 World's Champion Belle City Incubator

140 Egg Size Prize Winning Model—Hot-water—Double-walled—Copper Tank—Thermometer Holder—Deep Nursery—Self-regulating. When ordered with \$5.25 Hot-water 140 chick Brooder, both cost only \$13.50.

Freight Prepaid East of Rockies

Satisfaction Guaranteed

Over 524,000 Satisfied Users

Save time—Order Now—Share in my

\$1,000 Cash Prizes

Conditions easy to get big

prize—Free Book "Hatching

Factors" tells all—Gives short cuts

to Poultry Success—Write me

today.

Jim Bohan, Pres.

Belle City Incubator Co., Box 18

Racine, Wis.

90 Days' Trial

10 1/2" A ROD

164 Styles. YOU save money

by ordering direct at wire mill

prices. Shipment from Kansas,

Indiana, Nebraska, Texas, Colo. or

Calif. CATALOG FREE. Write today.

OTTAWA MANUFACTURING CO.,

110 King Street, Ottawa, Kansas.

Gopher Death

Kills Prairie Dogs, Ground

Squirrels, G. Hogs, Pocket

Gophers. Saves alfalfa. Ex-

perimental stations approve.

1400 tablets, P. P. \$1.25. War-

ranted. Mole Tablets, 75c.

Ask Druggist or send direct.

Booklet Free. Ft. Dodge Chem. Co., Ft. Dodge, Ia.



CARE OF HATCHING EGGS

GATHER the eggs at least twice daily. Be sure the hands are free from oil or grease when handling eggs that are to be used for hatching. When eggs are held they should be turned at least every three days. Do not keep the eggs in a damp, musty room. A temperature ranging from 45 to 60 degrees is most suitable for keeping eggs to be used for hatching purposes.

Through fear of chilling the eggs, many keep them too warm and thereby ruin what might otherwise be a splendid hatch. An egg begins the process of incubation as soon as it reaches a temperature of 68 degrees. Many eggs held for setting become much warmer than this during the day. At night they become quite cool. The warmth during the day starts the germ to growing and the cool of night checks it. The next day the process is renewed only to be checked the following night. A germ thus treated is so weakened that it will probably die before hatching time, or at best the chick will merely pip the shell and perish from lack of strength.

Do not keep eggs in too dry a room as this will cause rapid evaporation. The ideal place is a cool, well ventilated room where the air is moderately moist.

Shipping Eggs by Parcel Post

Eggs sent by parcel post for hatching should be well protected from cold and jars incident to the journey. Each egg must be wrapped by itself in paper, so that it will not be subjected to sudden temperature changes, and placed, large end up, in a cardboard mailing case which may be bought at little cost. The case having been folded, should be placed in a basket, excelsior packed closely about it, and a cloth sewn over the top of the basket.

Eggs packed in this way have been found to be more likely to reach their destination in good condition than those packed in the unprotected mailing carrier, and with less expense than when bran or some other such packing material is used.—KATRINA KIMFORT.

Eggs for Hatching

Eggs selected for hatching should weigh not less than two ounces nor more than two and one-fourth ounces.

Eggs selected for incubation should have clean, strong shells which are free from ridges, cracks, transparent spots or lime deposits.

Where all of the eggs considered are of the same variety, there is a definite correlation between the size of the egg incubated, the size of the chick when hatched and the size of the chick from ten to twenty weeks old.

Eggs selected for hatching should be of a true egg type. Exceptionally long eggs and very short, rounded eggs are equally objectionable. Malformed eggs should never be incubated. These eggs are usually difficult to hatch. White eggs and brown eggs should not be incubated together.

Kill Weak Chicks

Do not under any circumstances help chicks out of the shell. Chicks which do not have enough vitality to get out of the shell, either because of a lack of vitality in the egg or because of faulty incubation, are not worth having.

Kill and burn all weak or crippled chicks as soon as the hatch is over. Weak chicks are always a menace to the flock.

Hatch Chickens Early

Fresh eggs are highest in the late fall and winter. This is because everybody's hens take their annual vacation then.

Don't blame the hens; they always have done it and they always will. They stop laying eggs and grow a new crop of feathers instead. During this "molt" period, as poultrymen call it, nobody has many eggs to sell until the young pullets begin to lay.

American breeds—Plymouth Rocks, Wyandottes, Rhode Island Reds, etc.—begin to lay when about seven months old. Leghorns, Minorcas, and others of

the smaller breeds begin when about six months old.

If we hatch chickens early in the spring they will begin to lay when the hens are molting.

To produce late fall and winter eggs, begin hatching early in March. Hatch at intervals and have all the chicks out not later than May 1.

If hens do not want to sit in time, get broody hens from a neighbor or use an incubator.

Brooding Baby Chicks

Millions of baby chicks will die this season because of wrong methods and mistakes made in brooding and feeding. Eggs are higher and chicks will be scarcer and higher than in most preceding years. It behooves every poultry raiser to use such methods as will insure the lowest per cent of mortality and the quickest growth.

Brooder stoves of many kinds are upon the market. The coal burning brooder stoves are the kind with which we have the greatest success, and are those which seem to be giving most general satisfaction in the hands of most poultrymen. We know of some who use two of these stoves of small size in one room. Then if one stove goes out the other will protect the chicks and prevent chilling.

Most of these stoves have a capacity of from 150 to 500 chicks. Some can hover as many as 750 chicks. We prefer to use about 300 to 500 chicks with one stove. We build a house 10 x 20 feet, 12 x 24 feet, or 14 x 28 feet. The house has a partition in the center with a runway for the chicks and a swinging door for the attendant. The stove is placed on one side of the partition and the cool room is used for feeding and exercise. It is necessary to have a cool room so the chicks can get away from the heat. This is one of the secrets of successful brooding.

The houses for these brooder stoves are built just as we would build any laying or breeding house. We would not build a special brooder house which we could only use three or four months during the year and then let it remain idle for the remainder of the time. Every poultryman should endeavor to have as little idle equipment as possible. We build these houses of the dimensions mentioned above. We locate them where the chicks can have plenty of range after they grow up. As soon as they are old enough to do without heat, we simply remove the brooder stove and put in temporary roosts. The chicks remain right in this house until the next fall or winter when it comes time to cull them and to select the choicest for the laying and breeding pens. A flock of pullets are usually wintered in these houses. Nests can be put in temporarily until the houses are needed again for next season.

By handling the chicks in this way you avoid handling them so often, they are accustomed to their quarters and you do not check their growth by moving, and you are getting the benefit of your equipment throughout the year. It is easier and better to move the stove to another house than it is to move the chicks and have the house vacant for eight months.

Tack cloth over the ventilators and make the house comfortable and provide for ventilation near the floor, but avoid drafts. Be certain to provide for one cool room. If the chicks have a tendency to cannibalism and pick at one another's toes, paint the window panes with a bluish or whitish frosting. You want light in your brooder house, but not the direct rays of the sun. Keep the chicks busy and active. Put some fresh earth on the floor in one corner of the room. If they show signs of developing the habit of picking at one another, grind some lean meat and mix equal parts of bran, shorts, corn meal and ground meat, with a little water just to moisten it a trifle. After it is mixed, run it through a sausage mill or meat grinder and then feed it to the chicks each day. The frosted windows will do most to prevent cannibalism. You will not be troubled with the chicks



Pick It Up and Walk Off

Did you ever see any other 8 H. P. Engine two men could carry? Cushman engines are the lightest weight farm engines in the world—easy to move around and put to work anywhere. No longer necessary to put up with old-style, back-breaking, heavy weight engines, with their violent explosions and their fast and slow speeds. The Cushman weighs only about one-fifth as much, per horsepower, but with its modern design, accurate balance and Throttle Governor, it runs much more steadily and quietly.

Cushman Light Weight Engines

40 to 60 lbs. Per Horsepower

The 4 H. P. weighs only 190 lbs. Mounted on iron truck, as shown below, it may be pulled around anywhere. Besides doing all other work, it may be attached to moving machines in the field, such as grain and corn binders, potato diggers, etc., driving the operating part and leaving the horses nothing to do but pull the machine out of gear. 8 H. P. 2-cyl. weighs only 320 pounds.

Sizes up to 20 H. P. Not cheap engines, but cheap in the long run. Book free.

4 H. P. Truck

CUSHMAN MOTOR WORKS

622 North 21st Street Lincoln, Nebraska



Flour City Tractors

17 YEARS IN THE FIELD

A PRACTICAL DESIGN CAREFULLY DEVELOPED.

SIMPLICITY IS ITS BEAUTY, STRENGTH AND POWER ITS STRONG POINT.

ITS SUCCESSFUL CAREER HAS BUILT OUR FACTORY AND MADE OUR BUSINESS

THE FLOUR CITY IS BUILT IN SIZES SUITABLE FOR ANY FARM.

BUY ONE BIG ENOUGH TO DO YOUR WORK.

CATALOG ON REQUEST.

KINNARD-HAINES CO.
848 44th Ave. N. MINNEAPOLIS, MINN.

IWAN POST HOLE AUGER

Digs post holes faster than the man behind can set posts, without hard back-breaking labor. Digs wells also. The two interlocking sharp, crucible steel blades easily cut through any soil. DIGS QUICK AND EASY and saves time and trouble. Don't be imposed upon. Refuse the poorly made, flimsy imitations. A poor tool is dead at any price. Reliable dealers sell the original, patented, "guaranteed Iwan" for only \$2. It pays for itself in one day's work.

WRITE FOR FREE BOOK about Iwan Post Hole Diggers, Skele Edge Key Knives, Ditching Spades, Drain Cleaners, The Hooks, Chimney Pops, Ventilators, Etc.

IWAN BROTHERS

1527 Prairie Ave., South Bend, Ind.

Join Our MONEY-MAKERS

with "Successful" INCUBATORS & BROODERS

Twenty-three years leadership. Poultry lessons free to every buyer. Booklet, "How to Raise 48 out of 50 Chicks"—10c. Catalog FREE. Make green, egg-making feed in "Successful" Grain Sprouters.

DES MOINES INCUBATOR CO., 83 Second St., Des Moines, Ia.

\$7.50 and up

Scarified Sweet CLOVER

Sweet Clover seed has a very hard shell. Scarifying scratches the shell, making it easily burst, and increasing germination 10 to 40 per cent. New crop, Kansas grown, cleaned and thoroughly tested.

Catalog and Samples FREE

Also Alsike, Red Clover, White and Crimson Clover and Alfalfa seed at lowest prices. Weekly Pink List free, gives prices of field seeds in quantities. Write today.

BARTELDES SEED CO.
1207 Massachusetts St., Lawrence, Kansas.

A "Cinch" to get your GOPHERS

The Cinch Gopher Trap is famous for its ability to catch, hold, kill and destroy more gophers per working day than has ever been done by any other method.

Send for free booklet "HOW TO GET RID OF GOPHERS" For sale by hardware dealers or direct by mail, postpaid. 85c each, 3 for \$2.25

W. C. EMERSON & CO.
Forest Grove, Oregon (Manufacturers)

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.

Corn Saver Beet

Double your hog profits. Feed them Corn Saver Beets this year. Great for cattle, especially dairy cows. Keeps them healthy. Costs less than half of corn or grain feed. Imported originally from Germany. Rich in sugar and other fat-producing qualities. Grow large—as big as 25 pounds. Our largest yield was 60 tons to acre. Write us today and let us tell you more about it.

Write for Big, New 1917 Seed Book A postal brings it to you free, postpaid. Worth having. Full of Garden and Field Seed bargains. Tells also about our many new varieties, such as Shrock's Kaffir Corn, White Kaffir Corn, White Wonder Millet, etc. Color head-quarters for your seed. Buy Lincoln Grand Seeds and get the best. We are biggest dealers in America. Write us. Get our Special Seed Supply Catalog. Address: **CRISWOLD SEED AND NURSERY CO.** Dept. X-141 Lincoln, Neb.

1917 PLANTING GUIDE AND PURE SEEDBOOK

Ask now! This beautiful 96-page four-color book describes 1917 varieties of vegetables and flowers, handsomely illustrated; beautiful home grounds, flower and vegetable gardens, landscapes, shrubbery, orchards, farms. A dictionary of gardeners. It is a gardener's delight. Berry grower's book! An orchard ever published. Better than our famous 1916 book. Don't miss it. Ask today. A postal gets it. **Galloway Bros. & Co., 6218 Waterloo, Ia.**

HYDE'S SUDAN

Hyde's Sudan is tagged—Showing exact purity and germination. Why take a chance? We ship direct from farm to farmer. Hyde's Pays the Freight and refunds your money if not entirely satisfied. **FREE CATALOG and Price List sent postpaid—Write at once.**
HYDE SEED FARM,
300 Hyde Bldg., Pattonsburg, Mo.

\$15.00 Sweep Feed Grinders | \$19.00 Galvanized Steel Wind Mill.

We manufacture all sizes and styles. We will pay you to investigate. Write for catalog and price list.
CURRIE WIND MILL CO.,
Seventh St., Topeka, Kansas

RELIABLE WINFIELD TREES

PURE-BRED—TRUE TO NAME
Direct from grower at Wholesale Prices. New FRUIT BOOK with colored plates, **FREE.**
COOPER & ROGERS, Box A, Winfield, Kan.

