

KANSAS FARMER

WITH WHICH IS COMBINED FARMERS ADVOCATE

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Wheat Production in the United States.

Demand Increases Faster than the Supply.

PROF. JOHN HAMILTON,

Pennsylvania

In the past ten years the annual wheat crop of the United States ranged from 522,229,505 to 735,260,970 bushels. The average annual production, however, for the ten years from 1897 to 1906, was 631,181,626 bushels. The average yield per acre in the United States for the decade 1897 to 1906 as given by the report of the Department of Agriculture for 1906 was 12.69 bushels per acre. The averages per acre according to periods were as follows: 1871 to 1876, 11.70 bushels; 1877 to 1886, 12.51 bushels; 1887 to 1896, 12.66 bushels; 1897 to 1906, 13.82 bushels, and the average for the entire period from 1871 to 1906 was 12.69 bushels. The annual average value of the crop for the decade, 1897 to 1906, was \$9.48, and for the entire thirty-six years from 1871 to 1906, \$10.28 per acre.

COST OF AN ACRE OF WHEAT.
When it is remembered that the cost of production of an acre of wheat in the eastern part of the United States is about \$12.50 but little argument is needed to show its status in the list of profitable crops in that section. While the cost of producing an acre of wheat upon the new lands of the great West, where wheat is grown as practically the only crop, is at present much less than in the older wheat districts of the East, nevertheless the fact that the entire wheat acreage of the country averaged but \$9.48 per acre for the last decade, shows that the margin of profit even under the most favorable conditions is comparatively small.

That wheat is not an exception to other cereal crops in its value per acre is seen by the Census report for 1899, which gives the average value of all of the cereals taken together at but \$8.02 per acre. When it is remembered that of the acreage of all farm crops in 1899, 63.8 per cent were cereals, we can understand how vitally this low production affects the farming interests of the country. While it is true that some farmers receive much greater income per acre from their cereals than the average indicates, yet an equal number receive correspondingly less, so that taking the country as a whole the average remuneration to the portion of the 35 per cent of our population who grow cereal crops must from this source of necessity be very slight.

CONSUMPTION OF WHEAT.
The records show that our population consume from four to seven bushels of wheat per capita each year, depending upon the price, and the condition of the business of the country. The average consumption of wheat, however, taking all of the years between 1871 and 1906, was 5.25 bushels per capita per year. The average production of wheat during that same period was 7.31 bushels per capita, leaving 2.06 bushels as surplus, which is an average of 28.2 per cent. The actual exports for the period from 1871 to 1907 as given in the statistical abstract for 1906 were. From 1871 to 1876, 23.78 per cent of the crop; 1877 to 1886, 29.94 per cent; 1887 to 1896, 29.92 per cent; 1897 to 1906, 28.58 per cent; 1887 to 1896, 29.92 per cent; 1897 to 1906, 28.58 per cent, and the average for the entire period was 28.05 per cent. It will be observed

that the average pro rata for export for each period was practically uniform, although the population of the country had increased in that time from 39,555,000 to 84,154,000, or 112.75 per cent.

INCREASED ACREAGE IN WHEAT.
This is due to the fact that the acreage of wheat in the United States as given by the report of the Department of Agriculture in 1906 increased 137.19 per cent, from 19,943,893 acres in 1871, to 47,305,829 acres in 1906, or 24.44 per cent greater than the population. In other words, it required in 36 years 27,361,936 additional acres to be put out in wheat in order to supply our increasing population and keep up the average per cent of our export trade.

It is manifest that such an additional acreage cannot be expected in the next 36 years, for the great body of available wheat lands in the United States has been appropriated. The time will therefore come when at the present rate of production per acre our population will overtake our wheat production. As has been shown, wheat production by increas-

ing the acreage each year, has succeeded in holding its relative position as respects population during the past 36 years, the average production per capita varying only slightly in any decade. The average production from 1871 to 1876 was 6.28 bushels per capita; from 1877 to 1886, 8.06 bushels; 1887 to 1896, 7.25 bushels; 1897 to 1906, 7.66 bushels, being a per capita average for the entire period of 7.31 bushels. During the same time the surplus for export has only varied from a minimum average of 23.78 per cent of the crop in the six years ended 1876, to a maximum of 29.94 per cent for the decade ended 1886 with an average for the entire period from 1871 to 1906 of 28.05 per cent.

RELATION OF WHEAT PRODUCTS TO GROWTH OF POPULATION.
If the present wheat acreage were to stand still, and the bushels per acre now grown remain constant, allowing 5.25 bushels to the individual per year, and estimating our annual crop at 631,181,626 bushels, which is the average for the past ten years, a population of 120,225,071 would consume our

entire production annually. At the present rate of increase this point of complete consumption would be reached inside of 15 years.

Mr. James J. Hill, in an address delivered at the dedication of the Livestock Pavilion on the Minnesota State Fair Grounds, September 3, 1907, presented some figures respecting the increase of our population in the next 40 years that are worthy of serious attention. I quote from his address the portion relating to this point. Mr. Hill says:

"So careful an observer as Leroy Beaulieu gives the natural increase of our population as 15.2 per thousand per year. It is fair, therefore, to reckon on the increase by the excess of births over deaths at 15 per cent on the average for each decade. The additions by immigration are more variable. It is highly probable, however, that the oncoming tide will increase. Only in periods of severe depression has immigration fallen much below the half million mark for the last twenty-five years. In good or fairly good times it has gone greatly above. In the two years before 1905 it exceeded 800,000 annually, while for each of the last two years it has exceeded one million. It is a conservative estimate, therefore, to add 750,000 a year for increase of population from this source, or 7,500,000 for each decade. Computed on this basis, the population of the United States in the near future will show these totals: Population in 1910, 92,248,895; population in 1920, 117,036,229; population in 1930, 142,091,663; population in 1940, 170,091,663; population in 1950, 204,041,223."

If Mr. Hill's estimate is correct, or even approximately correct, and our population increases by the middle of this century to 204,000,000, we will need 1,071,000,000 bushels of wheat at 5.25 bushels per capita to feed our people. To produce this at 13.5 bushels per acre would require 79,259,185 acres, or 31,953,356 additional acres over that in wheat in 1906, or 67.54 per cent addition to our present acreage. Can this be secured?

DIVERSIFIED FARMING.
It is very clear that the states whose agriculture is now devoted almost exclusively to growing wheat must in the near future follow diversified farming, so that instead of increasing, they will have to restrict the percentage of their wheat area as has been found necessary in all of the Eastern States. This they will be compelled to do in order that the fertility of their soils may be maintained that they may produce sufficient crops to justify their tillage. To put out on any large scale more than one-third of the land adapted to cereal crops in wheat is practically impossible in any system to agriculture that is to continue.

The census of 1900 shows that the per cent of acres in wheat as compared with the entire cereal crop is at present less than one third. The total land in cereals, barley, buckwheat, corn, oats, rye, wheat, rice and Kafir corn in 1900 in the United States was 184,994,588 acres.

In 1880 the proportion of acreage in wheat to the entire cereal crop was 29.8 per cent; in 1890, it was 23.9 per cent.

(Continued on page 11.)



"Hey, Fellers! She's Boilin' Hot."

Canning Vegetables in the Home

By J. F. BREAZEALE,

Bureau of Chemistry, U. S. Department of Agriculture.

[For a discussion of the scientific aspects of canning and of the appliances refer to page 2 of the KANSAS FARMER of June 5.]

SELECTION AND PREPARATION OF VEGETABLES.

The first step in successful canning is the selection and preparation of the vegetables. Never attempt to can any vegetable that has matured and commenced to harden or one that has begun to decay. As a general rule, young vegetables are superior in flavor and texture to the more mature ones. This is especially true of string beans, okra, and asparagus. Vegetables are better if gathered in the early morning while the dew is still on them. If it is impossible to can them immediately, do not allow them to wither, but put them in cold water or in cold, damp place and keep them crisp until you are ready for them. Do your canning in a well-swept and well-dusted room. This will tend to reduce the number of spores floating about and lessen the chances of inoculation.

In the following pages are given directions for canning some of the more common vegetables, but the housewife can add to these at will. The principle of sterilization is the same for all meats, fruits, and vegetables.

CORN.

Contrary to the general opinion, corn is one of the easiest vegetables to can. The United States Department of Agriculture has shown that the amount of sugar in the sweet variety diminishes very rapidly after the ear is pulled from the stalk; therefore in order to retain the original sweetness and flavor it is necessary to can corn very soon after it is pulled—

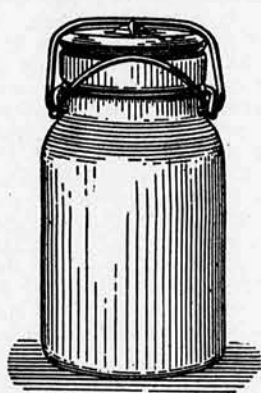


Fig. 7.—Position of spring during sterilizing. within an hour if possible. Select the ears with full grains before they have begun to harden, as this is the period of greatest sugar content. Husk them and brush the silks off with a stiff brush. Shear off the grains with a sharp knife and pack the jar full. Add salt to taste, usually about a teaspoonful to the quart is sufficient, and fill up the jar to the top with cold water. Put the rubber ring around the neck of the jar and place the glass top on loosely, as shown in fig. 6. Be careful not to press down the spring at the side of the jar.

Place the false bottom in the boiler and put in as many jars as the boiler will conveniently hold. Don't try to crowd them in. Leave space between them. Pour in about 3 inches of cold water, or just enough to form steam and to prevent the boiler from going dry during the boiling. It is not necessary to have the water up to the neck of the jars, as the steam will do the cooking. Put the cover on the boiler and set it on the stove. Bring the water to a boil and keep it boiling for one hour. At the end of that time remove the cover of the boiler and allow the steam to escape. Press down the spring at the side of the

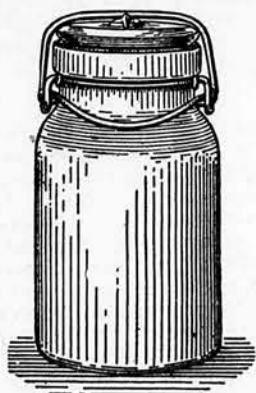


Fig. 8.—Position of spring after sterilizing.

jar, as shown in fig. 8. This clamps on the top and will prevent any outside air from entering. The jars can now be removed and cooled or allowed to stand in the boiler until the next day.

On the second day raise the spring at the side of the jar, as shown in fig. 7. This will relieve any pressure from steam that might accumulate inside the jar during the second cooking. Place the jars again in the boiler and boil for one hour. Clamp on the top as on the preceding day and allow them to cool. Repeat this operation on the third day. In removing the jars from the boiler be careful not to expose them to a draft of cold air while they are hot, as a sudden change in temperature is likely to crack them.

After the sterilization is complete the jars may be set aside for a day or two and then tested. This is done by releasing the spring at the side and picking up the jar by the top (fig. 8). If there has been the least bit of decomposition, or if sterilization has not been complete, the top will come off. This is because the pressure on the top has been relieved by the gas formed by the bacteria. In this case



Fig. 9.—Manner of testing.

it is always best to empty out the corn and fill up the jar with a fresh supply. If canning fruit or some expensive vegetable, however, examine the contents of the jar and, if the decomposition has not gone far enough to injure the flavor, place it once more in the boiler and sterilize over again. If the top does not come off, you may feel sure that the vegetable is keeping.

STRING BEANS.

Select young and tender beans, string them, and break them into short lengths. Pack firmly in the jar, cover with cold water, and add a teaspoonful of salt to each quart. Put on the rubber and top and boil for one hour on each of three successive days, as directed under "Corn." A small pod of red pepper placed in the bottom of the jar will give a delightful flavor to this vegetable.

EGGPLANT.

Pare the eggplant, cut in thin slices, and drop in boiling water for fifteen or twenty minutes. Drain off the water and pack the slices in the jar. Cover with water and sterilize as directed under "Corn." The slices of eggplant are pliable and may be taken from the jar without being broken and either fried in bread crumbs or made into pudding and baked.

BEETS.

Although beets will keep in the cellar over winter, it is very desirable to can them while they are young and tender, as the mature beet is apt to be stringy and lacking in flavor. Wash the young beets, cut off the tops, and put them in boiling water for about an hour and a half, or until they are thoroughly cooked. Cover with water and sterilize in the manner previously described. If a mild pickle is desired, make a mixture of equal parts of water and good vinegar, sweeten to taste, and cover the beets with this mixture instead of water.

OKRA OR GUMBO.

This is a vegetable worthy of more extended culture. Although extensively grown in the South, it is comparatively unknown in the North. It

is easily kept and makes a delicious vegetable for the winter. Wash the young and tender pods, cut them in short lengths, pack in jars, cover with water, and sterilize. Okra is used for soups or stews.

SUMMER SQUASH.

Cut the vegetable into small blocks, pack in the jars, and cover with water. Add a teaspoon of salt to each quart and sterilize. It is sometimes preferable with this vegetable, however, to pare off the skin, boil or steam until thoroughly done, mash them, and then pack in the jars and sterilize. If canned in the latter way, it is advisable to steam them for an hour and a half, instead of for an hour, on each of three days, as the heat penetrates the jar very slowly. It is absolutely necessary that the interior of the jar should reach the temperature of boiling water. A jar will usually hold about twice as much of the cooked vegetable as it will of the uncooked.

ENGLISH PEAS.

When prepared and canned in the proper way, peas are easily kept and never lose the delicate flavor that they possess when fresh. Shell the young peas, pack in jars, and sterilize as directed under "Corn."

ASPARAGUS.

Can the young tips only, in the same way as you would corn.

CAULIFLOWER.

This vegetable usually keeps very well, but if the supply for the winter should begin to spoil it may be necessary to can it during the summer. Prepare it as you would for the table, pack it into jars, and sterilize.

CARROTS AND PARSNIPS.

These, if gathered during the early summer and canned, make most excellent vegetables for the winter. The young plants at that season are not stinky and have not yet developed the strong taste that is so objectionable to some people. Prepare as you would for the table, and sterilize.

TOMATOES.

Every housewife knows how to can tomatoes. They are very easily kept, even in the common screw-top Mason jar. If one already has on hand a number of jars of this pattern, it is best to use them for preserves or for canning tomatoes and to purchase the more modern styles for canning other vegetables. In using the Mason jars be careful to sterilize them first by placing in cold water, bringing to a boil, and boiling for about ten minutes. The rubber and top should also be immersed in boiling water for the same length of time. Remove them from the boiling water when needed, handling as little as possible. Be careful not to put the fingers on the inside of the top or the inner edge of the rubber. Fill the jar with the cooked tomatoes while steaming hot, put on the rubber, screw on the top firmly, invert it, and let it stand in that position until cool.

KOHL-RABI.

This vegetable resembles the turnip in its habits of growth, although in flavor it more nearly approaches the cauliflower. It is grown in many sections of the North, but in the South it is almost unknown. Prepare it as you would turnips, pack in the jar, and sterilize.

LIMA BEANS.

Lima beans lose their flavor very quickly after being shelled; therefore it is necessary to can them as soon as possible after gathering. Discard all pods that have begun to harden, and proceed as you would with corn.

PUMPKIN OR WINTER SQUASH.

If provided with a warm, dry cellar, one may keep certain varieties of these vegetables all winter. Some of the best varieties, however, do not keep well, and even the best keepers when not properly housed begin to decay in December or January. It is then necessary to can them in order to save them. If one has a limited number of jars, it is a good plan to fill them all with other vegetables during the summer and upon the approach of frost to gather the pumpkins and bring them indoors. By the time the pumpkins begin to spoil, enough jars will be emptied to hold them. They can now be steamed and canned in the same way as summer squash.

In this way a supply of jars may be made to do double service.

SUCCOTASH.

The writer has found that a mixture of corn and lima beans, or succotash, is one of the most difficult things to keep. This furnishes one of the very best mediums for bacterial growth; so extreme care must be taken in the process of canning. It is advisable to gather the corn and beans early in the morning and prepare and sterilize them in the manner already described. As with summer squash, it is best to boil for an hour and a half, instead of for an hour.

VEGETABLE ROAST.

A rather unusual dish for the winter may be made by canning a mixture of vegetables. Prepare corn, lima beans, tomatoes, string beans, okra, squash, and eggplant as you would for canning separately. Mix these in varying proportions, letting the corn and lima beans predominate. Add two or three medium-sized onions to each quart of this mixture and run all through a food chopper in order to mix it thoroughly. Pack in jars and sterilize. In preparing for the table mix with an equal volume of bread crumbs, a piece of butter the size of a walnut, and one egg; season to taste with pepper and salt, and bake in a round baking dish until brown. Cut into slices as you would a cake and serve hot with a drawn butter sauce.

Corn, okra, and tomatoes, mixed in equal proportions, may be canned in this way as a soup stock.

FRESHNESS OF FLAVOR AND COLOR.

Vegetables when canned properly should retain their attractive color and lose very little of their flavor. It will be found almost impossible to detect any difference either in taste or in appearance between the canned and the fresh article if these directions are carefully followed. The volatile oils which give flavor to most vegetables are not lost during this process of sterilization. Cooking for three short periods in a closed container at a comparatively low temperature instead of cooking for one short period at a high temperature or for one long period in an open vessel makes the vital difference and insures freshness of flavor and color. After the jars have been sterilized and tested, they should be kept in the dark, as the sunlight will soon destroy the color of the vegetable.

Jars of vegetables are sometimes hard to open, unless it is done in just the right way. Run a thin knife blade under the rubber, next to the jar, and press against it firmly. This will usually let in enough air to release the pressure on the top. In case it does not, place the jar in a deep saucepan of cold water, bring to a boil, and keep it boiling for a few minutes. The jar will then open easily.

These directions for canning apply only to pint and quart jars. If half-gallon jars are used, always increase the time of boiling, making it an hour and a half instead of one hour.

Do not go into canning deeply at first. Experiment with a few jars in the early part of the season and see if they keep well. It is not a difficult matter to can vegetables properly. The writer has never lost a can of string beans, okra, eggplant, carrots, parsnips, lima beans, beets, asparagus, or pumpkin in several years' experience, and has had only one can of peas spoil, a few cans of corn during the earlier trials, and a few cans of succotash. Any housewife can do equally well. If you follow the directions here given carefully, you will have no difficulty whatever. If you should happen to fail in the first trial, rest assured that you have done something wrong or left something undone. No housewife who has on hand during the winter a supply of home-canned vegetables ready to serve on ten minutes' notice will ever regret the trouble or difficulties experienced in learning.

News from west Texas brings the information that cattle are dying by thousands from starvation because of drouth. Rain has not fallen in six months and the plains in many large areas are as barren as a desert. Herds are being moved as rapidly as possible to Oklahoma and Kansas to save the stock from starvation.

FARM INQUIRIES



ANSWERED BY
Prof. A.M. TenEyck

Alsike Clover.

Will you tell me if you have had any experience with alsike clover? Which is the best feed, alsike clover or alfalfa? How many times a year can you cut it? What kind of feed does it make for cattle? Will it stay in the ground or do you have to seed it every year? When is the best time to plant alsike clover?—John Tincknelt, Cherokee, Kan.

In localities to which alfalfa is adapted, it is far superior to alsike clover for hay meadow. A combination of alfalfa and bromus inermis makes a productive and a fairly safe pasture. However, in your section of the state, orchard grass and English blue grass with alfalfa may be preferable to the alfalfa-bromus combination.

Alsike clover may be sown with grasses for pasture. Sow about 12 to 15 pounds of the English blue grass, 10 to 15 pounds of orchard grass with 5 pounds of clover or eight pounds of alfalfa seed per acre.

Alsike clover is by nature a biennial. Most of the plants die the second year after maturing seed. However, when sown with grass, clover may continue more or less productive for a number of years. We have found alsike clover not to be so productive for meadow as the common red or mammoth clover. But it is somewhat to be preferred for pasture on account of its more permanent character and also its great hardiness.

Alsike clover hay makes excellent feed for cattle, especially young stock and calves. However, it is not more valuable than alfalfa as a forage for cattle.

White Navy Beans.

I would like to have some information on raising the white navy beans or some other kind that would make a good yield of seed, or that would be good for feeding to stock.

I have tried cow-peas, the Whip-poor-will kind, and soy-beans and common navy beans. Planted all at the same time, the navy beans yielded the best, the other two varieties yielded poorly. The cause may be that I planted too early, April 20, two years ago.