SEED CORN

That makes the crop bigger is raised and sold by **JOHN D. ZILLER**
THE FARMER SEED GROWER, HIAWATHA, KAN.
Catalog free.

SEED CORN

Three Leading Varieties. Pure Kherson Oats, Clover Seed.
PLAINVIEW HOG AND SEED FARM
Frank J. Rist
Humboldt, Neb., Box H

"Principles of Feeding Farm Animals," by Sleeter Bull, of the Illinois University, is a recent book from the press of the Macmillan Company. It is an outgrowth of a manual prepared for students in stock feeding, but is a valuable and practical book for the general farmer and stockman. It sells for \$1.75 postpaid.



We desire to make this department just as helpful as possible, and believing that an exchange of experiences will add to its value, we hereby extend an invitation to our readers to use it in passing on to others experiences or suggestions by which you have profited. Any questions submitted will receive our careful attention and if we are unable to make satisfactory answer, we will endeavor to direct inquirer to reliable source of help. Address Editor of Home Department, Kansas Farmer, Topeka, Kansas.

Glad sight, wherever new with old
Is joined through some dear homeborn tie;
The life of all that we behold
Depends upon that mystery.
Vain is the glory of the sky,
The beauty vain of field and grove,
Unless, while with admiring eye
We gaze, we also learn to love.
—Wordsworth.

Seed testing will prove interesting work for the children. A simple arrangement for this work requires two dinner plates, a little cotton and two pieces of cloth. The pieces of cloth should be long enough so they can be doubled. Place a part of the cotton in the fold of each piece of cloth and dampen. Put the cloth and the cotton on one of the plates, put the seeds to be tested in rows on the cloth, lay the other cloth over them and cover all with the second plate. See that the cloth and cotton are kept quite moist and the plates should be kept warm. The way the seeds germinate under these conditions is a very fair indication of what they will do in the garden seed bed.

The cotton material known as Egyptian tissue is one of the most satisfactory for dresses. It wears well and does not fade. We have worn an Egyptian tissue for several years and the color in it is as good now as when bought. Last summer we found many spots of iron rust on it after having made sherbet. These spots were kept saturated with salt and lemon juice and subjected to the strong sunlight, which removed them but left the blue in the material as bright and clear as ever.

Each year during Farm and Home Week at the agricultural college a number of contests are arranged for the visiting club boys and girls. This year forty-two prizes—fifty cents to one dollar each—were awarded for making buttonholes, judging cotton fabrics, rope-tying, rope-splicing, identifying varieties of apples, nail-driving, and the judging of corn, sorghums, pigs, horses, dairy and beef cattle. The interest in all these contests was very keen and this diversion was much enjoyed by the participants and the audiences.

Too many farms are not being made to produce as much of the family living as they should be supplying. Care in this particular is an easy way to help keep the living cost at the minimum. Vegetables, fruits and meats can be produced and saved for use much more economically than they can be bought on the markets. The garden should be planned to take care of the winter's needs as well as those of summer, and the plan for providing fruit should include those varieties best adapted to the locality and to the family's taste and need. Even where it is necessary to irrigate in a small way, the home garden and orchard will pay well for the cost and labor invested.

Extension Schools Popular

The past year more than 20,000 busy Kansas men and women availed themselves of the twenty-five one-week schools in agriculture and home economics conducted by the division of extension of the Kansas Agricultural College. Interest in these schools is growing rapidly and many petitions have already been received for next year's schools. The only requirement for obtaining these trained instructors for a week, is that a class of not less than fifty men and twenty-five women be organized in the community and a fund sufficient to pay expenses be guaranteed—this being between \$50 and \$125. This money is used only for local expenses, the college paying the salaries and railroad fare of the teachers from funds appropriated by the state and federal government for this purpose.

Dustless Mop

Mrs. C. F., Pottawatomie County, asks how a dustless dust cloth or mop can be made.

The solution for dipping the cloth is

made of melted paraffin and coal oil—twice as much coal oil as paraffin. Let this dry on the cloth, and when not in use roll the cloth tightly so it will stay moist.

Directions for making a dustless floor mop have recently been sent out by the office of the Federal Department of Agriculture extension work. The solution used is that given above, and the foundation for the mop is a worn-out broom the straw of which has been cut off even with the wires fastening the straw to the handle. Cover the broom stub with an old stocking and fasten it securely to the handle. Cut the legs of old stockings into strips one inch wide and twelve inches long. Leave about two inches above the strips for sewing on to the broom covering. These should be sewed on around and around, in layers about one inch apart until the mop is thick enough. This should be dipped in the paraffin and coal oil and allowed to dry. The mop can be kept moist by rolling tightly and pressing into a paper bag when not in use.

The use of this mop saves the necessity for crawling over the bare part of the floor and cleaning it with a cloth, and the treating solution saves the stirring of dust all through the house.

Have You Planted Sweet Peas

There is a difference of opinion as to the proper time for planting sweet peas. Many growers attribute their success to the deep trench in which they plant their peas very early. Some think they have better luck if the peas are put in on a certain date—St. Patrick's Day or some other which marks the date of planting in a year when the peas did specially well.

In the growing of sweet peas, as in the growing of other plants, the condition of the seed bed and the quality of the seed planted have more to do with the results than does any particular date upon which the peas may be planted.

If you did not get your peas planted in a trench early—which is considered the best method by many authorities—there is yet time for planting them. The seed should not be planted deeper than six inches at this time and the bottom of the seed bed should be well loosened and well rotted manure mixed with it. The seed will germinate more quickly if soaked over night in warm water. Two rows, six inches apart, is a good way to plant. The plants should be thinned to three inches apart, and as they grow the soil should be filled in around them.

A windbreak to shield the peas from the cold spring winds will help them retain their vitality. This can be made of brush and easily removed when no longer needed.

A firm trellis four to six feet high should be made for the vines and the tips should be clipped when they have reached this height.

Sweet peas will bloom more profusely if picked daily.

Dinner Rolls

2 cupfuls scalded milk
1/2 cupful butter
2 tablespoonfuls sugar
1 teaspoonful salt
1 yeast cake dissolved in
1/2 cupful lukewarm water
Flour

Add butter, sugar and salt to milk. When lukewarm, add dissolved yeast cake and three cupfuls flour. Beat thoroughly, cover, and let rise until light. Cut down and add enough flour to knead—it will take about 2 1/2 cupfuls. Let rise again, toss on slightly floured board, knead, pat, and shape into small biscuits. Place in rows on floured board, cover with cloth and pan and let rise until light and well puffed. Flour wooden spoon handle and make deep crease in middle of each biscuit and press edges together. Place closely in buttered pan, cover, let rise, and bake 12 to 15 minutes in hot oven.

If the pan or cup in which chocolate is melted is greased a little, the chocolate will not adhere to it.

FERTILE KANSAS LAND CHEAP

Those who located in Central Kansas 20 years ago are the big farmers today. Their land has made them independent.

Your chance now is in the five Southwestern Kansas counties adjacent to the Santa Fe's new line, where good land is still cheap.

With railroad facilities this country is developing fast. Farmers are making good profits on small investments. It is the place today for the man of moderate means.

Wheat, oats, barley, speltz, kaffir and broom corn, milo and feterita grow abundantly in the Southwest counties referred to. Chickens, hogs, dairy cows and beef cattle increase your profits.

You can get 160 acres for \$200 to \$300 down, and no further payment on principal for two years, then balance one-eighth of purchase price annually, interest only 6 per cent—price \$10 to \$15 an acre.

Write for our book of letters from farmers who are making good there now, also illustrated folder with particulars of our easy-purchase contract. Address

E. T. Carlidge,
Santa Fe Land Improvement Co.,
1892 Santa Fe Bldg., Topeka, Kansas.

APPLE, PEACH TREES—True to Name 4c

Cherry Trees only 10c.
Everything at bargain prices.

SEED CORN, standard varieties, per bu. \$1.75

Buy of the producer—save money! Send for latest FREE Catalog of Bargains.
MANHATTAN NURSERY
Box 117 MANHATTAN, KAN.

Armstrong's Seed Corn

Originators of the seed corn business. Growers and breeders for forty years. That's our guarantee of high quality and service. Don't experiment. Buy Armstrong's.
FREE SAMPLES AND SEED CORN
Finest stock of heavy yielding, early maturing, high test, pure bred seed corn ever grown. Varieties adapted for your section. Special prices on early orders. Write for free samples and seed corn manual.
I. B. ARMSTRONG & SON Box 151 SHENANDOAH, IOWA

Hill's Evergreens Grow

All hardy stock—twice transplanted—root pruned. Protect buildings, stock, crops. Hill's Evergreen Book, illustrated in colors, free. Write today.
Hill Nursery Co., Inc., 2213 Cedar St.,
Besse, Ill. Evergreen Specialists

SEED CORN

KANSAS GROWN Barteldes' Kansas grown seed corn, tipped butted, shelled—tested for vitality and graded. Produces biggest crops in this climate. Well acclimated—hardy, vigorous. **FREE SAMPLE and Big Catalog** sent postpaid, also Special List of field seeds of all kinds. Write at once.
THE BARTELDES SEED COMPANY,
607 Massachusetts St., Lawrence, Kansas.

EVERGREENS

Nothing better for windbreaks and hedges. We grow all hardy tested varieties. Also a complete line of shrubs, fruit, etc. We are specialists. Write for free catalogue.
Evergreen Nursery Co., Sturgeon Bay, Wis.

SCHOOLS and COLLEGES

Spalding's COLLEGE

10th & Oak Sts., KANSAS CITY, MO.
51st YEAR. Over 28,000 former Students. Our modern Building has 15 elegant Rooms, including **FREE GYMNASIUM and Auditorium**, 21 experienced Teachers and Lecturers. Day and Night Schools all Year. Free Employment Bureau. Shorthand, Typewriting, Book-keeping and English Branches. Catalogue "K" Free. **J. F. Spalding, A. M., Pres.**

LEARN AUCTIONEERING

At World's Original and Greatest School and become independent with no capital invested. Every branch of the business taught in five weeks. Write today for free catalog. **Jones Nat'l School of Auctioneering, 34 N. Sacramento Blvd., Chicago, Illinois.** Carey M. Jones, President.

WHEN WRITING TO ADVERTISERS PLEASE MENTION KANSAS FARMER

RELIABLE POULTRY BREEDERS

PLYMOUTH ROCKS.

WHITE ROCK EGGS, \$4 PER HUNDRED. Nora Lamaster, Hallowell, Kansas.

BARRED ROCK EGGS—WILL PLEASE. \$1 postpaid. Mrs. Geo. Kennedy, Edmond, Okla.

BARRED PLYMOUTH ROCKS—FARM-BRED beauties. Eggs for hatching, 50 each. Mrs. W. C. Becker, Solomon, Kan.

BUFF AND WHITE ROCK EGGS—FEMALES scoring high as 96 and 96%. Mating list. W. H. Beaver, St. John, Kansas.

BARRED ROCK EGGS, \$1 PER SETTING, \$4 per hundred. Mrs. Lillie Hirt, Parkerville, Kansas.

CHOICE WHITE ROCK COCKERELS for sale. Mrs. T. A. Case, Route 2, Sterling, Kansas.

WHITE ROCK EGGS, \$2 PER FIFTEEN. Quality guaranteed. W. G. Allison, Sterling, Kansas.

EGGS—FANCY BARRED ROCKS, WINTER layers, \$1.25 and \$2.50 setting. Clyde Karel, Clarkson, Nebraska.

WHITE PLYMOUTH ROCKS ARE PRIZE winners. Send for catalog. W. K. Trumbo, Box 66-C, Roseland, Kansas.

WINTER LAYING BUFF ROCKS—EGGS \$1.15 setting. Range, \$5 hundred. Chicks, 12½c. Mrs. A. P. Young, Lexington, Mo.

HIGH QUALITY BARRED "RINGLETS," 100 chicks, \$15. Eggs, \$5. Edward Hall, Junction City, Kansas.

FINE BARRED ROCK EGGS FROM farm raised flock, \$1.50 per fifteen. Mrs. J. A. Grimes, Milo, Kansas.

WHITE ROCKS, SIZE AND QUALITY, good egg strain. Eggs—fifteen, \$1; fifty, \$3; hundred, \$5. G. M. Kretz, Clifton, Kansas.

BARRED ROCK EGGS FOR HATCHING. Eighty-seven premiums. A. G. Hammond, Vinland, Kansas.

BEAUTIFUL IMPERIAL "RINGLETS," \$35 cockerel heading Pen No. 1. Eggs, \$4 per fifteen. Mrs. Iver Christenson, Jamestown, Kansas.

BARRED ROCKS, HENS AVERAGED 176 eggs, 1916. Trap-nest males and their pullets mated with fine cockerels. Eggs, 10c; fifty, \$4. Farnsworth, 224 Tyler St., Topeka.

PURE-BRED BARRED ROCKS EXCLUSIVELY. Choice stock. 100 eggs, \$5; 50, \$3. Safe delivery and satisfaction guaranteed. Adam A. Weir, Clay Center, Neb.