I have 30 acres of second bottom land where the wheat has been killed by drought. I want to sow rye in next fall. I will feed yearlings next winter. The question with me is, what would be the best crop all round to put in this field, taking the future crop and feeding the cattle in consideration. I have in mind first, Siberian millet for seed, second 110 day yellow corn planted with lister 20 inches apart with binder; third navy beans, also planted with lister shallow, five inches apart in the row.—John Suischnv, Wilson, Kan.

I have mailed circular giving information regarding field beans. We are publishing a bulletin on cow-peas which may be secured within a couple of weeks from the Director of the Experiment Station. It is now on the press.

All of the bulletins of this station are sent free to the farmers of Kansas. Simply send your name to E. H. Webster, Director Experiment Station, Manhattan, Kan.

It is not too late to plant corn. We have matured corn, Reid Yellow Dent variety, by planting as late as June 10. For forage you may sow millet, cane or Kafir. The cane or Kafir are usually preferred in this state since they produce larger yields than millet. For seed production, also, possibly they may be the better paying crop. The Siberian or German millets are other early maturing sorts well adapted for growing in this state and there is a ready sale for good pure millet seed of these varieties.

Experiments for Control of the Bindweed.
Professor TenEyck and Director

Webster of the Experiment Station have inspected the bindweed experiments which have been carried on during the last two years on the farm of Andrew W. Sander, near Victoria, Ellis county. The special fund for carrying on the work is now exhausted. However, Director Webster states that some work in this line will be continued in order to more fully determine the success of certain methods of control and eradication of this pest which have been suggested by Professor TenEyck's experiments. The following is a brief report of the work by Professor TenEyck.

"The work on the Sander farm has been conducted mainly with the purpose of learning the best methods of controlling the bindweed on large infested areas. Two general plans of experiments have been undertaken, namely, (1) different cultural methods and (2) the use of smothering crops. Most of the cultural methods tried have failed to destroy the bindweed or even check its growth. This is particularly true of ordinary field cultivation with cultivators, both on fallow land and where a crop was grown. Even frequent hoeing for one season did not destroy all the weeds. However, the thinner stand and more feeble growth of the weeds on this plot indicates that another season of such strenuous treatment may accomplish complete eradication, however, is practical only for small areas.

"The only method of culture applicable to large areas which promises any great degree of control or destruction of the pest is very late fall or winter plowing. The plots which were plowed in November (no plowing was done later than November 20) showed a very scattering and feeble growth of bindweeds on April 26, the date of inspection.

"The weeds were thinner and more feeble also on the unplowed land, which produced a crop of sowed cane or sowed Kafir last season, than they were on the untreated ground or on any of the plots cultivated in intertilled crops.

"The fewest in number and most feeble growth of weeds occurred where these two methods were combined, namely, after growing a crop of sowed cane which yielded two cut-

tings, nearly four tons of field cured hay per acre, this plot was plowed 6 inches deep on November 20. It was quite evident that almost any spring crop planted on this land would receive little or no injury from bindweed. And it appears probable that if the smothering-crop late-plowing treatment were continued for two or three years in succession, the bindweeds might be entirely destroyed. At the least, such treatment offers a method of control which may be successfully practised on large areas by which the bindweed may be held in check.

"It will not be possible to grow wheat continuously and hold the bindweed in check, but a rotation of crops, growing wheat one year in three, and practising late fall and winter plowing, the writer believes that it is not only possible to control the bindweed, but the land may be made to produce a larger income than may now be secured from similar land free from bindweed, by continuous wheat growing.

"Again, experiments here and elsewhere indicate that alfalfa and grasses may be started and grows

very successfully in the worst bindweed infested lands. And if this is true the farmers of the central west have little to fear from this weed if they will grow more alfalfa and practise better farming methods.

"It is important, however, that every means possible be used to prevent the further spread of these weeds. Care should be taken when an infested spot is found not to spread the contagion over the field by dragging the roots about with the plow or harrow. If a part of the field only is infected, divide the field and plow and crop the infected part separately.

"Again, avoid spreading the pest by scattering the seed in feed or seed grain. Fan and grade all seed grains so as to remove all foul weed seed. It has come to my attention that a certain firm in Ellis county has advertised for sale and shipped into several other counties seed wheat containing bindweed seed. There is no excuse for this because plenty of pure wheat may be obtained, or if the grain is infected, the weed seed may be readily removed by grading."

WHEELER'S ANSWERS

Fattening Rations for Heifers.

I am fattening a bunch of heifers for the market and am at a loss to know whether I am giving them a properly balanced ration. Am feeding per head as follows Corn chop 6 pounds, alfalfa-meal 4 pounds, oil cake 4 pounds, roughage, alfalfa hay. Can you tell me whether this is a proper ration?—W. A. Stauffer, Marion, Kan.

You failed to state the age of the heifers you are feeding, and likewise have omitted to state the prices of the various feeds which you are using. Without these facts it would be impossible to answer as definitely as if they were available. I presume your heifers are young, and assuming that in addition to the corn, alfalfa meal, and oil cake which you are giving them daily, they are eating at least 8 pounds of alfalfa. The nutritive ratio would be but 1:3.9. This is an exceptionally large amount of protein. In fact, much more than is needed. Since the oil meal is the highest priced feed you are feeding and considering the fact that the alfalfa hay and the alfalfa meal both supply protein in considerable quantities, a cheaper ration would be made by leaving out the oil cake and feeding corn chop, or at least reducing the oil cake or meal to a pound daily instead of 4 pounds. If your alfalfa meal is costing you \$3 or \$4 per ton in excess of what the hay is worth, I would only use a sufficient quantity of it to lighten up the corn chop.

Rye for Hay.

How is rye, cut while the grain is in the dough, for hay to feed cattle and horses?—Frank Slater, Pleasanton, Kan.

Of the small cereals grown for hay or forage purposes rye is probably the least valuable. It is not absolutely lacking in value for feeding purposes and will make a fair quality of hay if cut early in the milk or dough stage. It seems to develop a considerable quantity of fiber very early in its growth and for that reason is not as palatable to the animals as some of the other cereals. Oats and barley rank the highest in value as forage or hay crops.

Alfalfa for Silage.

Would like to know if alfalfa, as it is mowed and without running it through a cutter, if dumped into any underground silo and weighted down with sand bags will keep. Will its food value be any greater and better for feeding swine and lambs in winter? Will there be any danger in feeding such ensilage to lambs, western range lambs, such as are bought on the market during the fall?—W. L. Ross, Omaha, Neb.

It would be possible to make silage successfully in an underground silo as you suggest but it has some very decided objections. In the first place, a silo should be fairly deep, 28 or 30 feet, in order to secure a considerable pressure for the purpose of excluding the air. It is an easy matter to get material into an underground silo but a very difficult task to get it out for feeding. This must become a regular chore once or twice a day through the whole feeding period. There is likewise another objection, due to the fact that poisonous gases are developed on top of the silage, making it unsafe for a man to go down into it. In the ordinary construction the opening of doors above the surface of the silage keeps the air pure so that there is no danger of this kind.

There is not much doubt but that the same materials well preserved in a silo are of more value than cured in the dry form. Silage is especially valuable in the feeding of lambs and can constitute at least half of the total dry matter of the ration.

It is my opinion that you would find it more satisfactory to install a cutter if you plan to make silage on a very large scale. It will pack much more closely and be much more easily removed from the silo in feeding.

The only danger in feeding such ensilage to the lambs would be in feeding too much, just as green alfalfa may be eaten in excess and cause bloat. There is very little danger of the silage producing bloat if fed in reasonable quantities. For mature swine in the winter, alfalfa silage would be more valuable than the hay as it approaches more nearly the conditions of green alfalfa and would be very valuable in keeping the hogs in good healthy condition. It could hardly constitute the whole ration for hogs unless mature brood sows.

I would suggest that you write the Silver Mfg. Company, Salem, O., for their booklet on "Modern Silage Methods." This will give you a very complete discussion of the silo and silage.



J. D. Spangler, Sharon, Barber county, Kan., and his big Poland Chinas. See ad on another page.



KANSAS FARMER

EDITORIAL



UTILITARIAN EDUCATION.

The trend of the times is towards education that qualifies for the activities and responsibilities of life. It has been said that when one has learned to read he may have access to all knowledge written in his language. But knowledge has so greatly increased that no one person ever acquires it all. In the great universities many and diverse subjects are taught, but the instruction is by specialists in the many departments of learning. It has been said that a mastery of all that is offered in some of these institutions would require a student's continued application for 150 years. If this is even approximately true the student's necessity for selection, the impossibility of mastering more than a small fraction of the work offered, is obvious. The fact that the university studies do not include these of the elementary grades or of the high school is not to be overlooked.

The instruction in well organized city schools includes eight years in the grades and four years in the high school. The college or university work requires four years. If training for one of the professions be added to this, three or four more years will be required.

Summarizing we have. For the graded schools, 8 years; for the high school, 4 years; for the college or university 4 years, and for the professional school 4 years, making a total of 20 years.

If, then, the child begin at six, have good health and no interruption, he may complete a fairly full course of schooling at 26.

In many of the discussions of the present time various subjects of study are strenuously urged as desirable additions to those now taught in the schools. Industrial subjects have been introduced in many city schools beginning with the primary and continuing into the high school. Enlargement of this has been advocated. Instruction in agriculture, especially in country schools, is strongly insisted upon. Courses of instruction for teachers in agriculture are announced by some institutions in summer short courses now soon to open.

Evidently, if much additional work is to be crowded into the school days of young America, those days will have to be lengthened or some adjustment will have to be made.

The demand for the introduction of industrial subjects into the course of study may have been due in part to the fact that on graduation from either high school or college the youth finds himself surprisingly unprepared for the activities of life. He is disappointed at his inability to realize quickly on the added power which he has believed he had been acquiring and which he will, in all probability, find real as he learns to use it.

The superiority of the liberally educated person is estimated at about its true worth by the community, but there is disappointment because of the fact that in most cases years are required in which to realize upon advantages of training.

It is, therefore, not surprising that the inquiry has been propounded whether it be not possible to so modify courses of study as to retain the culture advantages and at the same time to equip the learner with ability to realize quickly upon his added powers, possibly to develop his powers so that he may apply them in some branch of the world's work without having to begin to learn where the unschooled man of affairs of his own age began several years ago.