HATCHING EGGS FROM BARRED PLYMOUTH ROCKS, excellent birds. Two dollars for fifteen. Peter H. Friesen, Route 1, Lehigh, Kansas.

WHITE ROCKS—SEVENTEEN RIBBONS. This season's eggs, one and two dollars per fifteen. Mating list. Ed Fehr, Marquette, Kansas.

BARRED ROCKS—FIRST COCKEREL, Manhattan, 93½. Fifteen eggs, \$3; hundred, \$5. Duroc boars, gilts. F. F. Wood, Wamego, Kansas.

BLUE RIBBON BARRED ROCKS—Twenty-eight years experience. 110 premiums. Pens headed by Chicago winners. Eggs, fifteen, \$3, \$3.50. Mrs. Chris Bearman, Ottawa, Kansas.

PRIZE WINNING BARRED ROCKS—Four entries, five prizes, State Show 1917. Eggs, special mating, \$3 to \$5; farm flock, \$1. C. D. Swain, Geuda Springs, Kansas.

BARRED PLYMOUTH ROCKS, E. B. Thompson strain. Eggs, \$1.50 per fifteen; \$3.50 per fifty; \$6 per hundred. C. J. Rivir, Lafontaine, Ind.

BARRED ROCKS, EXCELLENT IN SIZE and quality. Eggs, first pen, \$3 per fifteen; range flock, \$6 per hundred. Mrs. Myrtle Henry, Route 1, Leecompton, Kansas.

PURE BARRED ROCK EGGS FROM large well-marked range birds, \$1.25 setting, \$8 hundred. Choice Thompson strain pen eggs, \$3 setting. S. R. Blackwelder, Isabel, Kansas.

LINDAMOOD'S BARRED ROCKS, BOTH dark and light matings. Prices for eggs from special matings, \$5 per fifteen. Utility eggs, \$5 per hundred. Send for circular. C. C. Lindamood, Walton, Kansas.

WHITE PLYMOUTH ROCKS, BEST ALL-purpose fowl. Bred them twenty-four years. No better anywhere. Eggs, \$2 per fifteen, \$5 per forty-five delivered. Thomas Owen, Poultry Editor, Topeka, Kansas.

EGGS FOR HATCHING—FROM BEST laying strains of Barred Plymouth Rocks. Bradley Bros. and Parks 200-egg strains. \$3, fifteen; \$5, thirty. Catalog. Gem Poultry Farm, Haven, Kansas.

BARRED PLYMOUTH ROCKS—GENUINE Thompson Ringlet prize winning strains. Pen eggs, either cockerel or pullet mating, also utility flock eggs. Circulars free. A. F. Siefker, Defiance, Missouri.

BARRED ROCK SPECIALIST—PRIZE winning Hobart, first, second, third, fourth cockerels; first, third pullet; first pen; second, third cock; silver cup, gold special. Oklahoma City, first pullet, bred pen, first cock. Eggs, fifteen, \$2, \$3; hundred, \$6. Fred Hall, Lone Wolf, Okla.

RHODE ISLAND REDS.

ROSE COMB R. I. RED EGGS, FIFTEEN, \$2. Fine stock. G. D. Willems, Inman, Kansas.

ROSE COMB RHODE ISLAND REDS—Utility stock. Winter layers. Eggs, \$2, 15; \$5, 45; \$9, 100. Louise Krigbaum, Route 1, Topeka.

ROSE COMB RHODE ISLAND RED EGGS, one dollar per fifteen. R. R. Wilson, 2519 Grand Ave., Parsons, Kansas.

ROSE COMB RED EGGS FROM BLUE ribbon winners, \$3, \$5, \$7.50 per fifteen. Best of guarantee. Fred Kelm, Seneca, Kan.

RHODE ISLAND REDS.

LARGE BRILLIANT ROSE COMB RED eggs for hatching, \$1 per fifteen; \$6 per hundred. Mrs. Roy Davison, Sabetha, Kan.

SINGLE COMB RHODE ISLAND RED eggs. Maple Hill Poultry Farm, Route 6, Lawrence, Kansas.

SINGLE COMB RED EGGS—GOOD FARM range, \$4 per hundred, \$1.50 per thirty. Mrs. Rosa Janzen, Box 242, Geneseo, Kan.

HIGH SCORING R. C. R. I. REDS—EGGS, \$1.50 per setting. Fertility guaranteed. Chas. Wodke, Council Grove, Kansas.

ROSE COMB RHODE ISLAND REDS—Eggs, \$2 per setting. Kansas state show winners. Baby chicks. Mating list. L. E. Castle, Wichita, Kansas.

DARK R. C. REDS, PURE-BRED, EXTRA fine. Eggs, \$3 and \$2 per fifteen; \$5 per hundred. W. J. Honeyman & Sons, Hillside farm, Madison, Kansas.

PURE-BRED ROSE COMB RHODE Island Reds. Eggs for hatching, \$1 per fifteen, \$5 per hundred. Mrs. L. F. Hinson, Stockdale, Kan.

S. C. REDS—EGGS FOR HATCHING. Laying strain headed by prize winning cockerel. Fifteen, \$3. Mrs. Mira Lambert, Anderson, Missouri.

EGGS FOR SALE—S. C. R. I. REDS.—Breeder for twelve years. \$1.50 per setting of fifteen; \$5 a hundred. Mrs. Jno. G. Schmidt, Route 1, Box 135, Edgewood, Lexington, Mo.

FERTILITY AND SAFE ARRIVAL guaranteed on low priced eggs for hatching, from high quality, both combs, Rhode Island Reds. Fourteen years breeding. Mating list free. H. A. Sibley, Lawrence, Kansas.

SIX GRAND PENS, ROSE COMB RHODE Island Reds that have shape, size and color. Mated to roosters costing \$15 to \$50. Fifteen eggs, \$2.50; thirty eggs, \$4; fifty eggs, \$6. Fine pure-bred range flock, \$5 per hundred. Baby chicks. Send for catalog. W. R. Huston, Red Specialist, Americus, Kan.

WYANDOTTES.

R. C. BUFF WYANDOTTE EGGS, \$1.50 for fifteen. G. G. Wright, Langdon, Kan.

PARTRIDGE WYANDOTTE EGGS, \$3.00 per fifteen; \$5.50 per thirty. Mrs. O. M. Collins, Drexel, Mo.

PURE WHITE WYANDOTTE EGGS FOR hatching. Thirteen of fourteen now hatching. Samsel, Lebanon, Nebraska.

WHITE WYANDOTTE EGGS, \$1 PER 15. Martin Fishel strains. Fred Watts, Havensville, Kansas.

WHITE WYANDOTTE EGGS, \$1, FIFTEEN; \$5 hundred. Mrs. Geo. Downie, Lyndon, Kansas.

ROSE COMB WHITE WYANDOTTE EGGS \$4 per hundred; farm range. Bertha Rogers, Route 6, Garnett, Kansas.

WHITE WYANDOTTES—EGGS FROM choice stock, \$1.30, thirty; \$5, hundred. Mrs. Will Beightel, Holton, Kansas.

COLUMBIAN WYANDOTTE EGGS—FIFTEEN, \$1.50; hundred, \$7. Miss Etta Foreman, Belvue, Kansas.

SILVER-LACED WYANDOTTE EGGS, \$1.25 per fifteen; \$3 per fifty; \$5 per hundred. Mrs. H. R. Young, Stella, Neb.

ROSE COMB WHITE WYANDOTTE eggs, per fifteen, \$1; one hundred, \$4. H. A. Ritter, Route 2, Kiowa, Kansas.

EGGS FOR SALE FROM PURE WHITE Wyandottes, \$6 per hundred. Mrs. D. J. White, Clements, Kansas.

WHITE WYANDOTTE EGGS, ONE DOLLAR for fifteen. Four-fifty per hundred. Geo. Tuis, Fredonia, Kansas.

CHOICE ROSE COMB SILVER WYANDOTTE eggs, \$1 for 15; \$5 for 100. Mrs. Phillip Schuppert, Arrington, Kansas.

WHITE WYANDOTTE EGGS FROM farm range stock, \$4 per hundred. Vida Hume, Tecumseh, Kansas.

CHOICE ROSE COMB WHITE WYANDOTTE eggs for sale, \$1.50 per setting of fifteen eggs. Mrs. George Foresman, Route 1, Belvue, Kansas.

ROSE COMB WHITE WYANDOTTES—Pullets, \$1.50 each; eggs, pen, fifteen, \$2; flock, fifteen, \$1.00, \$4.75. Mrs. Effie Acheson, Falco, Kansas.

SHUFF'S "BEAUTIFUL" SILVER WYANDOTTES. Eggs—Fifteen, \$1.50; fifty, \$3.50; hundred, \$6. Baby chicks. Mrs. Edwin Shuff, Plevna, Kansas.

PARTRIDGE WYANDOTTE EGGS, MAHOGANY strain, \$1.50 per fifteen. Good cockerels, \$3 to \$5 each. Canaries, fine singers. Baby chicks. Mrs. Edith B. Taylor, Marion, Kansas.

SILVER WYANDOTTES. YES, I AM still selling Silvers. Have some good cockerels left. Eggs in season. Prices reasonable. Write me. M. B. Caldwell, Broughton, Kansas.

WHITE WYANDOTTE EGGS—REGAL strain, prize winners. Farm range, \$5 hundred. Pen 1, Martin male direct, fifteen, \$5. Pen 2, high scoring male, fifteen, \$3. Prepaid. Frances Fleury, Concordia, Kansas.

PARTRIDGE WYANDOTTES—PENS headed by Madison Square Garden and Chicago Coliseum winners. Eggs, \$3 per fifteen. Book early. Rev. F. R. Beery, Concordia, Kansas.

SILVER WYANDOTTES, BETTER THAN ever. Keen lacings. Superior shape. Utility flock, fifteen eggs, \$1.25; \$6 hundred. Pens No. 1, high scoring females headed by one of Hoffman's best blooded cockerels, fifteen, \$5; No. 2, choice females headed by Williams cock, fifteen, \$3. All eggs sent postpaid. Satisfaction guaranteed. Mrs. Paul McElwee, Route 21, Chilhowee, Mo.

LEGHORNS.

WHITE LEGHORN EGGS (YOUNG'S \$20 stock). Elsie Thompson, Mankato, Kan.

PURE-BRED BUFF LEGHORN EGGS, \$6 hundred. P. A. Wempe, Seneca, Kansas.

ROSE COMB WHITE LEGHORN COCKERELS, \$1 each. N. C. Dewey, Stafford, Kan.

TIP TOP ROSE COMB BROWN LEGHORN eggs. J. E. Wright, Wilmore, Kan.

PURE-BRED SINGLE COMB BROWN Leghorns. Choice farm flock. Eggs, 100, \$4. Mrs. D. A. Wohler, Hillsboro, Kansas.

PURE-BRED S. C. BROWN LEGHORN eggs, \$1 per fifteen, \$5 per hundred. Mrs. L. H. Hastings, Thayer, Kansas.

"BARRON'S" 268-EGG LEGHORNS—Eggs, \$5 hundred. Sunlight Poultry Farm, Mt. Moriah, Mo.

EGGS, \$1.50 PER SETTING. LEGHORNS, Reds, Rocks, Wyandottes and Orpingtons. Royal Poultry Yards, Coffeyville, Kansas.

SINGLE COMB BROWN LEGHORNS—Pullet mating only. Tiff Moore, Osage City, Kansas.

EGGS, EGGS FROM KEEP-LAYING strain Single Comb White Leghorns. Thol. R. Wolfe, Conway Springs, Kansas.

MRS. SMITH'S QUALITY WHITE LEGHORN eggs, \$5 per hundred. Mrs. A. J. Smith, Colony, Kansas.

SINGLE COMB BUFF LEGHORN COCKERELS. Eggs. White Holland turkey toms. Eggs. Mrs. S. F. Crites, Florence, Kansas.

SINGLE COMB WHITE LEGHORN EGGS—English Barron strain. Baby chicks. F. B. Morger, Fowler, Colo.

ROSE COMB WHITE LEGHORNS—Eggs for hatching, \$5 per hundred. Mrs. Joe Streeter, Route 5, Hamilton, Mo.

ROSE COMB BROWN LEGHORNS—Prize winners. \$5 hundred, \$2.75 fifty, \$1 fifteen. Rufus Standiford, Reading, Kan.

BROWN LEGHORN HATCHING EGGS, \$1 per fifteen, \$3 per fifty, \$5.50 per hundred. R. W. Getty, Downs, Kansas.

PURE-BRED ROSE COMB BROWN LEGHORN eggs, \$1 per fifteen, \$5 per hundred. Mrs. Daisy Denlinger, Frankfort, Kansas.

EUREKA FARM SINGLE COMB WHITE Leghorns, bred to lay. Farm range eggs, \$4 per hundred. Henry Richter, Hillsboro, Kansas.

EGGS FOR HATCHING FROM HOGAN'S laying strain of Single Comb White Leghorns, \$5 per hundred. Roy Rhodes, Maize, Kansas.

BROWN LEGHORNS—ROSE, SINGLE comb. Egg production scoring 200 to 280 eggs, \$2 fifteen, \$6 hundred, prepaid. Plainview Poultry Farm, Lebo, Kansas.

SINGLE COMB BROWN LEGHORNS—Thirty-one prizes at Kansas State Show, 1917, including eight firsts. W. J. Roof, Maize, Kansas.

TOM BARRON S. C. WHITE LEGHORNS—Best winter layers. Our hens proved their merit. Fifteen eggs, \$1.25; 100, \$5. J. L. Stratton, Ottawa, Kansas.

SINGLE COMB WHITE LEGHORN EGGS from extra good layers and prize winners. Fifteen, \$1; hundred, \$5. I. H. Gnagy, Hutchinson, Kansas.

S. C. WHITE LEGHORNS—EXHIBITION laying quality. Choice cockerels. Eggs for hatching. Descriptive folder free. O. L. Robey, Maryville, Mo.

S. C. BROWN LEGHORNS—OH! YES, we have been raising them 21 years; the 222 to 266 trap nest egg record kind. Eggs, 15, \$1.25; 100, \$5.00. Gorsuch, Stilwell, Kansas.

EGGS FOR SALE FROM PURE-BRED heavy winter laying Single Comb White Leghorns, \$2 fifteen, \$10 hundred; 100% fertility guaranteed on seventh day of incubation. H. M. Blaine, Sylvia, Kansas.

SINGLE COMB WHITE LEGHORNS, Columbian Wyandottes, Muscovy ducks, fancy pigeons. Catalog. Southdown sheep, Berkshire swine. J. A. Leland, Springfield, Illinois.

S. C. BROWN LEGHORN EGGS AND cockerels. Guaranteed finest imported and domestic strain in the country. Pullet line only. Eggs, \$2 setting. W. H. Taylor, 703 South Emporia, Wichita, Kansas.

PRIZE WINNING S. C. WHITE LEGHORNS at two state shows. Eggs, \$2, \$3 and \$5 per fifteen. Eggs from flock, \$5 per 100. Chicks. Send for free mating list. C. G. Cook, Box F, Lyons, Kansas.

RUSSELL'S FAMOUS BROWN LEGHORNS, single comb, prize winners, heavy layers. Write for catalog. Satisfaction guaranteed. Mrs. Geo. Russell, Chilhowee, Missouri.

S. C. W. LEGHORN COCKERELS FROM hens with records over two hundred eggs; one, two, three dollars each. Baby chicks, 12½c each. Eggs, \$5 per hundred. Hyperion White Leghorn Farm, Route 1, Des Moines, Iowa.

YOU WANT GOOD LAYERS. MOORE'S strain of S. C. Brown Leghorns are prize winners and winter layers. Eggs, \$1 for fifteen and \$4 for 100 postpaid. John W. Moore, R. R. No. 1, Poplar Bluff, Mo., formerly of Hendrickson, Mo.

S. C. WHITE LEGHORNS EXCLUSIVELY. Decka's laying strain. Many winners. Eggs for hatching, \$6 per hundred. Write for 1917 price list. Yours for quality (Nuf sed), Decka's White Poultry Farm, Route 1, Des Moines, Iowa.

EGGS—FROM BELMONT'S UTILITY strain Single Comb White Leghorns, bred to lay kind, that pays the grocery bill. Flock headed by White King, the largest and whitest bird we have ever owned. Setting fifteen, \$1; fifty, \$3; hundred, \$5. Belmont Farm, Trenton, Mo.

LEGHORNS.

WHITE LEGHORN EGGS (FROM Young's best). G. D. Willems, Inman, Kan.

S. C. W. LEGHORN EGGS. STATE WINNER. Mrs. W. R. Hildreth, Oswego, Kansas.

R. C. B. LEGHORNS, WINTER LAYERS, vigorous stock. Eggs, \$5 per hundred. The Blue Grass Stock Farm, Onida, Kansas.

GOLDEN BUFF LEGHORNS—GREAT layers, silver cup winners. 100 eggs, \$6. Agnes Smiley, Braddyville, Iowa.

S. C. BROWN LEGHORNS—WINTER layers and beauty strain. Booking orders for chicks to be delivered April 1, any quantity, at \$12.50 per hundred. Eggs at \$5.00 per hundred, trap-nest stock. Pullets in laying contest. Paradise Poultry Farm, Carona, Kansas.

WHITE LEGHORNS

YOUNG'S STRAIN WHITE LEGHORNS—Eggs, \$5 hundred. Folder free. Reed Poultry Circle, Box H, Reed, Oklahoma.

UTILITY S. C. WHITE LEGHORNS—Fertile, Young, Frantz and Yesterlaid strains. Eggs, \$1 per fifteen; \$4 per hundred. Sold 8,000 eggs for hatching last season, no complaint. L. O. Wlemeyer, Route 1, Anthony, Kansas.

SEVERAL BREEDS.

EGGS—BARRED ROCKS, BRONZE TURkeys and Toulouse geese. Grace Aspedon, Farragut, Iowa.

TWENTY VARIETIES POULTRY. EGGS, \$1.50 setting. Royal Poultry Yards, Coffeyville, Kansas.

SINGLE COMB ANCONA AND SILVER Laced Wyandotte eggs, \$1.26 per sixteen by post prepaid. Mrs. Cecile McGuire, Pratt, Kansas.

TURKEYS, GEESE, WHITE RUNNERS, Buff Drakes, Single Comb White Orpingtons, Buff and Brown Leghorn cockerels. Emma Ahlstedt, Roxbury, Kansas.

FREE—1917 PRICE LIST OF EGGS. ALL leading breeds of chickens, turkeys, ducks, geese and guineas. Monroe Poultry Yards, Monroe, Iowa.

PURE-BRED BOURBON RED TURKEY eggs, \$3 per eleven. Pure-bred Rhode Island Red eggs from open range herd, \$1 per fifteen, \$4.75 per hundred. J. W. Harshbarger, Milo, Kansas.

EGGS FROM PURE-BRED PRIZE WINNING Bourbon Red turkeys, both combs. S. C. R. I. Reds, White and Black Langshans, Anconas and Light Brahmas. Write for mating list. Mr. Henry Gillen, Route No. 1, Osborne, Kansas.

EGGS—M. B. TURKEY, NEW YORK prize winning blood in flock, \$3 per eleven; geese eggs, African, Embden, Toulouse, \$1.75 per seven; White Muscovy ducks, \$1.75 per eleven; White African guinea, \$1.50 per seventeen; White Rock, Fishel strain, \$5 per hundred. W. L. Bell, Funk, Neb. Dry Creek Poultry Farm.

FOR SALE, EGGS—EGGS FROM PURE-breeds, and cockerels, turkeys, geese, eight kinds of ducks, pearl and white guineas, bantams, Barred, White and Buff Rocks, Rhode Island Reds, Houdans, Hamburgs, Games, Langshans, Minorcas, Brahmas, Cochins, Buff and White Orpingtons, Buff and Silver Laced Wyandottes, Leghorns, Hares, Rabbits, Guinea Pigs, Dogs, Fancy Pigeons. Write wants. Free circular. D. L. Bruen, Platte Center, Neb.

ORPINGTONS.

PURE-BRED WHITE ORPINGTONS—Eggs for hatching, \$1 per fifteen, \$5 per hundred. Frank Hinson, Stockdale, Kansas.

EGGS FROM PRIZE WINNING BUFF Orpingtons, \$2 per 15; fine Barred Rock, \$1 per 15, \$5 100. Mrs. M. Ditto, Newton, Kan.

BUFF ORPINGTON EGGS, \$1.25 PER fifteen. Farm raised stock. High quality. Mrs. H. M. Long, Reife, Mo.

FINE GOLDDUST BUFF ORPINGTONS—Eggs, \$1.50 setting; \$8 hundred. Prepaid. Mary E. Price, Route 7, Manhattan, Kansas.

BUFF ORPINGTONS—EGGS FROM heavy layers, \$2. They win, lay, pay. Virgil Taylor, Holton, Kansas.

FINE BUFF ORPINGTON EGGS FROM my regular winners, reasonable. H. T. Farrar, Axtell, Kansas.

WHITE ORPINGTON COCKERELS—Eggs and chicks reasonable. Mrs. Barracough, 137 S. Fern, Wichita, Kansas.

WHITE ORPINGTON COCKERELS, A few pullets. Eggs reasonable. Also Indian Runner duck eggs. James Kennicott, Bunker Hill, Kansas.

EXHIBITION BUFF ORPINGTON EGGS, state, county winners. Bourbon Red turkeys. Prices reasonable. Write for catalog. Mrs. Rees Barton, Amoret, Mo.

"PAYWELL" BUFF ORPINGTON EGGS from heavy winter layers and blue ribbon stock, \$2 per fifteen. L. S. Weller, Salina, Kansas.

WHITE ORPINGTONS—ALDRICH strain direct. Eggs, \$1.50. Two extra choice pens, \$3 per fifteen. Fertility guaranteed. H. M. Goodrich, 712 Topeka Ave., Topeka, Kansas.

WHITE ORPINGTONS—PERSISTENT winter layers. Four pens. Mating list free. Eggs, \$1.50 per setting and up. Urbandale Poultry Farm, 418 Butts Bldg., Wichita, Kansas.

EGGS FROM MY GREAT WINTER-LAYING White Orpingtons. Fifty-five eggs January 20, sixteen from 65 hens. 108, \$6; 60, \$3.50; pen, \$2 fifteen. Express paid. John Vanamburg, Marysville, Kansas.

(Continued on Next Page.)

BRAHMAS.

PURE-BRED PRIZE WINNERS—LIGHT Brahmans. Eggs, fifteen, \$1; 100, \$5. Mrs. V. E. Rogers, Sharon, Kansas.

EGGS FOR HATCHING FROM PRIZE-winning Light Brahmans. Write for prices. R. W. Getty, Downs, Kansas.

BABY CHICKS.

ROSE COMB RED CHICKS—WHITE Runner duck eggs. Lily Robb, Neal, Kan.

REDS, ROCKS, LEGHORNS; 12½c. Request folder. McCune Hatchery, Ottawa, Kansas.

PHEASANTS.

PHEASANTS—DEMAND UNLIMITED for Ringnecks this spring at \$6 to \$8 pair. Booking orders. Eggs of these, \$4 dozen; Golden, \$5 dozen. Harper Lake Poultry Farm, Jamestown, Kansas.

MINORCAS.

S. C. BLACK MINORCA EGGS, FIFTEEN, \$1; 100, \$5. Frank Scherman, Route 8, Topeka, Kansas.

S. C. WHITE MINORCAS—EGGS FROM pure-bred birds, \$3 and \$2 per setting. Correspondence solicited. A. Goodwyn, Minneapolis, Kansas.

CORNISH

CORNISH INDIAN GAME HENS, \$2.00 each. Maggie Fleisher, Ottawa, Kansas.

DARK CORNISH, WON FOUR FIRSTS and one special at state shows this season. Stock and eggs for sale. O. Blankenship, Waldron, Kansas.

LANGSHANS.

GET MY FREE MATING LIST OF Madison Square and Chicago prize winning Langshans. John Lovette, Mullinville, Kan.

BLACK LANGSHAN EGGS FROM FIRST prize birds, Iowa and Nebraska state shows, \$1.50 per fifteen. Mrs. S. Marsh, Juniata, Nebraska.

BLACK LANGSHAN EGGS, \$3 FOR 15, from my San Francisco and Kansas State Show winners, 1917. H. M. Palmer, Florence, Kansas.

EGGS—PURE-BRED BLACK LANGSHANS exclusively from free range fowls, \$1 for 15, \$5 for 100. Mrs. John A. Roberts, Route 5, Stanberry, Mo.

TURKEYS.

BOURBON RED TURKEY EGGS, \$2.50 per eleven. Fred Watts, Havensville, Kan.

BOURBON RED TURKEYS—EGGS, \$3.50, eleven. Mrs. J. E. Bundy, Goodrich, Kansas.

WHITE HOLLAND TURKEYS, SINGLE Comb White Leghorns, Single Comb Buff Orpington eggs. Baby chicks. Mrs. S. A. Warren, Reger, Mo.

MAMMOTH WHITE HOLLAND TURKEYS—EGGS, \$2.50 per eleven. Let us book your order early. Mrs. Roy Davisson, Sabetha, Kansas.

FEATURING THE MUCH WANTED "Goldbank" Mammoth Bronze turkeys. Eggs, \$1 each after April 1. Will book orders. Mrs. Iver Christenson, Jamestown, Kansas.

MAMMOTH BRONZE TURKEYS—NO more toms for sale. Pullets, \$5, \$10; hens, \$10, \$15. Eggs—Yard, 1, \$1 each; second, 50 cents. Black Langshan, Barred Plymouth Rock cockerels for sale, \$2, \$5. Eggs, \$2-\$5 per setting. Show record. Jas. W. Anders, Unionville, Mo.

POULTRY SUPPLIES

MILLIONS OF FINE POULTRY WILL die from lice and mites unless poultrymen use X-ray louse killer. Formula, 50c. Order now. C. O. Bayha, Jacksonville, Ill.

DUCKS AND GEESE.

DOMESTICATED WILD MALLARDS—Eggs and drakes. James C. Shortt, Route 1, Belvue, Kansas.

ANCONAS.