Among the attempts in a broad way to provide an affirmative answer to this inquiry the founding of the agricultural colleges stands conspicuous. The provisions of the Morrill act as signed by Abraham Lincoln are very broad. The states have not been entirely uniform in the success of their attempts to comply with the spirit of these provisions. Where the agricultural college has not been made a department of a university strong influences have favored the introduction of university features in the college. For a long time it was impossible to man the agricultural colleges with qualified presidents and instructors except as they were drawn from the older kind of colleges. Some of these were able by abstract reasoning to realize that utilitarian education

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ADVERTISING RATES—25 cents per agate line, 14 lines to the inch. Announcements of reputable advertisers respectfully solicited. No medical nor questionably worded advertising accepted. Terms close Monday.

OUR GUARANTEE.—It is our belief that all advertisements in this paper are from reliable persons or firms. To show that we are in earnest in protecting our subscribers we guarantee the trustworthiness of our adver-

tisers under the following conditions: We will make good the loss of any ad up subscriber who suffers by dealing with any fraudulent advertiser in our columns, provided complaint is made to us within thirty days after the transaction. This guarantee means just what it says. It does not mean that we guarantee to settle all trifling disputes between a subscriber and an advertiser, though we offer our good offices to this end. We do, however, protect you from fraud under the above conditions. In writing to advertisers be sure always to say: "I saw your advertisement in Kansas Farmer."

CONTRIBUTIONS.—Correspondence invited on all farm topics, live stock, soil cultivation, grains, grasses, vegetables, household matters, recipes, new and practical farm ideas, farm news. Good photographs of farm scenes, buildings, live stock, etc., are especially invited. Always sign your name, not for publication, unless you desire it, but as an evidence of good faith. Address all communications to
KANSAS FARMER COMPANY,
Topeka, Kansas.

was the purpose of the agricultural colleges, but, able men as they were, they could not divest themselves of their university instincts and aspirations. Again, the agricultural colleges with few exceptions were located at or in the close vicinity of towns having city aspirations. The desire of these towns was for universities rather than agricultural colleges and their influence harmonized with the instincts of the working force.

The agricultural college idea harmonizes, however, with the ever increasing common sense demand that education shall be useful and that school days must absorb less than half a life time. These colleges and their demand have produced educators whose training as well as their logic has shown them that cultural advantages may be derived from learning what one needs to know; that strength may be developed by study that is concrete; that abstraction is not more educative than thought that is applied; that utilitarianism is to be cultivated and not despised. These modern educators are now found not only in the agricultural colleges but in the more advanced universities as well.

The rudimentary studies of necessity receive most of the attention of the pupils in the primary school. But the best high schools now provide several courses from which to select studies according to the use the pupil may have for knowledge and training of a particular kind. In the universities many optional courses are offered. In the more modern universities professional courses in great variety are provided. In many cases one of these is made a part of the regular four year course leading to a degree. Such a course well arranged, ably presented and carefully studied gives the student the broad culture needed by the citizen and fits him to enter upon his life career without the intervening incompetency which often embarrasses those who have devoted their attention solely to the so-called purely culture studies. Some of the greatest institutions provide a four year business course, several four-year professional courses, a four year agricultural course, etc. It is also permitted to select from several of these for a four year general course leading to the regular bachelor's degree. Thus, at Cornell studies from the agricultural course receive full gree. Thus, at Cornell studies from the agricultural course receive full credit on the work of the Senior year. This recognition of the educational value of purely agricultural studies comes as a welcome endorsement of positions long maintained by some progressive thinkers in Kansas.

To serve their purposes best the agricultural colleges must remain considerably differentiated from all other schools. The students with whom they deal are the best in the world, but they come without the prelimi-

nary preparation of the majority of those who enter the universities or the other colleges. It is possible that this may be gradually changed by the development of the consolidated district schools, but for the present at least the agricultural colleges must provide for students who have not had high school privileges.

Whatever else the agricultural college may do, it must teach and teach well those branches needed by the young citizens who will become farmers, or who will devote their powers to some of the mechanic arts. Time is coming when there will be a profession of agriculture as much as there are now professions of law, of medicine and of the ministry. Time is coming when the profession of agriculture will be one of the most honorable because requiring a greater range of exact knowledge, the exercise of more accurate observation and of keener judgment than are necessary in other professions. Time is coming when to hold a degree in agriculture will be most desirable.

The agricultural colleges ought to be proud of their title, proud of their chief purpose. The path of honor for them lies along the line of greatest proficiency in providing for the educational needs of those who are to direct the agricultural destinies of the country. To do this they must act upon the most advanced views of utilitarian education, not doubting that the acquisition of knowledge that can be used and the application of such knowledge develop symmetrical mental powers of greater value than can be acquired in any other way.

INVESTMENT OF SURPLUS INCOME.

To find remunerative investments for accumulated surplus capital derived from the sale of products of Kansas farms is becoming an increasingly important problem. In many cases loans in the neighborhood are not to be had. On the contrary the would-be lender often meets a rejoinder in an offer of money at a low rate of interest. After the harvest, now soon to commence, the demand for investments will be greater than ever before.

To leave money long in the bank without interest is not a very attractive proposition. To invest in "gold bricks" or in other "slick" schemes is far worse. When an unusually pleasant talker appears with a proposal showing marvelous profits for the investor it will be well to take time to consider and to consult with one's banker before investing. True, the banker sometimes takes a "well baited hook" and is caught, so that he is not infallible as an adviser on financial questions, but the old saying, "Two heads are better than one, even if one is a sheep's head," is still true. It is not necessary in any case to determine which is the sheep's head, but it is not usually that of the man who

refuses to be rushed into an important transaction.

Some farmers are investing in municipal bonds, i. e., school district, township, county, or city bonds. If these are issued by Kansas municipalities they are not taxable in this state. The interest rate is low, but they are generally safe.

There are industrial shares that are fairly good and reasonably safe. It is necessary, however, to scrutinize all such carefully with the aid of the banker.

Railroad shares and other securities ought to be safe and profitable investments, but until the manipulation of their values shall be eliminated, by law or otherwise, small investors will regard them with suspicion.

But there is another class of investments that may safely be made and that will yield profitable returns. On almost every farm better fences, better gates, and better buildings may be made to reduce expenses, add to the income, and increase the satisfaction and pleasure of life on the farm. A good many farmers are remodeling and enlarging their residences. Not unlikely some will make their dwellings so big as to add unnecessarily to the labors of the housekeeping force. But the installation of the improvements known as "modern conveniences" in the home is an investment that pays well in comfort and pleasure and lightens the labors of the wife and daughters. These modern conveniences are not too expensive for the well-to-do farmer of today. An investment of \$150 to \$500 will cover the cost in almost any case, providing water, the appliances, heating plant, ventilation, and drainage, all of which are necessary. In remodeling any house or in building a new one, provision for such improvements can be made.

Investments for the improvement of life are safer than stocks and bonds, are more to be desired than added acres, and yield their returns every day. On the home farm is a good place to invest some of the surplus.

THE KANSAS AGRICULTURAL COLLEGE ON WHEELS.

In cooperation with the Santa Fe railroad the Kansas State Agricultural College conducted a "school on wheels" last week. An exhibition car and two audience cars made up the special train which was equipped with a corps of lecturers from the college whose object was the dissemination of real, up-to-date information in regard to wheat raising. The route lay through the wheat belt and, in spite of the busy season, the train was met everywhere by large and enthusiastic crowds of farmers who were anxious to avail themselves of the unusual opportunity of having the Agricultural College brought to their doors. Everything pertaining to the choice of varieties, selection of seed, methods of sowing, harvesting and storing, rotation of crops and the insect and fungus enemies of wheat were discussed by the professors to the edification of the hearers.

In some portions of the territory covered, it was found that large areas that had formerly been devoted exclusively to wheat raising were now in corn and other crops because the land had grown "wheat sick." This rotation together with the introduction of the strong new varieties like the Kharkov, Malakof and Defiance will reinstate the wheat growing industry in many places.

The trip was managed by Superintendent J. H. Miller of the Farmers' Institute and College Extension department as a part of his regular duties. The train was handled by Mr. R. E. Wilson, Traveling Industrial Commissioner of the Santa Fe, than whom there is no more capable man for such work. The lecturers were Director E. H. Webster of the Experiment Station, Prof. A. M. TenEyck of the agronomy department, Prof. T. J. Headlee and Geo. F. Freeman of the entomological department and Superintendent Miller who is always alert when the college or its growth is concerned.

The enterprise displayed by the college authorities in thus carrying a great fund of practical information to these thousands of farmers whose school days are over but whose desire to learn has never abated is most

WEEK 12, 1909.

highly commendable and is one of many things that have served to make of the Kansas State Agricultural College the greatest of its kind.

SHOW FARMING.

The city man whose farming has been limited to rides through the country is in many cases certain that he can tell the tiller of the soil all about how he ought to proceed. When such a man traverses a region where 160 acres is considered about the

right area to receive the care and labor of a man and several horses the city critic is disturbed at what to him seems wanton waste in corners and along fence rows, and he blames the farmer for shiftlessness in failing to save the vagrant heads of wheat which the reaper did not reach. Perhaps the city man did not know that Ben Franklin's proverb, "Time is money" is more applicable at harvest than at any other season, and that the time which he insists should have been