SINGLE COMB ANCONAS—EGGS, FIFTEEN for \$1.25 or \$6 per hundred delivered. Write for printed matter. C. K. Whitney, Route 9, Wichita, Kan.

ANCONAS—BLUE RIBBON WINNERS. Eggs, \$1.50 per fifteen, \$6 per hundred. Pens two and three, \$1.25 per fifteen, \$5 per hundred. Frank Glenn, Newton, Kansas.

SEND FOR MY "ANCONA DOPE" AT once. Tells why I quit all other breeds. It's free and worth reading. Fill orders for eggs promptly. Page's Ancona Farm, Salina, Kansas.

POULTRY WANTED.

WANTED—NO. 1 POULTRY: HENS, 18c; turkeys, 24c; capons, 22c. Eggs, market price. Coops and cases loaned free. The Copes, Topeka.

FARM AND HERD.

The consignment sale of Hereford cattle held at Manhattan, Kansas, March 1, under the management of W. A. Coehel, of the Animal Husbandry Department, Kansas Agricultural College, was one of the successful sales of the season. The cattle were selected from the best herds in the state and the seventy-four head sold for a total of \$22,675, or an average of \$300.60 per head. The average for the twenty-three head of cows and heifers sold was \$369.60. Fifty-one bulls sold for an average of \$278.03 per head. A cow consigned by J. O. Southard topped the sale at \$1,510. W. S. Streator, of Grattan, S. D., was the successful bidder.

Glen C. Smith, of Sedgwick, Kansas, is one of the successful Holstein breeders in Kansas. Mr. Smith has built up a herd of producers that always show a profit. He has record breeding and at this time has a fine lot of young stock.

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 60,000 farmers for 5 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.

BE A GOVERNMENT FARMER. GOOD pay; steady, interesting job. Write Central Institute, 44-F, St. Louis.

MAN OR WOMAN TO TRAVEL FOR old established firm. No canvassing; \$1,170 first year, payable weekly, pursuant to contract. Expenses advanced. G. G. Nichols, Philadelphia, Pa., Pepper Bldg.

MEN—18 OR OVER BECOME RAILWAY mail clerks. \$75 to \$150 monthly. Vacations. Big chances farmers. Write immediately for list government positions easily obtainable. Franklin Institute, Dept. A-82, Rochester, New York.

AGENTS WANTED.

GOOD MAN TO TAKE ORDERS. GET own clothes free, make big money. Knickerbocker Tailoring Co., Dept. 594, Chicago.

MEN TO WEAR FINE SUIT. ACT AS agent. Big pay, easy work. Banner Tailoring Co., Dept. 534, Chicago.

GENTLEMEN: MASON SOLD EIGHTEEN Spray Pumps and Auto Washers one Saturday. Profits, \$2 each. Write Rusler Co., Johnstown, Ohio.

WE PAY \$80 MONTHLY SALARY AND furnish rig and expenses to introduce guaranteed poultry and stock powders. Bigler Company, X 671, Springfield, Ill.

REAL ESTATE.

WANTED—TO HEAR FROM OWNER OF good farm for sale. Send cash price and description. D. F. Bush, Minneapolis, Minn.

640-ACRE MONTANA HOMESTEADS—new law. Circular free. Bureau 63, Boulder, Montana.

FOR BEST 320 ACRES HOMESTEAD relinquishments see Watson Land Co., Lamar, Prowers Co., Colorado.

YOUR CHANCE IS IN CANADA.—RICH lands and business opportunities offer you independence. Farm lands, \$11 to \$30 acre; irrigated lands, \$35 to \$50; twenty years to pay; \$2,000 loan on improvements, or ready made farms. Loan of live stock; taxes average under 20 cents an acre; no taxes on improvements, personal property, or live stock. Good markets, churches, schools, roads, telephones; excellent climate—crops and live stock prove it. Special homeseekers' fare certificates. Write for free booklets. Allan Cameron, General Superintendent Land Branch, Canadian Pacific Ry., 234 Ninth Ave., Calgary, Alberta.

LIVINGSTON'S GLOBE AND EARLIANA tomato; transplanted Jersey Wakefield and Copenhagen cabbage; cold-framed Snow-white and Self-Blanching celery; transplanted Yellow Jersey and Nancy Hall sweet potato, 5 cents dozen, 40 cents hundred, \$2 thousand. Cauliflower, Beauty egg plant, mango peppers, 15 cents dozen. Florist verbenas, asters, velvet pansy, 2 cents each. King Humbert cannas started in 10 cents each. Geraniums, assorted colors from pots, 5 cents each. Senator Dunlap strawberry plants, 10 cents dozen. Progressive Everbearing red raspberry plants, 5 cents each. Cumberland black raspberry plants, 5 cents each. If you wish your shipment parcel post, send me a little extra money and I will send larger plants. I pack between two layers of damp moss. These prices are good all spring and summer, 1917. I grow plants by the million and want your trade—1918. Address Chas. Vanstrom, Edgar Green House, Edgar, Nebraska.

NEW FARM OPPORTUNITY IN ONE OF the greatest states in the Union. A new line of the Santa Fe is tapping a rich and fertile prairie section of Northwest Texas, where already many farmers have made good in a big way with wheat, hogs and live stock. Here, if you act now, you can get first choice—get in on the ground floor of a great opportunity. You can get in ahead of the railway—ahead of the people whom the railway will bring—ahead of those who act more slowly than you do. This is the chance of a lifetime for a man of moderate means. A certain number of thrifty, far-seeing farmers can acquire good land at an astonishingly low figure and on long, easy terms. If you have confidence that a great railroad, like the Santa Fe, would only recommend what it considers a good thing, and because it wants to see new territory developed and wants newcomers to prosper and produce—then write me today for particulars about this district. Mild climate, social advantages, schools, churches, telephones, good roads. Everything there but enough men with their families. Will reap the advantage of a section that has been minutely inspected by a Santa Fe agricultural agent and pronounced right? Write me now and let me send you a copy of the special illustrated circular we are getting out. C. L. Seagraves, Industrial Commissioner, A. T. & S. F. Ry., 931 Railway Exchange, Chicago.

WISCONSIN LAND FOR SALE

LANDOLOGY, A MAGAZINE GIVING the facts in regard to the land situation. Three months' subscription free. If for a home or as an investment you are thinking of buying good farm lands, simply write me a letter and say "Mail me LandoLOGY and all particulars free." Address Editor LandoLOGY, Skidmore Land Co., 301 Skidmore Bldg., Marinette, Wis.

PET STOCK.

BELGIAN HARES FOR SALE. E. RATH-bun, Lucas, Kansas.

WHEN WRITING TO ADVERTISERS PLEASE MENTION KANSAS FARMER

TREES, SEEDS AND PLANTS.

WHITE BLOSSOM SWEET CLOVER, reasonable. John Lewis, Hamilton, Kan.

SEED CORN.—LAPTAD STOCK FARM, Lawrence, Kansas.

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

TEN ELBERTA AND FIVE CHAMPION peach trees, postpaid, \$1. Send now. Wellington Nurseries, Dept. C, Wellington, Kan.

SEED CORN—WON FIRST AND SWEEP-stakes, Missouri State Corn Show, 1917. For catalog, write George Manville, Faucett, Mo.

BEST PROGRESSIVE EVERBEARING strawberry plants cheap. For particulars write R. N. Thomas, Shenandoah, Iowa.

BLACK HULLED WHITE KAFIR SEED, recleaned, tested and sacked, \$2 per bushel. Grover Lee, Pratt, Kansas.

WHITE SWEET CLOVER BOUGHT (large or small lots) if priced attractively. State lowest price. Box 375, Emporia, Kan.

ALFALFA SEED, NEW CLEAN UPLAND, 14 cents per pound for one bushel or more. Bags, 25 cents. Sample on request. W. M. Hixon, Berryton, Kansas.

ALFALFA SEED FROM NORTHWEST Kansas, 95 per cent pure. Good germination. \$5.50 per bushel. Geo. Bowman, Logan, Kansas.

SEED CORN—DIAMOND JOE WHITE, excellent drouth resister, and Reid's Yellow Dent. Graded, \$2.50 bushel. D. D. Denver, Milford, Kansas.

PURE GOLD MINE AND BOONE COUNTY White seed corn, selected, graded, \$2 per. Alfalfa seed, \$7.50 per. Samples free. J. F. Feigley, Enterprise, Kansas.

FOR SALE—BOONE COUNTY WHITE seed corn, made over 30 bushels this year. Hand picked. \$1.75 per bushel. W. C. Baumgartner, Halstead, Kansas.

ALFALFA SEED FROM HIGH PRODUCING fields, 370 bu. from 40 acres. 99.74% pure; 95% germination. \$8.00 per bu. Sample free. Stockwell Farms, Larned, Kansas.

REID'S YELLOW DENT, BOONE COUNTY White seed corn. Genuine Red Texas seed oats, clover, timothy and alfalfa seed. S. G. Trent, Hiawatha, Kansas.

BLACKBERRY ROOT CUTTINGS—Early Harvest, \$1.25 thousand. Rhubarb roots, \$1.75 hundred. Catalog. Adams & Son, Fayetteville, Ark.

BEAUTIFUL FLOWERS—BIG STOCK, canna, gladiola, woolflower, salvia, tomato, cabbage, pepper, sage, and other flowering and vegetable plants. Seeds and bulbs. Write for descriptive price list. Henry S. Jefferies, Ottawa, Kansas.

SEED CORN—YELLOW DENT; ST. Charles White, carefully selected. Shelled, bushel, \$2; bags free. Orders filled with care at once. Frank Crosby, Route 2, Belvue, Kansas.

TREES, SHRUBS, PLANTS, VINES, seeds. Everything at lowest prices direct to you. All tree peddlers' commissions cut out. Free book. Wichita Nurseries & Seed House, 105 Shell Bldg., Wichita, Kansas.

GERMAN MILLET, FINE GERMINATION, 100 pounds, \$3.75. Tested white black-hull kafir, \$1.85 bushel in two-bushel sacks. All sacks free. Brooks Wholesale Co., Ft. Scott, Kansas.

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

SEED CORN—PURE-BRED REID'S YELLOW DENT and Boone County White. Alsike, Mammoth and Medium Red Clover, Kherson and Iowa 103 Oats, new crop timothy seed. Folder and prices free. F. M. Riebel & Son, Arabela, Mo.

EVERBLOOMING STRAWBERRY plants. Americus, 100 plants, 90 cents; 500, \$4. Progressive, 100 for \$1; 500, \$4.75. Guaranteed strong, healthy plants, true to name. Big stock flowering and vegetable plants. Write today for descriptive price list. Henry Jefferies, Ottawa, Kansas.

HORSES AND MULES.

SHETLAND PONIES, FIFTY HEAD, moderate prices. Charles Clemmons, Coffeyville, Kansas.

FOR SALE OR TRADE—PRINCE VICTOR, the best grade Percheron stallion in Harvey County. Weight 2,000 pounds; age 9 years. G. W. Perkins, Newton, Kansas.

FOR SALE—FOUR 5-YEAR-OLD PERcheron mares, two Percheron stallions; one 2, one 3. All registered P. S. A. and large. L. H. Luckhardt, Tarkio, Mo.

JACK FOR SALE OR TRADE—FIVE years old, gray, 14 hands jack measure; excellent breeder. Sacrifice price. Harry Bilson, Eureka, Kansas.

SITUATION WANTED.

WANTED—WORK IN UP-TO-DATE dairy by an experienced reliable young man. Lawson Sappington, Centralia, Missouri.

YOUNG MAN WANTS WORK ON FARM until harvest. Would expect \$25 per month including board and washing. F. L. McIntire, Rogers, Ark.

CATTLE.

FOR SALE—TWELVE REGISTERED Galloway calves, three bulls and nine heifers. B. F. Young, Richland, Kansas.

FOR SALE—ONE PURE-BRED JERSEY bull calf, born January 24, 1917. Write H. H. Starr, Claflin, Kansas.

TWO GUERNSEY HEIFERS, BOTH REGISTERED, richly bred, in calf and priced right. J. W. Marley, Oswego, Kansas.

GALLOWAYS FOR SALE—TWENTY head registered. T. T. Huntington, Rochepot, Missouri.

300 HEAD OF REGISTERED AND HIGH grade cows and heifers for sale, headed by the great 40-pound bull, Johanna King Segla. Neal Houslett, Oxford, Wis.

CHOICE CALVES—HOLSTEINS, GUERNSEYS, Shorthorns, high grades, \$15 to \$35 according to age. Expressed to you at little cost. Write Paul Johnson Company, South St. Paul, Minn.

HIGHLY BRED HOLSTEIN CALVES, either sex, 15-16ths pure, crated and delivered to any station by express, charges all paid, for \$23 apiece. Frank M. Hawes, Whitewater, Wis.

ONE HUNDRED CHOICE BREEDY HOLSTEINS from six months to six years. Some fresh, a lot springing. Tuberculin tested, three-fourths white, dairy conformation. Yearlings extra large. C. S. Simmons, Belmont, Wisconsin.

HEDGE POSTS.

FOR SALE—FIFTY THOUSAND OSAGE hedge posts. H. W. Porth, Winfield, Kan.

MISCELLANEOUS.

STAR ROUTE AND SIDE LINE, PAYING \$35 a week; price \$1,500; to exchange for farming outfit and live stock. Eppe, 1015 Park, Kansas City, Mo.

BLACKSMITH POWER MACHINE SHOP for sale or trade for land. Good farming. County seat town. Big business. E. J. Dorman, Wakeeney, Kansas.

YOU CAN MAKE A GOOD LIVING IN your back yard raising Belgian hares. Full particulars and price list of all breeds, 10c. W. G. Thorson, Aurora, Colo.

FOR SALE—16-HORSEPOWER GASOLINE engine on steel truck; good as new. Double seated carriage, rubber tires, good as new, cost \$480, or will trade either of the above. Make me an offer. H. W. McAfee, Route 8, Topeka, Kansas.

THE STRAY LIST.

TAKEN UP—BY ROY J. PHILLIPS, Council Grove, Council Grove Township, Morris County, Kansas, on December 18, 1916, one red heifer, no marks or brands. Appraised at \$25. Lee A. Moser, County Clerk.

TAKEN UP—BY HUGH JONES, OF Reading, Reading Township, Lyon County, Kansas, on December 16, 1916, one red and white steer, branded on left hip and piece out of right ear. Appraised at \$60. G. L. Miller, County Clerk.

TAKEN UP—BY PETER MUGLER, OF McPherson, King City Township, McPherson County, Kansas, on the 19th day of February, 1917, one red steer, about 1½ years old, small V cut in top of right ear. W. E. Rostine, County Clerk.

TAKEN UP—BY MRS. LAURA ATKINSON, of Americus, Americus Township, Lyon County, Kansas, on February 12, 1917, one red steer, no marks or brands. Appraised at \$40. G. L. Miller, County Clerk.

TAKEN UP—BY B. F. FORD, OF Seneca, Adams Township, Nemaha County, Kansas, February 21, 1917, one red cow four or five years old. Tip of tail white, white streak under belly. No marks or brands. Appraised at \$45. W. L. Kaufman, County Clerk.

BUSINESS CHANCES

offer to introduce my magazine, "Investing for Profit." It is worth \$10 a copy to any one who has not acquired sufficient money to provide necessities and comforts for self and loved ones. It shows how to become richer quickly and honestly. Investing for Profit is the only progressive financial journal, and has the largest circulation in America. 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 Boulevard, Chicago.

DOGS.

COLLIE PUPPIES, \$5. FRANK BARRINGTON, Sedan, Kansas.

FOR SALE—SCOTCH COLLIE PUPS, farm raised from good workers. I. P. Kohl, Furley, Kansas.

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.

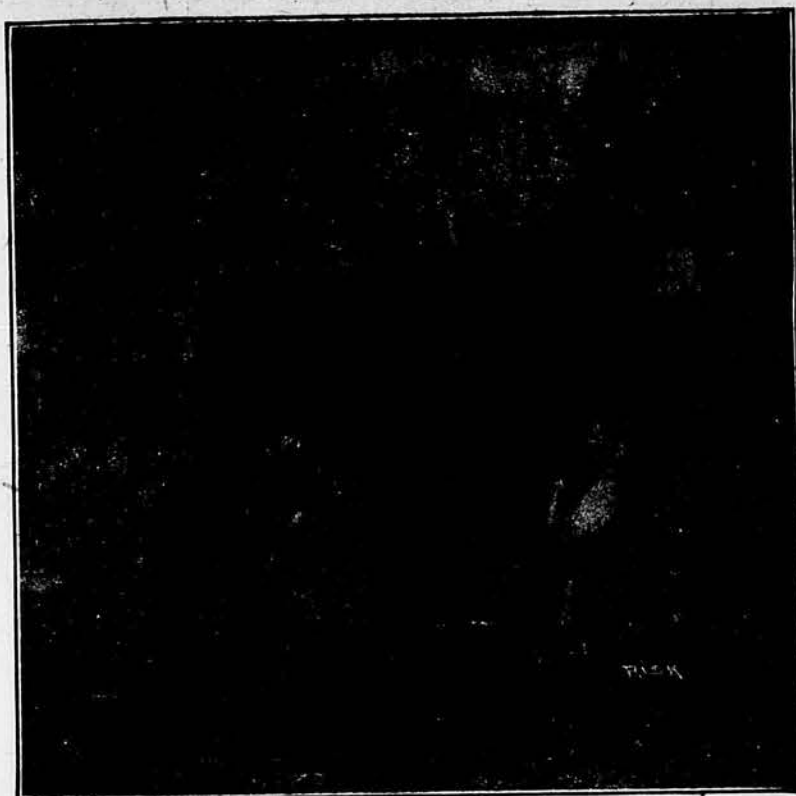
HOGS.

BIG-TYPE POLAND BOARS. U. A. Gore, Seward, Kansas.

O. I. C. REGISTERED HOGS FOR SALE, September and October male pigs and serviceable males. Write for prices. Carl F. Schuster, Scranton, Kansas.

M. E. Gunderson & Sons, of Oconomowoc, Wis., owners of one of the very high class herds of Holstein cattle in that state, report their herd making a splendid record. One of the cows in this herd recently made a seven-day record of 514.2 pounds milk and 25.19 pounds butter at 11 years 8 months of age. They are now testing a very fine lot of heifers. The sire at the head of this herd is a splendid individual. The records of his dam and sire's dam average butter seven days, 35.08 pounds; thirty days, 137.52 pounds; one year, 1,004.72 pounds; milk, one year, 22,147.20 pounds.

E. D. King, of Burlington, Kansas, has sold practically his entire breeding herd of Berkshire hogs to D. L. McDonald, of Hereford, Texas, who will establish one of the biggest herds of pure-bred Berkshires in the country.



The photograph of Giant Mammoth, a two-year-old jack in the Oakland Stock Farm Sale at Chillicothe, Mo., March 20, is a fair sample of the twenty young jacks that will be sold. Every animal of the twenty was bred and raised on these farms. We are breeders—not brokers. Go to the sale and cut out the broker's commission. You can buy them as cheap as the broker can. Remember the date, Tuesday, March 20.

HEREFORD CATTLE.

HEREFORD CATTLE.

Walnut Breeding Farms



Where real Anxiety 4th blood is found in abundance. The home of Concentrate 289644, a double Beau Brummel. Young stock always on hand for sale from this noted sire. Five extra herd headers on hand at reasonable price, blood lines considered. Twenty choice young bulls for sale. Come and see my herd. Satisfaction guaranteed. Also a few Berkshire pigs.

LEON A. WAITE, R. F. D. 8, WINFIELD, KAN.

HEREFORDS AND PERCHERONS

Choice 2-year-old bull, weight 1,600 lbs.; extra good bull calves. One May calf, weight 600 lbs., outstanding herd header prospect. Two choice yearling Percheron stallions. Priced to sell.

M. E. GIDEON - EMMETT, KANSAS

AYRSHIRE CATTLE.



The brimming pail of AYRSHIRE MILK

contains no waste. It is neither too "fat" nor too "lean"—it is STANDARD MILK, 3.94 per cent grade—passes all city and state requirements. Ayrshires are profit makers for the milkman. Yield abundantly to a ripe old age. Write for information and names of nearest breeders.

AYRSHIRE BREEDERS' ASS'N
C. M. Winslow, Sec'y, 33 Park St. Brandon, Vt.

ANGUS CATTLE

EDGEWOOD FARM

ABERDEEN-ANGUS CATTLE

Twenty-five young bulls, also some good cows and heifers for sale. All registered.

D. J. WHITE, CLEMENTS, KANSAS
Main line of A. T. & S. F. Ry., 145 Miles West of Kansas City.

GALLOWAY CATTLE.

GALLOWAY BULLS

SIXTY yearling and two-year-old bulls, strong and rugged; farmer bulls, have been range-grown. Will price a few cows and heifers.

E. E. FRIZELL, Frizell, Pawnee Co., Kansas

GUERNSEY CATTLE.

A GUERNSEY BULL

in Iowa has daughters that are producing over 130% more butter fat and milk than their scrub dams.

Use a GUERNSEY BULL on your scrub cows. His daughters will sell like hot cakes.

Write for our free booklets

The American Guernsey Cattle Club
Box R. K., Peterboro, N. H.

SHORTHORN CATTLE.

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

Doyle Spring Shorthorns

Scotch-topped Shorthorns. Ten bulls, age 9 to 11 months, sired by the famous Star Goods, Orange Marshall. Write your wants.

F. P. WILSON - PEABODY, KANSAS

CEDAR HEIGHTS SHORTHORNS

For Sale—One Lavender bull, 14 months old; one Orange Blossom, 10 months old; one Golden Drop, 10 months old.

HARRY T. FORBES
Bell Phone 59 N-1, Route 8, Topeka, Kansas

ALYSDALE HERD OF SCOTCH SHORTHORNS

Prince Valentine 4th and Clipper Brawith in service. Orange Blossoms, Butterfys, Queen of Beautys and Violets. Choice young stock for sale.

H. H. HOLMES, Route 28, Topeka, Kansas

Oakwood Stock Farm

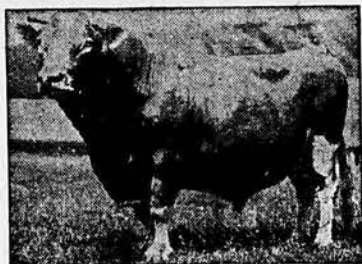
We have a few milking Shorthorn cows of the Bates strain. Large and good type. Write for prices and description. A number of roan calves of the same strain four to six weeks old. Shipped on receipt of \$25.

M. E. PECK & SON - SALINA, KANSAS

Breeders' Directory

ANGUS CATTLE.
Geo. M. McAdam, Holton, Kan.
Geo. A. Deitrich, Carbondale, Kan.
D. J. White, Clements, Kan.
RED POLLED CATTLE.
Mahlon Greenmiller, Pomona, Kansas.
JERSEY CATTLE.
J. B. Porter & Son, Mayetta, Kan.

GUERNSEY CATTLE.



BIG PUBLIC SALE!

61 Standardbred, Record and Show Horses.
18 Shorthorns, E. M. Hall-Bred, Showyard Type.
6 Jerseys—Grandson of Noble of Oakland, Imported.
2 Large Black Jacks. 4 Jennets. Mare Mule. 70 Hogs.
13 Angora Goats. 5 Sulkies. 2 Carts. Farm Machinery.

MUST SELL RAIN OR SHINE—WEDNESDAY, MARCH 28, 1917

At E. N. Perry Farm NOEL, MO. S. W. Corner State
Write Rudy Bros. & Pickens, Neosho, Mo., for Catalog
Auctioneers—Cols. R. L. Harriman, Al Hudson and Bill Noel

HORSES AND MULES.

HORSES AND MULES.



German Coach Stallions and Mares

THE FARMER'S GENERAL PURPOSE HORSE

Twenty-three stallions from weanlings to 5-year-olds. Handsome, stylish, gentle, but powerful young stallions, 1,300 to 1,600-pound fellows, the right kind to produce durable, active farm horses and command attention in any stud. Priced where you will buy. Satisfaction guaranteed. Come or write at once.

ROUTE 4, PRATT, KANSAS
Waldock Lake Ranch

BERGNER BROS.,

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.

ED BOEN, LAWSON, MO.
38 Mi. E. of K. C. on C. M. & St. P.
40 Mi. S. W. of St. Joe, on Santa Fe



PERCHERONS—BELGIANS

Imported and home-grown 4 and 5 yr. old stallions, ton and heavier, 3 yr. olds, 2 yr. olds, yearlings. Produce of 62 imported mares and noted prize winning imported sires. Farmers' prices. Fred Chandler, R. 7, Charlton, Iowa. (Above Kansas City.)

Home-Bred Draft Stallions, your choice \$500 with the exception of two. Also mares for sale. A. Latimer Wilson, Creston, Iowa

FOUR BIG JACKS FOR SALE

Also three jennets. Jacks are all blacks, 4 and 5 years old, 15 1/4 to 16 1/4 hands, standard. All grandsons of Limestone Mammoth. Barns 3 blocks north of depot.

F. W. POOS - POTTER, KANSAS

REGISTERED PERCHERONS

Yearling and two-year-olds, both sexes. Good breeding and individuals grown in a way to make useful animals. Would trade filley for Shorthorn bull good enough to head herd of registered cows.

GEO. S. APP, Route 2, ARCHIE, MISSOURI

40 Head Percheron Stallions - 40 Jacks and Jennets - 40

Two to six years old, heavy bone, right in every way. Imported Spanish Jack, weight 1,200 pounds, at head of jennet herd. Come and see us. We mean business. Prices reasonable.

J. P. & M. H. MALONE

CHASE - KANSAS

Barn Full of Percheron Stallions and Mares. Twenty-five mature and aged jacks. Priced to sell. AL. E. SMITH, Lawrence, Kansas.

SHIRES AND PERCHERONS

Stallions and mares, registered.

JAMES AULD, Wakefield, Clay Co., Kansas



FOR SALE OR TRADE

Eight head of jacks from sucklers to eight years old. All black with white points; 15 to 16 hands high; weight up to 1,100 pounds. Can use a good draft stallion or other live stock.