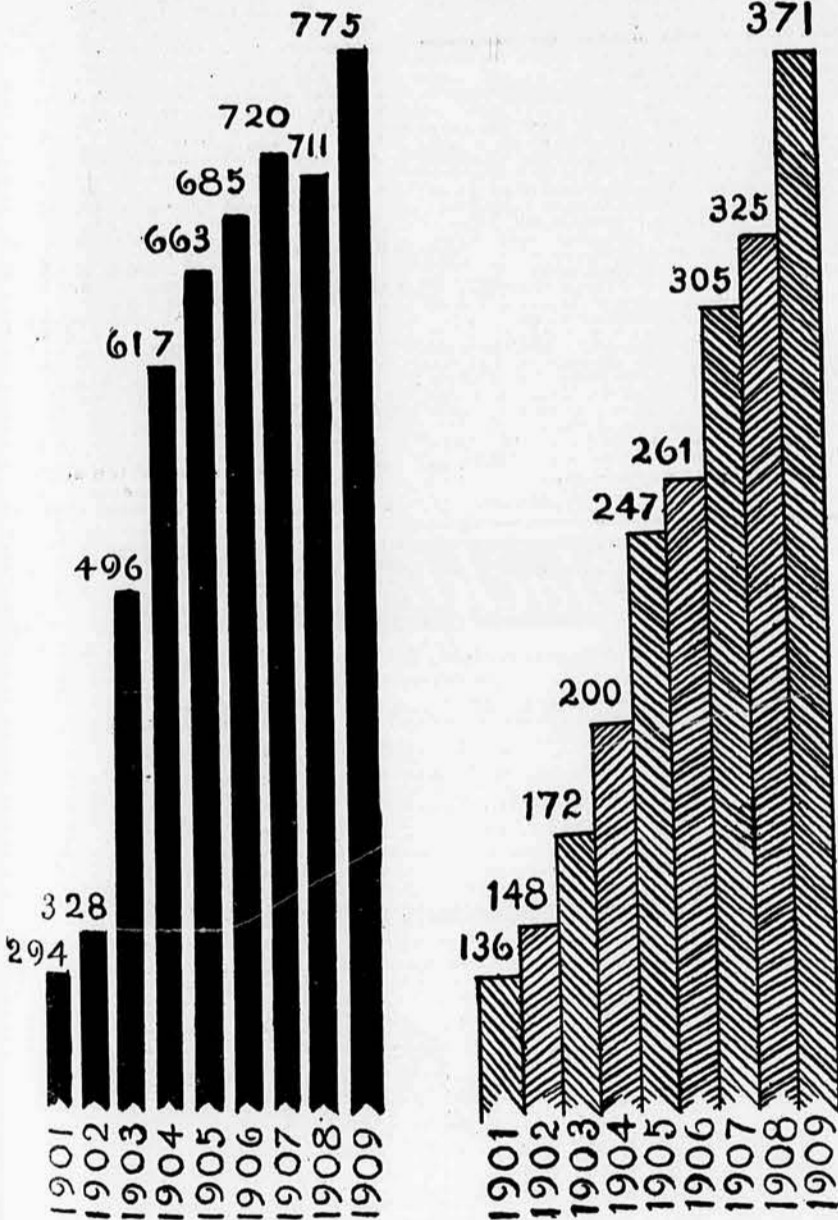
ANOTHER KANSAS CROP.

When Secretary Coburn gets out his next "Idyls of Kansas," with its instructive exhibit of "The Where of Wheat," "The Lay of the Helpful Hen," "The Hog's Happy Habitat," he should add another chapter, chronicling a still more important crop, the educated boys and girls Kansas is raising.

Our country at large might almost be said not to believe in education much beyond the fourth grade, for three-quarters of all its children never see the fifth grade. We had a total population last year (1908) of over 87 million. Of this total, 19.8 per cent were in some elementary school, public or private. But as there was only 21.16 per cent of all our population in all schools, this leaves the depressing exhibit of only 1.36 per cent in attendance on any school higher than the eighth grade. Let us see this in actual numbers: in 1908 there were 17,373,852 elementary pupils, but

But what about Kansas? Not so much better as we would wish, indeed, in our farm-world not enough better to point with pride to our growth. Still, we are gaining, and this should spur us to further exertions. The diagram accompanying this article graphically tells the story of nine years of college growth of the noble college at our state capital. Any school that can show such an uninterrupted increase may well be proud of its record. But we are warranted in taking this diagram as typical of a wider fact, the growth of all higher education in Kansas.

Let us keep to this same yard-stick of time, nine years. Nine years ago our State University had 474 students; it now has 2,063. Our Agricultural College had 594; it now has 2,192. Our high school attendance nine years ago was 15,000; it now stands above 23,000. Baker University had 124 true liberal arts students; it now has 387.



GROWTH OF WASHBURN FOR NINE YEARS.

TOTAL ATTENDANCE.

COLLEGE PROPER.

against this there were only 961,783 in all our American high schools and academies together, or bare nine-hundredths of a per cent more than one pupil to every hundred people, i. e., one would have to pass 99.1 persons in a line before he would find so much as one boy who had tasted a high school. This is the average American fact.

If we go up to any higher schooling, as university and college, what are the facts? There are 149,700 in our liberal arts schools, but this is only 17-hundredths of one per cent of our 87 millions, and, indeed, only 8-tenths of one per cent of the youth we do send to some school.

If we shall add the 96,956 who attend some school of technology or a professional school we are adding only 52-hundredths of one per cent of our whole population. Does this look as though higher education is being overdone?

Washburn had 136; it has 374. Ottawa has risen from 57 to 129; Emporia from 36 to 125; Kansas Wesleyan from 22 to 68. Of course, these figures include only the "college proper" in each case, and not the total attendance of these colleges, thus: Baker has a total attendance of 780, Washburn 783, Ottawa 432.

There is in these showings no reason for the alarm which has been professed in some quarters least we are in this age "over educating." The power for usefulness, for leadership in the world's work, possessed by the thoroughly educated man or woman, the growing demand for the greatest possible competency, a demand which always exceeds the supply, admonish the young and their parents to such use of institutions of higher education as shall make their growth in the immediate future distance that of the recent past.

Why Different Priced Sewing Machines?

What makes the difference in the prices of various sewing machines? Why is one make sold for \$18 and another for \$40 or more? They all look about the same—to the unpracticed eye. The demonstrator may do fairly good work on the cheapest one, but you cannot do the work of years on it.

Perhaps he tells you the club plan of selling makes it possible to reduce the price because more are sold. Perhaps he tells you that in the higher priced machine you pay for its name.

Now think it out for yourself. If the price could be lowered on account of the number sold, the Singer Sewing Machine would be the lowest priced in the world, because there are more Singers sold than all other makes put together.

You are not paying for a name when buying a Singer; you are paying for the merit that that name implies. How did the Singer get the name in the first place? Why didn't some other machine get the name?

Let us put a Singer in Your Home To try at Our Expense

This is a bona fide offer. We'll pay all expense incurred in getting it there. Try it out thoroughly on your regular work—sewing—or mending. If it is not all you hope to find it send it back at our expense. This costs you nothing, only a postal for our booklet, "A Wireless Message from the Singer Tower," which we send you to select a machine from, according to the style you'd like and the price you'd like to pay if you buy. Remember, you are under no obligation to buy.

Address
SINGER SEWING MACHINE COMPANY
 Room No.1174 Singer Building, New York

spent in saving a few quarts of scattering wheat in an out-of-the-way place was wisely used to save bushels that urgently needed attention.

As land becomes dearer more hands will be employed upon given areas, but at all times the city man should remember that farming must pay its way. While advances in farm management will bring waste places into use and will reduce the waste, yet strictly show farming is rarely remunerative in dollars and cents however large the returns in satisfaction to the passerby.

CORN GROWERS HAVE CHANCE.

Any farmer will have a chance to win prizes at the next National Corn Exposition since the winners of the 1907 and 1908 sweepstakes have been eliminated from entering the regular classes. In addition to this the exposition will give no cash prize of \$1,000 to the winner of the Grand Champion sweepstakes—the grand premier trophy being considered sufficient reward together with the honor of winning the prize. Instead of the \$1,000 cash prize for the champion sweepstakes, three sweepstakes prizes have been arranged, giving one to each of the best ten ears of yellow, white, and other than yellow or white, which includes flint, red, and calico varieties.

These changes were decided on at a meeting of the executive committee of the exposition and vice presidents of the National Corn Association, held in Omaha last week.

The management has also decided that all exhibits must be in Omaha

at the office of a transportation company or on the exposition grounds by November 27, ten days before the exposition opens. The 1909 exposition, which is to be held December 6 to 18, is to be an exposition that is "ready."

The guessers on the Kansas wheat crop present estimates varying through a wide range. Those who have heretofore been reasonably close to the mark place the aggregate at about eighty million bushels. There need be no surprise if this figure be found too low.

The closing exercises of the year's work at the Kansas State Agricultural College will be held June 13-17. This will include the graduation of the 1909 class of 134 young men and maidens. This great institution is engaged in a work whose usefulness to the state and nation is dependent upon the capability and wisdom of the management. The material at hand and the support which the state is ready to give are unsurpassed.

In an extensive series of experiments with alfalfa, the Geneva, New York experiment station found that alfalfa will succeed without inoculation or lime about once out of five attempts on the soils of New York State; with lime and without inoculation, about twice out of five times; with inoculation and without lime about three times out of five, and with both inoculation and lime about four times out of five.

Readers' Market Place

CLASSIFIED ADVERTISING 3 CENTS A WORD

The rate for advertising in this department is low, only three cents per word each insertion. There is no more popular advertising than classified advertising. Every one reads classified ads, and just because they are classified. You can reach 50,000 farmers in Kansas and adjoining states, the best farmers on earth, through this page. All ads set in uniform style, no display. Initials and address count as words. Terms, invariably cash in advance.

HELP WANTED.

WANTED—A SOLICITOR WITH HORSE and buggy to drive through the country and solicit subscriptions. Address Circulation Manager, Kansas Farmer, Topeka, Kan.

WANTED—LOCAL MEN TO TAKE ORDERS for high grade western grown nursery stock. Experience unnecessary. Outfit free. Cash weekly. National Nurseries, Lawrence, Kan.

WANTED—LADY OR GENTLEMAN AS local representative in every Kansas county. Splendid chance to make good wages without great effort and no expense. Write for particulars. Address Circulation Department, Kansas Farmer, Topeka, Kan.

FOR EXCHANGE.

WE CAN GET YOU WHAT YOU WANT in exchange for your farm, hardware, merchandise or other property. We have 500 propositions to choose from. Graham Bros, Eldorado, Kan.

SWINE.

BERKSHIRE BOARS FOR SALE—FROM 125 lbs. to 250 lbs. of Masterpiece and Lord Premier breeding. G. J. Willems, Inman, Kan.

POLAND CHINA BOAR, FANCY U. C. by U. C. Perfection, bred by W. J. Honeyman. Farrowed July 8, 1906. A guaranteed breeder and first class individual. G. H. Randolph, Emporia, Kan.

DOGS.

FINE COLLIE PUPS \$5 EACH, BROOD bitches, \$10. John W. Treadway, Kincaid, Kan.

FOR SALE—COLLIES OF ALL AGES. Natural born cattle drivers. Pedigreed stock. Write for circular. Harry Wells, Belleville, Kan.