H. A. JOHNSON
Red Cloud - Nebraska

POLAND CHINAS

DEMING RANCH POLANDS

Twenty strictly high class boars, bred the same as our grand champion sow and other prize winners. They are herd headers. Also gilts and bred sows and 150 fall pigs. All immune.

THE DEMING RANCH

H. O. Sheldon, Herdsman Oswego, Kansas

TOWNVIEW FARM

Big-Type Poland Chinas.

For Sale—25 summer and fall gilts, sired by Miller's Sioux Chief and out of Lady Longfellow. Bred for late spring litters. Also 25 summer boars. Come and see my herd.

C. E. GREENE - PEABODY, KANSAS

ARKELL'S BIG POLANDS

Fall boars sired by Longfellow Again and Chief Big Bone, out of choice big-type sows. Choice individuals. Some herd header prospects.

JAS. ARKELL, JUNCTION CITY, KANSAS

OLD ORIGINAL SPOTTED POLANDS

Have only a few of last fall's litters left. Write your wants to

THE CEDAR ROW STOCK FARM
A. S. Alexander, Prop. R. 2, Burlington, Kan.

PROFITABLE TYPE POLANDS

Big-type Poland Chinas, as good as grows. You prove it at my expense. Breeding stock for sale at all times.

L. C. WALBRIDGE - RUSSELL, KANSAS

LANGFORD'S SPOTTED POLANDS

Boars—Serviceable age, guaranteed to please. Breeding stock, both sexes.

T. T. LANGFORD & SONS, Jamesport, Mo.

IF INTERESTED IN

Polled Durhams

COME TO

South Omaha, Neb., March 29

IF YOU WANT

Shorthorns

COME TO

South Omaha, Neb., March 30

Write for illustrated catalog of the breed you are interested in. Sixty head of Polled Durhams the first day. Seventy head of Shorthorns the second day.

For illustrated catalog address:
H. C. McKelvie, Mgr., Lincoln, Neb.

JERSEY CATTLE.

REDHURST JERSEYS

Grandsons of Golden Jolly and Noble of Oaklands for sale. Also a few fancy cows and heifers of same breeding. Write.

REDMAN & SON - TIPTON, MISSOURI

120 Jersey Cows and Heifers

Pure-bred and high grade. Forty bred yearlings, superior individuals, all from profitable dams, now for sale.

J. W. BERRY & SON, Jewell City, Kansas

DORNWOOD FARM JERSEYS

Some richly bred young Jersey bulls. Pedigrees and prices on request.

DORNWOOD FARM - TOPEKA, KANSAS

Registered Jersey Bulls, butter-bred, from high producing cows. Photo furnished. Maxwell's Jersey Dairy, Route 2, Topeka, Kan.

LINSCOTT JERSEYS

Kansas First Register of Merit, Estab. 1878. If interested in getting the best blood of the Jersey breed, write me for descriptive list. Most attractive pedigree.

R. J. LINSCOTT - HOLTON, KANSAS

YOUNG'S REGISTERED JERSEYS

Won 150 prizes at six leading state fairs in 1916. Am offering cows, heifers and bulls, over 100 head of the best milk and butter strains. Write at once to

HAL C. YOUNG - LINCOLN, NEB.

"Fertilizers" is the name of a new book from the Macmillan press. It treats of manures and fertilizers of all kinds and contains much valuable information on how to use these materials efficiently. This book sells for \$1.50 postpaid.

HOLSTEIN CATTLE.

CLYDE GIROD, At the Farm

HOLSTEIN-FRIESIAN FARM, TOWANDA, KANSAS

Brooders of pure-bred Holsteins. Special attractions in choice young bulls ready for service, with fashionable breeding. Write for pedigrees and prices. We maintain a breeding herd of pure-bred females and offer a grand lot of young springing heifers and cows, a number with A. R. O. records at prices within reason.

IT WILL PAY YOU TO SEE OUR OFFERING
Of choice extra high grade young cows and heifers, all springers in calf to pure-bred sires; large developed females, good udders, well marked and the right dairy type at prices that will challenge comparison for Holsteins of their breeding and quality. A visit to our farm will convince you. Keep us in mind before purchasing. Wire, write or phone.

GIROD & ROBISON**HOLSTEIN CATTLE.**

F. W. ROBISON, Cashier Towanda State Bank

HOLSTEIN-FRIESIAN FARM, TOWANDA, KANSAS

Brooders of pure-bred Holsteins. Special attractions in choice young bulls ready for service, with fashionable breeding. Write for pedigrees and prices. We maintain a breeding herd of pure-bred females and offer a grand lot of young springing heifers and cows, a number with A. R. O. records at prices within reason.

IT WILL PAY YOU TO SEE OUR OFFERING
Of choice extra high grade young cows and heifers, all springers in calf to pure-bred sires; large developed females, good udders, well marked and the right dairy type at prices that will challenge comparison for Holsteins of their breeding and quality. A visit to our farm will convince you. Keep us in mind before purchasing. Wire, write or phone.

GIROD & ROBISON**MAURER'S HOLSTEIN FARM**

Is offering another choice lot of young pure-bred cows and springing heifers, including several granddaughters of Pontiac Korndyke. Also some registered yearling heifers, and a fine lot of large, heavy milking, high grade cows, and both pure-bred and grade calves of either sex. Write or call.

T. R. MAURER & CO., EMPORIA, KANSAS.**HOLSTON'S HOLSTEINS — HOME OF THE "MADISON DIAMONDS"**

Charles Holston, Proprietor. Vey G. Holston, Manager. Route 2, Topeka, Kansas

We offer for immediate sale, a grandson of Colantha Johanna Lad (the world's greatest producing and transmitting sire) from an official record "Madison Diamond" dam. A combination that certifies superior quality. This bull is well grown, light in color and ready for service. \$250. Also a few younger ones as low as \$100. Write for further information.

**Purebred Registered
HOLSTEIN
CATTLE**

Twenty million dairy cows in the United States, and five million of that number unprofitable! Surely one great public benefactor is the dairyman who by changing bad cows for good ones, seeks to produce two quarts of milk in place of one produced before. This progressive type of farmer, all over the continent, is either grading up his common cows with a pure-bred Holstein bull, or he has already installed the profitable pure-bred registered cows in his barns. He is adding to the wealth of the nation and to himself as well. Slowly but surely, proper understanding will eliminate the unprofitable dairy cow.

Send for FREE Illustrated Descriptive Booklets.
The Holstein-Friesian Association of America
F. L. Houghton, Sec'y. Box 114, Brattleboro, Vt.

HOLSTEIN CALVES.

Very high grade heifer calves, five weeks old, nicely marked, \$20 each delivered to your station. We can supply you with registered or high grade Holsteins, any age or number, at reasonable prices. Clover Valley Holstein Farm, Whitewater, Wis.

CEDAR LAWN FARMS

C. A. Schroeder & Sons, Props.
Forty years of registered Holstein breeding, not dealing. Birthplace of 40-pound cow, Johanna DeKol Van Beers. State wants and get delivered prices on young bulls.
W. C. SCHROEDER - WEST BEND, WIS.

Look to the future.

Tredico Bulls
(Holsteins)
Kingman, Kansas

32 1-2 POUND BREEDING

Bull calves from A. R. O. dams, sired by Beauty Pieterje Prince, a 32.52-pound bull. Good individuals, splendidly marked. Priced right. **M. E. GUNDERSON & SONS, Route 25, Oconomowoc, Wisconsin.**

HOLSTEIN CALVES—Ten heifers and two bulls, 15-18ths pure, beautifully marked, 5 weeks old, from heavy milkers. \$20 each, crated for shipment anywhere. Write **EDGEWOOD FARM, Whitewater, Wis.**

Real Estate For Sale**For Sale**

EIGHT-ROOM HOUSE, MODERN,
in Kenwood Addition. The best residence district of Topeka. Good terms. Write

**KANSAS FARMER, BOX 3
TOPEKA, - - - KANSAS**

EXCHANGES.

I have good farms to trade for smaller farms and city property. Write me.
W. M. GARRISON - SALINA, KANSAS

640-Acre Homestead waiting for you. Good grass, water, plenty timber. Don't miss opportunity. Best ever. For particulars write **J. C. WYNN, LOCATOR, GRANTS, N. MEX.**

LANDS, IN EVERY STATE. Thirty-six pages, colored covers, 25c a year, four months 10c.
LAND MAGAZINE - 66, TRAEER, IOWA

160 A. UPLAND SHAWNEE CO. FARM
Ten miles of Topeka, 1 1/2 miles of railroad town and high school. Good improvements. 80 acres cultivation, balance fine bluestem grass; fine spring and well. Fine bluegrass yard with pine trees. Located on main road. This farm is priced below its value at \$75 per acre. For particulars write

F. M. Buchheim, 521 West St., Topeka, Kan.

SPECIAL BARGAIN—Highly improved 120-acre farm adjoining Ottawa, abundance good water, good soil, very choice home. Write for descriptive list of same.

Special Price on 360 acres, well improved; 100 acres tame grass.
Also 170 acres, well improved, choice farm, ideal location, very attractive. Write for full descriptions. Possession at once.
MANSFIELD LAND CO., OTTAWA, KAN.

200 ACRES, all bottom, all tillable. 70 a. cult., bal. meadow and pasture, adjoins city, this county, 1,500. \$35 a. terms.
SOUTHERN REALTY CO., McAlester, Okla.

Improved Section \$8 per Acre

Excellent Stock Ranch, Wichita County, Kansas. With plenty of outside range, on daily motor mail route. Some rolling land but greater part of place nice smooth farm land. Abundance of water, bargain, must be sold at once.

D. F. CARTER - LEOTI, KANSAS**RANCH FOR SALE**

Eight miles from county seat and shipping point. One-half mile to school. 200 acres under cultivation; 400 or 500 acres good alfalfa land if cultivated; creek running through place giving plenty of living water; 200 acres or more of good timber; excellent shelter for stock; balance good buffalo grass pasture. Nine-room story-and-a-half house, cistern, well, wind mill, carriage shed, granary, corrals, hog lots, chicken yards, etc. This is one of the best ranches in the county. Come and be shown. Have lived on ranch for forty years, am retiring and would sell. For particulars address **P. O. BOX 202, MEDICINE LODGE, KAN.**

FOR SALE BY OWNER

140-Acre Farm, twenty miles of Topeka. Write
Chas. P. Clare, 700 Lane St., Topeka, Kan.

120-ACRE FARM, Improved, in Shawnee County. Price, \$14,000. Wants to trade for smaller farm.
MAY STILES - ROSSVILLE, KANSAS

NINTH ANNUAL SALE**40 Jacks and Jennets 40****At the Lafayette County Jack Farm**

Farm joins town, on main line of C. & A. and Lexington and Sedalia Branch of Missouri Pacific Railway

WEDNESDAY, MARCH 28, 1917

Twenty Head of High-Class Aged Jacks; Six Yearlings and Four Suckling Colts; Ten Extra Good Registered Jennets



Every animal registered and guaranteed as represented. Catalogue ready for distribution. I am selling such jacks as Dr. McChord III, one of Dr. McChord's best sons. Also Dr. Nelson, another great son of Dr. McChord and the celebrated jack, Limestone Big Boy, a son of Orphan Boy, the undefeated jack of the world. Also Dr. Wilson, a grandson of Dr. McChord, and other great noted jacks. I would be pleased for you to attend this sale, as the offering is the best I have ever put before the public. Send for catalogue.

W. J. FINLEY, Higginsville, Mo.**Registered Kentucky Jacks**

I have shipped from my home, Poplar Plains, Kentucky, eighteen head of jacks to Newton, Kansas, and they are for sale privately. This is a good load of jacks, with lots of bone and size, with all the quality and finish you would ever see in a load of jacks. Ages from two to eight years; height from 14 1/2 hands to 16 hands standard, and good performers.

I have shipped jacks to Kansas since 1879 and I do not believe I ever shipped a better load.

Any one wanting a good jack, call and see me at Welsh's Transfer Barn, two blocks from Santa Fe Depot, one block from Interurban. Come and see me.

E. P. MAGGARD**Successor to Saunders & Maggard NEWTON, KAN.****Otey's Great Bred Sow Sale****Winfield, Kansas, Thursday, March 29**

Undoubtedly the Duroc event of the Spring, 1917, will be this great sale. We drive into the ring eight great young tried sows, twelve fall yearlings, twenty-five spring gilts, ten summer gilts, eight summer and fall boars (some of them grand champion prospects), and one great tried herd boar. These are sired by such noted boars as Good E Nuff Again King, grand champion 1913; Crimson Wonder 4th, second; Otey's Dream, champion 1914; and All Col. 2d, one of the very great young boars in the field. Bred to All Col. 2d and Day Dream, a great son of Otey's Dream. No richer blood anywhere, and no more grand champion blood in one herd. It is your last and biggest chance to buy in the purple at your own price. Stick a pin in the date, Thursday, March 29. Send for catalog, and COME.

W. W. OTEY & SONS, WINFIELD, KANSAS**AUCTIONEER—LAFE BURGER.****FARM AND HERD.**

A. S. Alexander, of Cedar Row Stock Farm, Burlington, Kansas, reports his herd of old original big-boned Spotted Poland

Chinas doing fine. Mr. Alexander owns one of the good herds of Spotted Poland now in existence. His herd is drawn upon heavily for breeding stock and he has sold a large number of bred sows and gilts this year. He has bred a large number of sows for spring farrow.

AUCTIONEERS.**Live Stock and Farm Auctioneer**

Write or wire for date. I can please you.
LAFE BURGER, WELLINGTON, KANSAS

Jas. T. McCulloch Live Stock Auctioneer. I make sales anywhere.
CLAY CENTER, KANSAS
Write for date.



P. M. GROSS
LIVE STOCK
AUCTIONEER

Pure Bred Sales a Specialty
MACON, MISSOURI

"Twelve Years on the Block"
Sales Made Anywhere

LESTER R. HAMILTON
Live Stock Auctioneer
Write for terms and date. **Clarksdale, Mo.**

SUNFLOWER HERD 3rd ANNUAL SALE OF Registered Holsteins



SUSAN AAGGIE RUE BURKE 133979

At 2 years, 249.3 pounds milk, 11.19 pounds butter. At 7 years, 486.3 pounds milk, 19.3 pounds butter. One A. R. O. Son. Sire, Johanna Rue Burke Sascatic 55700. Dam, Susan Aaggie Posch 88331. One of the heavy producing cows of the herd. Owned by F. J. Searle, Oskaloosa, Kansas.

I have a number of cows that have milked above 85 pounds each, one day this winter, and a number that have produced and will produce from 15,000 to over 20,000 pounds during this lactation period of less than 365 days.

Big, strong, healthy, fine individuals with the right kind of udders, the kind everybody likes.

Among our consignments will be a large number of daughters of that great sire, King Segis Pontiac, together with a few of his good sons. Ten daughters of King Frontier Pontiac (a son of King of the Pontiacs from a 26-pound show cow). King Frontier Pontiac will also be sold.

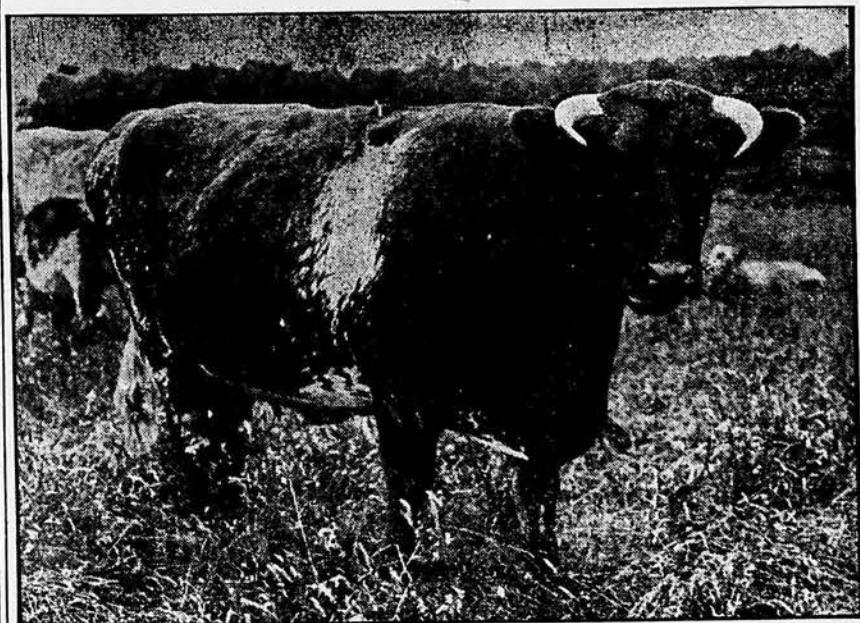
There will be many other cows and heifers sired by bulls carrying the best blood of the breed, and from dams of equally good breeding.

Altogether 160 head of registered cattle, including two great herd sires, young herd sires, A. R. O. cows, heifers and calves. You have been wanting Holsteins, and here, on April 10 and 11, will be the place for you to procure the best there is. For information and requests for catalogs, address

F. J. SEARLE,

OSKALOOSA, KANSAS

All cattle from outside the state will have federal test. All Kansas cattle tested by proper state authorities
AUCTIONEERS—HAEGER, KELLEY AND CREWS.



FARM AND HERD.

Catalogs are out for the great sale of Holstein cattle to be held April 10 and 11 by F. J. Searle, of Oskaloosa, Kansas, owner of the famous Sunflower Holstein herd. He has 160 head of Holsteins catalogued for this sale. The offering represents a line of record breeding that has made the Holstein breed famous and this will doubtless be one of the biggest sale events in Holstein circles this year. The cows and heifers that will go in this sale are backed by records that insure them heavy producers. They are the kind that will always prove profitable on any farm and it is to be hoped that at least a very large per cent of the offering will remain in Kansas.

Inquiries for catalogs indicate that the sale of Percheron jacks and jennets to be held at Oakland Stock Farm, Chillicothe, Missouri, March 20, will be one of the big sale events in Missouri this season. We have just received a catalog of this offering and the Percherons, jacks and jennets described therein are not only a well bred lot but are a carefully selected lot of individuals that will make good. The offering of both Percherons and jacks includes herd headers.

W. J. Finley, of Higginsville, Missouri, the well known breeder of high class jacks and jennets, has announced a sale of jacks and jennets to be held March 28. He has catalogued twenty head of aged jacks, six yearlings and four colts, also ten head of extra good registered jennets for this sale.

His offering will be one of the good lots of jacks and jennets that will be sold this season.

Rudy Bros. & Pickens, of Neosho, Mo., have announced a big public sale of stock to be held at the E. N. Perry farm near Noel, Missouri, March 28. Their offering will consist of sixty-one standard-bred record and show horses, eighteen head of choice Shorthorn cattle, six richly bred Jerseys, and a number of jacks and jennets. The offering is high class throughout and this will be one of the big sale events of the season in Southwest Missouri.

Catalogs are out for the Polled Durham and Shorthorn cattle sales to be held at South Omaha, Nebraska, March 29 and 30, under the management of H. C. McKelvie, of Lincoln, Neb. The offerings in this two days' sale are from the best herds in the country and have been very carefully selected. The cattle catalogued is a very useful lot of bulls, cows and heifers that will be profitable to the buyers.

The Axtell & Potter Dairy Farm, Newton, Kansas, has just received from New York a carload of high record cows and some royally-bred bull calves. Another carload is expected later from the same place, some of which are now on test in New York. There were nineteen cows in this lot, fifteen of which have records of from 20 to 31 pounds of butter in a week, and milk records up to 100 pounds a day. Wilhelmina, with a record of almost 31 pounds of butter in a week, is the banner cow of the

Central Shorthorn Breeders Association Fourth Annual Sale of SHORTHORN CATTLE Two Days, April 4, 5, 1917

At Fine Stock Pavillon, Kansas City, Mo.
120 - HEAD OF SHORTHORNS - 120

Drafted from the best herds in the corn belt. Sixty bulls from yearlings to matured sires. Sixty cows and heifers, consisting of cows with calves at side and re-bred, heifers bred and open.

These cattle are contributed by the best breeders in the corn belt and are sired by the most popular sires known to the breed. The best lot of cattle ever consigned to our Central Shorthorn Breeders' Sale. Make your arrangements early to attend. Write today for illustrated catalog to

W. A. FORSYTHE, Sale Manager, Greenwood, Mo.

Auctioneers—R. L. Harriman, Carey M. Jones.

herd. The next highest is Pussy Willow, with a record of 27 pounds of butter in a week. Pussy Willow has presented the farm with a fine heifer calf since her arrival. The little heifer is by a high record son of King of the Blacks and Whites, a very noted New York sire.

W. B. Wallace, of Bunceton, Missouri, has claimed Thursday, April 12, for a real King Joe bred sow and bred gilt sale. The offering will consist of forty large spring yearling Poland China gilts, mostly bred to the great boar, King Joe. Their gilts are sired by such boars as Model Big Bone 2d, a Fred Severs bred boar; A Monarch by A. Wonder and Grand Mammoth. The offering will also include ten tried sows that have raised litters. Most of these sows and gilts will farrow in April and May.

A. E. Whitzel, of Sterling, Kansas, owner of one of the good herds of Red Polled cattle in this state, reports his herd doing well. Mr. Whitzel has succeeded in building up a herd of forty head of Red Polleds that have proven very profitable on his farm. His foundation stock was from the herds of E. B. Youtsey and D. F. Van Buskirk and his blood lines are the best of the breed. A feature of his herd at this time is the choice lot of young stock.

C. Holston & Son, of Topeka, report their herd of Holstein cattle doing well. This firm has succeeded in building up a herd of heavy producers. They have a choice lot of record breeding and at this time they have a fine lot of young stock, including

some young bulls, grandsons of Colantha Johanna Lad, one of the great Holstein sires.

A. L. Harris, of Osage City, Kansas, owner of the Sunflower herd of Shorthorn cattle, is making a great success breeding Shorthorn cattle. Mr. Harris started his herd only a few years ago but has now on the farm twenty head of registered cows and heifers. They represent some of the very best Scotch families. Mr. Harris is planning on showing a small herd at the Topeka fair this fall.

H. C. Young, of Lincoln, Nebraska, owner of the famous Wineland Farm Jersey herd, reports his herd making a fine record again this year. Wineland Farm herd is one of the best Jersey herds now assembled. In 1916 this herd won 150 prizes at six of the leading fairs. Their winnings included sixty-five firsts and championships. The herd is headed by the great bull, Stockwell's Champion 115854, who has won thirty-three firsts and championships at the leading fairs. The herd now consists of over 100 head of richly bred Jerseys.

Richard Rothgeb, of Pleasant Green, Missouri, held one of the good Duroc sales of the season on March 6. Forty head of bred sows and bred gilts sold for \$2,060, or an average of \$51.50. The top price was paid for No. 5, which went to C. C. Jones, Pilot Grove, Missouri, for \$94. The offering was presented in splendid sale condition and the prices received were very satisfactory to Mr. Rothgeb.

\$1150 F. o. b.
Racine

Mitchell Junior — a 40 h. p. Six
120-inch W heelbase

Mitchell
SIXES

\$1460 F. o. b.
Racine

7-Passenger — 48-Horsepower
127-inch Wheelbase

How Mitchells Differ Because of What John W. Bate Has Done

Hundreds of Extras

Factory efficiency has been made a fine art in this plant. John W. Bate, our efficiency engineer, has spent millions to attain it.

This entire plant, covering 45 acres, was built and equipped to secure it. Now our new body plant completes it. We urge you to learn where these tremendous savings show in extra value.

For a Lifetime Car

Part of this saving pays for 100 per cent over-strength. Our margin of safety used to be 50 per cent. It has now been doubled.

Steering parts, gears, axles, etc., are made oversize. Our rear springs are built so that, in two years, not a single spring has broken.

Over 440 parts are built of toughened steel. Parts which get a major strain are built of Chrome-Vanadium. The steel in Mitchells costs us up to 15 cents per pound. And we do not skimp on weight.

The result is safety, freedom from repairs and troubles. And a car which probably will serve men for a lifetime. Time will prove, we believe, that this double strength is worth half the price of the car.

\$4,000,000 in Extras

There are 31 extra features in Mitchells, most of them exclusive. On this year's output these extras cost us about \$4,000,000.

They are things like a power tire pump, an easy control, a ball-bearing steering gear, engine primer on the dashboard, a light in the tonneau, a locked compartment, etc.

Every one is a wanted feature. Yet they are impossible, at a modest price, without Mitchell factory efficiency.

Extras in Luxury

The Mitchell has long been considered by experts one of the handsomest cars on the street. The output is largely sold in metropolitan centers.

Yet this year we have added 24 per cent to the cost of finish, upholstery and trimming. We are giving you heat-fixed finish, extra-grade leather, and scores of new dainty touches.

All this results from another economy. We now occupy our new body plant. All Mitchell bodies, open and closed, are built here now, under Bate efficiency methods. And this added luxury clearly shows the result.

What So Important?

What else is so important?

Extra values like these, without extra price, come only through efficiency. Under other methods, all these values are wasted in the shop.

Mitchell stands unique among fine cars in respect to efficiency. For a dozen years John W. Bate has worked here to attain it. Go to your Mitchell dealer and see the results. Compare it with cars built otherwise. If you can, take an engineer with you, and we will abide by his verdict.

\$1150 Mitchell Junior

Note that this year's line includes two sizes—the Mitchell and the Mitchell Junior. But the Mitchell Junior—for five passengers—is still powerful and roomy.

This is also for efficiency. So the man who wants a 5-passenger car need not pay for more power or more room than he needs.

MITCHELL MOTORS COMPANY, Inc.
Racine, Wis., U. S. A.

TWO SIZES

Mitchell — a roomy, 7-passenger Six, with 127-inch wheelbase. A high-speed, economical, 48-horsepower motor. Disappearing extra seats and 31 extra features included.

Price \$1460, f. o. b. Racine

Mitchell Junior — a 5-passenger Six on similar lines, with 120-inch wheelbase. A 40-horsepower motor— $\frac{1}{4}$ -inch smaller bore than larger Mitchell.

Price \$1150, f. o. b. Racine

Also all styles of enclosed and convertible bodies. Also demountable tops.