SCOTCH COLLIES—PUPS AND YOUNG dogs from the best blood in Scotland and America now for sale. All of my breed bitches and stud dogs are registered, well trained and natural workers. Emporia Kennels, Emporia, Kan. W. H. Richard.

COLLIES OF ALL AGES FOR SALE—They are stock drivers, pets and home protectors. 250 head sold last year. Write for illustrated circular and prices. Would like to buy a few ferrets. Address Harvey's Dog Farm, Clay Center, Neb.

POULTRY.

BUFF ROCK HENS \$1 to \$2; EGGS, 16, 75c; 45, \$2. W. A. Hillands, Culver, Kan.

FOR EGGS OF THE FAMOUS WHITE Wyandottes write J. H. Brown, Boyero, Colo.

HOUDANS—AMERICAN AND ENGLISH strains. Eggs for sale. No more stock till fall. O. E. Henning, Wahoo, Neb.

BUFF COCHIN EGGS, BEST PEN, HIGH scoring birds, 15, \$1.50. Good hatch guaranteed. H. T. House, Jewell, Kan.

BARRED ROCKS—EXTRA FINE SPRING cockerels and breeding pens at half price. Circulars. A. H. Duff, Larned, Kan.

BLACK LANGSHAN EGGS—\$1 PER SET- ting, \$6 per 100. Baby chicks 10c each. Mrs. Geo. W. King, Solomon, Kan.

RHODE ISLAND REDS—WINNERS OF 40 premiums at State Show. Send for egg circular. R. B. Steele, Topeka, Kan.

PURE S. C. BROWN LEGHORN EGGS—From the best laying strains, \$1 for 50, \$2 per 100. A. G. Lorr, Osage City, Kan.

WHITE PLYMOUTH ROCKS EXCLU- sively, large birds, good layers, farm range. Eggs \$4 per 100, \$2.50 per 50. Etta L. Willet, R. D. 1, Lawrence, Kan.

MANURE SPREADER.

FOR SALE—A NEW MANURE SPREAD- er, never used, none better made. It is for sale for a special reason at considerably less than the list price. If you have been thinking of buying a manure spreader, and every progressive farmer is thinking about buying one, here is your opportunity to get an absolutely new one at a special price. Write quick. Address A. Turner, care Kansas Farmer, Topeka, Kan.

CATTLE.

SEE LESLIE OF ALYSDALE BY PRINCE Consort, out of Lord Mayer dam, calved May 8, 1905. Best individual of our last bull crop. I want to show him to you. Also offer some cows and heifers at fair prices. Come and see them. W. Merriam, Columbian Bldg., Topeka, Kan.

The Stray List.

JUNE 5.
W. H. Shaffer, County Clerk.
Taken up on the 3d day of May, A. D. 1909, by J. G. Johnson, Garden Twp., Cherokee County, P. O. Galena, 1 mule, about 13 hands high, mouse color, branded C. C. on breast; scar on right foreleg above knee; valued at \$35.

JUNE 5.
Edward Iverson, County Clerk.
Taken up by Henry Nieman, April 29, 1909, in Walnut Twp., Atchison Co., a red cow, weight about 800 lbs.; valued at \$30.

REAL ESTATE.

FARM LOANS MADE IN ANY AMOUNT from \$500 up, at lowest rates and on most favorable terms. Betzer Realty & Loan Co., Columbian Bldg., Topeka, Kan.

320 ACRES IMPROVED, 280 ACRES CUL- tivated, balance pasture. Abundantly watered. Price \$8,900. G. H. Johns, Vine, Kan.

150 QUARTERS, \$8 TO \$20 PER ACRE; smooth and rich; Meade, Seward and Haskell counties. McConnell, Plains, Meade county, Kan.

TO TRADE FOR WESTERN LAND—Eight room house in good condition, fine shade, in Salina. Wight & Dodge, Salina, Kan.

FIFTY QUARTER AND HALF SECTIONS and some larger tracts of good farming land for sale in Edwards and Ford counties, Kansas. Thomas Darcey, Real Estate Agent, Offerle, Kan.

WELL IMPROVED RANCH OF 1,000 acres, near station, an abundance of water and good feed lots. Send for full and complete description. Price \$30 per acre. Hurley & Jennings, Emporia, Kan.

YOUR FARM SOLD QUICKLY FOR CASH—Buyers waiting. Send price and description. Terms free. Address, Frank P. Cleveland, 1213 Adams Express Building, Chicago, Ill.

FOR SALE—476 ACRES GOOD LEVEL land, 370 acres under cultivation, balance in pasture, all fenced, good 8 room house, granary and small barn, good water, close to school, 3 1/2 miles from county seat. For further information address Box 391, Kincaid, Kan.

DO YOU WANT A HOME?—WE HAVE 100 of the best farms in southeastern Kansas on the easiest terms of any land sold in the state. Send for copy of the Southeastern Kansas Homeseeker, the best monthly land paper published—it is free. Address, The Allen County Investment Co., Leawood, Kan.

FREE HOMES FOR EVERYBODY UNDER the homestead and desert acts. Sulphur Springs Valley, Arizona, is fast settling. Water obtained at a depth as shallow as four and one-half feet. As fine alfalfa land as there is in the world. For further information address the McCall Realty Company, Cochise, Ariz.

IMMEDIATE POSSESSION—80 ACRES, 15 bottom, 65 cultivated, 15 pasture, new 6-room house, outbuildings, good water, 50 acres of wheat, half goes. Price \$3,000. All kinds and sizes. Write for lists. Garrison & Stuebaker, Salina, Kan.

FAMOUS CROOKED CREEK VALLEY—If you want one to four quarters good land, well located, good neighborhood, telephone, daily mail, eight miles from Fowler, Meade Co., suitable for corn, wheat, alfalfa, all tillable, no improvements, twenty to thirty dollars per acre, write Owsar, Box 82, Fowler, Kan.

MISCELLANEOUS.

CONKEY'S ROOF CORE—POULTRY SUP- plies of all kinds for sale. G. H. Harries, 210 W. 6th., Topeka, Kan.

FOR SALE—EVERYTHING IN BEE supplies at lowest prices. Try my comb foundation. O. A. Keene, Topeka, Kan.

FOR SALE—BLICKENSDERFER TYPE- writer good as new with leather traveling case; cost \$60; price \$30 if sold at once. Jesse Johnson, Clay Center, Kan.

WANTED—TO RENT A DAIRY FARM, everything furnished, by an experienced farmer with family. Can give best of references. 217 East 9th, Hutchinson, Kan.

WANTED—FARMERS TO TRY OUR Binder Tongue Supports which takes off the weight from the horses' necks. Price \$3.75 each. Wenzelmann Mfg. Co., Galesburg, Ill.

PORK MAKER WORM EXPELLER FOR hogs. Farmer agents wanted to handle our remedy. Liberal commission. Write for particulars. Supplies furnished free. Miracle Remedy Co., Hebron, Neb.

I WILL PREPARE YOU FOR HOLDING a position at from \$50 to \$250 per month. Positions guaranteed. Descriptive catalog, free. Address: "Denton," Mgr., Official Training School, M. K. & T. Ry., Sedalia, Mo.

GENUINE BARGAINS IN HIGH-GRADE upright pianos. Slightly used instruments: 12 Steinways from \$350 up; 6 Webbers from \$250 up; 9 Krakows from \$250 up; 7 Knabes from \$250 up; 3 Chickering from \$250 up; also ordinary second-hand uprights \$75 up; also 10 very fine parlor grand pianos at about half. Write for full particulars. Cash or easy monthly payments. Lyon & Healy, 62 Adams St., Chicago. We ship everywhere on approval.

PATENTS.

PATENTS PROCURED AND SOLD; BIG money in patents; book free. H. Sanders, 115 Dearborn St., Chicago, Ill.

SEEDS AND PLANTS.

FREE CATALOG OF SEEDS—1 CENT and up per packet. Send name and address to H. M. Gardner (Seed Grower) Marengo, Neb.

LAWYERS.

A. A. GRAHAM, ATTORNEY AT LAW, Topeka, Kan.

TOO LATE TO CLASSIFY.

DEEP CREEK DUROCS.
Choice spring pigs sired by a good son of Kant Be Beat, the 6,000 boar, \$10 each. C. O. ANDERSON, Manhattan, Kan.

T. E. DEEM,

Live Stock Auctioneer. Best of references. See me early for desirable dates. Cameron, Missouri.

490 ACRES meadow land nicely located, well fenced with 4 wires, all lies in a body, and can be used for pasture. Within 40 rods of switch on Mo. Pac. R. R. Could be divided into a nice farm and is a bargain at \$30 per acre. C. R. CANTRALL, Fredonia, Kan.

90 ACRES OF CREEK BOTTOM and upland, 75 acres in cultivation, balance meadow, no other improvements, 3 miles from town. Price \$3,800. A snap, as 40 acres of it is fine alfalfa ground. J. S. BOYLE, Kansas.

McPHERSON COUNTY.
80 acres, 3 1/2 miles Salina, all in cultivation. \$4,500.
240 acres in Saline county, 80 in cultivation, all fenced, fair improvements, 1/2 mile school and church. \$25 per acre. WM. KINDT, Marquette, Kan.

TETON VALLEY, IDAHO.

has more natural advantages than any other irrigated land in United States. See it. Perpetual paid water rights; perfect titles and abstract; easy terms; new railroad; delightful climate; carfare refunded to actual purchasers in June of July. Call at our office.

IDAHO LAND AND LOAN COMPANY, St. Anthony, Idaho.

THE BEST TOWN TO LIVE IN.

If you would like to live in the most beautiful city in the West, with unsurpassed educational, business and religious advantages, in a city clean, progressive, where real estate values are low, but steadily advancing, where living expenses are reasonable, a city with natural gas at lowest prices, address the Secretary of the Commercial Club, Topeka, Kan.

FOR SALE.

Two choice farms, one of them 160 acres, well fenced and cross fenced, 40 acres tame grass and alfalfa, nice house, fine water, all in cultivation, fine soil, close to town.

Eighty acres, well fenced and cross fenced, all hog tight; 20 acres timothy and clover; plenty of buildings, limestone soil, close to station. Price each \$45 per acre. Easy terms. Call on or address

L. B. DAVIS & SON, Elk City, Kansas.

RENO COUNTY FARMS.

130 acres improved bottom land, 40 acres in wheat, 70 in corn, balance in pasture; one-third crop goes with place. Price \$9,000.
160 acres 2 miles from town, well improved, 50 acres in wheat, 60 in corn, some alfalfa, balance pasture. Price \$12,500.
80 acres, all in cultivation, all in wheat; one-third goes with place. Price \$5,000

CHARLES PETERSON, Hutchinson, Kansas.

Western State Fairs and Live Stock Shows for 1909.

- Blue Grass Fair, Lexington, Ky., Aug. 3-14.
- Iowa State Fair, Des Moines, Aug. 27-Sept. 3.
- Ohio State Fair, Columbus, Aug. 30-Sept. 1.
- Michigan State Fair, Detroit, Sept. 2-Sept. 10.
- Indiana State Fair, Indianapolis, Sept. 4-Sept. 10.
- Nebraska State Fair, Lincoln, Sept. 6-Sept. 10.
- Minnesota State Fair, Hamline, Sept. 4-Sept. 11.
- Kansas State Fair, Hutchinson, Sept. 11-Sept. 17.
- Interstate Fair, Denver, Colo., Sept. 12-Sept. 18.
- West Michigan State Fair, Grand Rapids, Sept. 13-Sept. 17.
- Wisconsin State Fair, Milwaukee, Sept. 13-Sept. 17.
- South Dakota State Fair, Huron, Sept. 13-Sept. 18.
- Kansas State Exposition, Topeka, Sept. 13-Sept. 18.
- Interstate Fair, Bozeman, Mont., Sept. 13-Sept. 18.
- Kentucky State Fair, Louisville, Sept. 13-Sept. 18.
- Tennessee State Fair, Nashville, Sept. 20-Sept. 25.
- Interstate Live Stock and Horse Show Co., So. St. Joseph, Mo., Sept. 30-Sept. 25.
- Interstate Live Stock Fair, Sioux City, Ia., Sept. 20-Sept. 26.
- Illinois State Fair, Springfield, Sept. 27-Oct. 2.
- Alaska-Yukon-Pacific Exposition, Live Stock Show, Seattle, Wash., Sept. 27.
- Wyoming State Fair, Douglas, Sept. 28-Oct. 1.
- Montana State Fair, Helena, Sept. 29-Oct. 2.
- Oklahoma State Fair, Oklahoma City, Sept. 29-Oct. 8.
- Missouri State Fair, Sedalia, Oct. 4-Oct. 8.
- Utah State Fair, Salt Lake City, Oct. 4-Oct. 9.
- Tristate Fair, Memphis, Tenn., Oct. 5-Oct. 14.
- American Royal Live Stock Show, Kansas City, Mo., Oct. 11-Oct. 16.
- Texas State Fair, Dallas, Oct. 16-Oct. 21.
- National Corn Exposition, Omaha, Neb., Dec. 6-Dec. 18.

Hereford Cattle Judges.

On behalf of the American Hereford Cattle Breeders' Association Secretary C. R. Thomas announces the selection of the following named judges of exhibits of Hereford cattle at the American Royal show at Kansas City October 16-21: S. W. Anderson, Blaker Mills, W. Va.; Thomas Mortimer, Madison, Neb.; and H. C. Duncan, Osborne, Mo. As Hereford judges at the International show at Chicago in December: T. J. Vornall, Liberty, Mo.; Robert Mousel, Cambridge, Neb.; and Ed Taylor, Fremont, Mich.

1 MAN AND 1 HORSE BALE 1 TON AN HOUR

Bale at Least Cost
Our Daisy SELF-THREADING, self-feeding one-horse hay press only one on which one man can do all the work. First successful self-threading device, automatic condenser increases results. Openside hopper. Free trial. Write today for Baler Book and prices. GEO. ETEL CO., Quincy, Ill.

Blacklegoids

Simplest, Safest, Surest Vaccination for the prevention of **BLACKLEG IN CATTLE**

NO DOSE TO MEASURE. NO LIQUID TO SPILL. NO STRING TO ROT.

Just a little pill to be placed under the skin of the animal by a single thrust of the instrument. You cannot afford to let your cattle die of blackleg when a few dollars spent on Blacklegoids will save them. Write for circular.

PARKE, DAVIS & COMPANY
HOME OFFICES AND LABORATORIES, DETROIT, MICH.
NOTICE—For a limited time we will give to any stockman an injector free with his first purchase of 100 vaccinations.

FREE!

The Latest Craze!

MOCKING BIRD WHISTLE

For Children and Adults Given Absolutely FREE For Solving This Puzzle



There are ten faces in this picture. Can you find seven of them? Directions—Trace out the lines of each face heavily with a lead pencil on this or a separate sheet of paper. Free to the persons sending correct solutions to this puzzle we will give absolutely free of charge the latest Parisian craze, a Mocking Bird Whistle, which will furnish amusement and pleasure to both children and adults. Also credit orders given to the amount of \$40, good as part payment on purchase of a piano. Only one answer from a family will be counted. Winners will be notified by mail. All answers must be mailed by June 18th, 1909, with your name and address plainly written.

E. B. GUILD MUSIC CO., 722 Kansas Ave., Topeka, Kan.

KANSAS FARMER ADVERTISERS GET RESULTS

Bargains in Farms, Ranches, and City Property

SPECIAL BARGAINS—80 acres 3 miles from Clyde, second bottom, \$50 per acre. 160 acres near Green in Clay Co., 90 under plow, well improved, \$50 per acre. 160 acres pasture near town, \$3,590. Write for fine large list. **WALTER NELSON**, Clyde, Kan.

COMPLETE DESCRIPTION Texas Panhandle, covers 25 years, 32 pp., complete birdseye view and wall map Amarillo, 15,000 population, in heart of Panhandle, sent prepaid for 35c; clubs of four, \$1. Order today—edition limited. Mirror Publishing Co., Amarillo, Texas.

320 ACRES of extra good land, house of 14 rooms, a fine barn, and other good improvements, 2 1/4 miles to town. One of Brown county's best. Enquire of **R. A. HENRY**, The Real Estate Man, Hiswatha, Kansas.

160 ACRE farm bargain, 7 miles northeast of Ness City. Small frame house 2 rooms, frame barn for 4 horses, hen house, small granary, good well and windmill, 75 acres in cultivation, 85 acres in wheat, one-fourth with place, 12 acres alfalfa. Land can be plowed, nearly level, 1 mile to school. Price \$2,500. \$2,000 mxtst be cash. **J. C. LOHNES & SON**, Ness City, Kan.

HERE IS A SNAP—160 acres, creek bottom farm, well located, does not overflow, all cultivated except 10 acres pasture, good 7 room house, cellar and outbuildings good, barn for 8 horses, corn, alfalfa, wheat and English blue grass new on farm. All goes up to June 1 for \$7,500. Write me quick. **C. R. CANTRELL**, Fredonia, Kan.

LYON COUNTY LANDS. Choice half section, well improved, school, mail, town, 8 miles Emporia \$60. Photos sent. A choice 80, \$5,000. 162 near town, \$55. Send for list. **H. B. GILES**, Emporia, Kansas.

FARMS FOR SALE in South Missouri. I have several good farms for sale on easy payments from \$5.00 to \$10.00 an acre. Please write me for full particulars. **WILLIAM BOWEN**, Houston, Missouri.

A SNAP FOR SOME ONE. 640 acres of fine land 6 miles from Dodge City, Kan., 230 acres in wheat, one-fourth goes with land if sold by June 1. This is all nice level land except about 40 acres and will come in in good shape for pasture; no other improvements. Price \$17.50 per acre. Terms can be arranged on part, at 7 per cent. **C. L. WELLS**, Great Bend, Kansas.

LARGE TRACT OF LAND—If you are looking for a snap in a big proposition it will pay you to come to Great Bend and talk to me in regard to the best of land in Ford county at the price. Consists of 3,000 acres. Practically all farm land, 2,800 acres in cultivation, 800 in wheat, all goes with land, 500 to corn, one-fourth goes 200 acres new in alfalfa, 1,000 acres of alfalfa land, 30 miles of three wire fence, soil black loam, six room house, barn for 15 head of stock, 4,000 bu. granary, only 8 miles from good market. Price \$21 per acre, terms on \$85,000. Perfect title. **C. L. WELLS**, Great Bend, Kan.

ARKANSAS—"Don't you wish you had bought when you were here before?" That is what they all say; and then, buy before it doubles up again. What have you got that half equals it? You can't find it in America. Think of the money bags being hauled in by a single farmer. Thrashing and hauling \$1,000 a day and more—getting the cash the same day. We have other propositions that will beat your best; besides, the best climate, best roads, best water and fine people, and anything else you want. I own the cheapest land on Grand Prairie and can make you terms—won't price you out. Also, fine timber lands. **F. W. HOUSTIN**, Stuttgart, Ark.

LOOK AT THIS. No. 503.—Here is a ranch of 2,960 acres, that we can recommend as good a cattle ranch as there is in the country; all under fence, plenty of water, 600 acres fine bottom land, suitable to grow alfalfa; the improvements, stone house, barn 50x35, stone shed 100 feet long, and all other necessary improvements that are required on a ranch of this kind. The survey of the new railroad running from Garden City to Stockton, runs near or through this place. Rural telephone and postoffice on the place. Price \$12.50 per acre, part time will be given. **TEED & ORBISON**, Jetmore, Kansas.

EXCHANGE COLUMN.

If You Want

a quick deal, list your trading property with us. We trade while the other fellow sleeps. We have exchanges for land, merchandise, live stock, or anything of value. Try us.

NEFF REALTY CO.,
Olathe, Kansas.

Trades Wanted

direct from owners of farms, ranches, income property, merchandise and hardware stocks, hotels, livery stocks. List your property with us, giving complete description. We can get what you want. No sale, no pay. Buyers wanted for good farms.

BERSIE REAL ESTATE AGENCY,
Eldorado, Kansas.

500 TRADES.

We have the largest list of farms, ranches, income property, merchandise, hardware, hotels, liveries, etc., of any firm in the West. We print description of your property on our list and will get you a good honest trade of just what you want.

GRAHAM BROTHERS,
Eldorado, Kansas.

WASHINGTON COUNTY LAND FOR SALE—Two hundred acres 4 miles from good town, 70 acres wheat, 5 room frame house, new barn 80x60, granaries, cribs, etc. All under fence. Price \$45 per acre. Very easy terms. **W. J. GORDON**, Washington, Kan.

CHEAP LAND. If you are looking for an investment in land that is sure to increase in value 25 per cent in the next six months you can get it by seeing or writing **HALE & ENGLISH**, Dodge City, Kansas.

HODGEMAN COUNTY LANDS. Map, booklet, new list and general information sent promptly on request. Cheapest farms, quality considered in the state. **WINN REALTY CO.,** Jetmore, Kansas.

J. W. BRADSHAW, The Land Man, of Herington, Kansas, is offering a section of land with two sets of improvements, six miles from Herington, for \$45 per acre. 200 acres under cultivation. A snap well worth \$50 per acre.

A SPECIAL BARGAIN. From owner, square section wheat land in Logan county, Kan., 6 1/4 miles from station, 1/4 mile from school house. Can about all be cultivated. Will sell right and give terms. Address **R. H. NUNN**, Ness City, Kansas.

GOOD FARM CHEAP—160 acres, 130 in cultivation, all fenced, 3 room house, barn, cow shed, poultry house and well and windmill, only 4 miles to R. R. where an elevator will be built this summer. Will take a small cash payment and give 5 years on balance. Price \$2,500. **KIRBERG & MILLER**, Ness City, Ness Co., Kan.

MARSHALL COUNTY BARGAINS. Large list of improved farms for sale at \$40 to \$100 per acre. 200 trading propositions. Can match you on anything. Write for complete list. **TROSPER & BLACKNEY**, Frankfort, Kansas.

A NESS COUNTY BARGAIN—320 acres 12 miles from Ness City, 3 room house, frame barn, well and windmill. Some very good alfalfa land. Price \$15 per acre. Call or address, **LOHNES & CABON**, Ness City, Kansas.

80 ACRES UPLAND. 60 acres in cultivation, 14 acres alfalfa, balance pasture, 5-room house, small granary, some fruit, 2 1/4 miles from good town. Price \$4,500. **J. S. BOYLE**, Bennington, Kansas.

IRRIGATED FARMS FOR SALE. In the famous Arkansas Valley of Colorado and the Pecos Valley of Texas, reasonable prices; good terms. If you want a money making investment or an ideal home write for further information. **J. F. CURRY**, Lamar, Colo.

WABAUNSEE COUNTY LAND. 160 acres ten miles from town, 80 acres under plow, 5 room frame house, barn for 7 horses, 6 acres alfalfa, half acre orchard, good well and running water, cellar, 6 room house, cribs, hen house, etc. Price \$30 per acre. **F. L. McGOY**, Eskridge, Kan.

HOW IS THIS? 160 acres, 3 1/2 miles of Spearville, 75 acres in cultivation, 40 acres in pasture, new frame house, stable, chicken house, smoke house, well, etc. Close to a Catholic church and school. For the low price of \$3,800, and good terms; no trades. Send for big list. Address **STINSON & WEYAND**, Spearville, Kansas.

SCHUTTE & SHINEY, the Rush county, Kan., real estate hustlers; 30 years in the same old place. Good farmers raised from 35 to 47 1/2 bushels of wheat per acre here last season. We can sell this land at from \$20 to \$35 per acre. Good improved ranch land, 1/2 good farm land, at \$15 per acre. Good bottom land not over 5 miles from market at \$25 to \$35 per acre. Well improved and running water, plenty of timber. See us or write us at La Crosse, Kan.

FOR SALE—320 acres of good wheat land in the famous wheat belt of Logan Co., Kan. 4 miles from Monument, and 8 miles from Page. 40 acres in cultivation. Price \$12.50 per acre. Purchaser to assume R. R. contract for about \$1,700. This is a snap. **W. H. LINVILLE**, Beloit, Kansas.

ARE YOU LOOKING FOR A HOME? No farmer should think of buying a home before seeing a copy of THE FARM AND REAL ESTATE JOURNAL. It contains the largest list of farm lands, city property and stocks of goods of any paper published west of Chicago. It reaches 50,000 readers each issue, 85 per cent of whom are farmers. Every one who has any property they wish to advertise will find this journal one of the best advertising mediums published. Advertising rates, 2c per word each insertion. Send 75c and we will mail you the Journal for one year, or for 15c in silver or stamps we will send it for two months on trial and step it at the end of the two months unless you renew your subscription. **FARM AND REAL ESTATE JOURNAL, TRAEF, IOWA.**

DODGE CITY AND FORD COUNTY to the front. For sale, 640 acres of good, smooth, rich, productive wheat land, 6 miles from Dodge City, 200 acres in cultivation. Price \$16.50, one-third of wheat to the purchaser. Have for sale 3,000 acres of improved and unimproved land near new Catholic church at Wright station, 6 miles east from Dodge City. This is good land, ranging in price from \$20 to \$30 per acre. Cooperation solicited. Price list furnished upon application. **G. L. PAINTER & CO.,** Dodge City, Kansas.

SMITH COUNTY, KANSAS. 160 acres 6 miles of county seat, 100 acres in cultivation, 90 acres in wheat, one-third goes with place, 5 room house, good water, all fenced; a bargain. Price \$36 per acre. 80 acres 3 miles of town, all but about 3 acres can be plowed, all fenced, no other improvements. Price \$37.50. These are dandies. Other bargains **CARL G. ANDERSON**, Athol, Kansas.



Kansas State Agricultural College

HOME IN MANHATTAN or Lands anywhere in Kansas. See Manhattan Realty Co., **HULL & MOORE**, Manhattan, Kan. You should buy or rent this summer. Write us now.

For Quick Sale. 160 acres in Trego county, 80 acres wheat. All goes \$1,600. Be quick. **STEVENS & RUBY**, Stockton, Kan.

Missouri Farms For Sale. Everman has a farm for every man. Write for description and price list. **JOHN W. EVERMAN**, Gallatin, Mo.

Ford County, Kan. Lands. For sale. Write for price list and crop reports. Cooperation solicited. **BROWN & VERNON**, Dodge City, Kansas.

HELLO FARMERS! Have you read my list of GREENWOOD CO. FARMS? The best corn, alfalfa, clover, cattle and hog country in the west. Fine blue stem pastures. Write for list and prices to **P. D. STOUTON**, Madison, Kan.

Hodgeman County Lands. Choice wheat and ranch lands. Write for price list and county map. **F. M. PETERSON**, Jetmore, Kansas.

Ozark Fruit Farm For Sale. 120 acres, 60 acres in cultivation, balance fine timber. Good 3 room house, 3 fine springs, fine apple orchard, large thrifty trees, other fruits. 1 mile from town. Good reason for selling. Price \$1,000. Write me for full particulars. **JOHN D. BAKER**, Ava, Douglas County, Missouri.

FIRST-CLASS CORN, ALFALFA AND HOG FARM. Eighty acres, 65 acres in cultivation, 15 acres in pasture, has 5 room house, new barn for 12 horses with large hay mow and other outbuildings, small orchard, 2 wells of good water, is fenced and cross fenced. Located 3 miles from the packing houses; this is all bottom land that does not overflow. Price \$5,500. **THE NELSON REAL ESTATE & IMG. CO.,** 137 N. Main St., Wichita, Kan.

Zimmerman Irrigated Lands The cream of the Pecos Valley. Now open. All river-front sections. The best alfalfa and fruit lands in America. Sold in 40-acre tracts, which will provide a permanent annual income of \$1,500 or more annually. Price \$40 per acre on 5 years' time, without interest or taxes, including perpetual water-right, 50 cents per acre as first payment. Address **THE HEATH COMPANY**, 100 West Seventh St., Topeka, Kan.

Buy Western Kansas Land. Should you want to buy any western Kansas land for speculation or for a home, don't fail to write me. I am selling land throughout all counties in western Kansas. I am myself farming extensively on the kind of land I offer for sale. I can sell you land that will make you money. Write me at once for prices. Address **EUGENE WILLIAMS**, Minneapolis, Kansas.

ONE OF THE BEST LAND BARGAINS EVER OFFERED IN EASTERN KANSAS. This is a square section of land situated near the county line of Bourbon and Allen counties and 4 miles from the fine town of Bronson and 7 miles from Moran. One quarter section of this ranch is under plow and is used for growing corn and the small grains and the bal. of this tract is in pasture—bluegrass and white clover—and there is no better pasture lands in any section of any state than this. While this pasture tract is somewhat rolling there is no lands that grows more grass per acre than does this and in addition to the fine bluegrass and white clover there is a never failing supply of good clear water by a small creek which is fed by springs and along this creek there is enough young timber for shade for the stock. The fencing on this farm is of wire and is good there is a 6 room two story residence and a very good barn with the other necessary out-buildings. A small bearing orchard. The drive from this ranch to Bronson is as fine as can be found in Eastern Kansas. This fine ranch which is the property of an estate is priced for the next ninety days for the very low sum of \$30 per acre. For additional description of this and special description of other lands in this section write **SMITH & WILSON**, Agents at Moran, Kansas.

\$100 REWARD for every farm you can find where we have sold above the owner's price. Call on us or send for new list of land. \$5 an acre up. **G. N. DAVIS & CO.,** Cimarron, Gray County, Kansas.

ROOKS COUNTY LAND One Hundred Farms for Sale. Write for Lists. **C. H. DEWEY**, Stockton, Kan.

GOOD BARGAINS. 320 acres 3 miles from town, all cultivatable, 250 acres now under cultivation or in tame grass, 70 acres pasture, abundance of water, 2 story 9 room house, barn and other outbuildings, orchard and other small fruits. Price \$10,000.00. 160 acres, 2 1/4 miles from town, 100 acres in cultivation, 80 acres clover and timothy, 70 acres corn, 60 acres pasture, abundance of water, good 6 room house, new 2 story barn 36x36, other outbuildings, good orchard. Crop and all goes for \$4,800.00. Come at once or write for particulars. **DONOHUE & WALLINGFORD**, Mound Valley, Kansas.

[First published in Kansas Farmer May 13, 1909.] **Notice of Appointment.** State of Kansas, Shawnee county, ss. In the matter of the estate of Marcus O. Frost, late of Shawnee county, Kan. Notice is hereby given that on the 15th day of May A. D. 1909, the undersigned was, by the probate court of Shawnee county, Kan., duly appointed executrix of the estate of Marcus O. Frost, late of Shawnee county, deceased. All parties interested in said estate will take notice and govern themselves accordingly. **MATTIE E. FROST**, Executrix. **P. H. CONEY**, Attorney.

MEN WANTED.

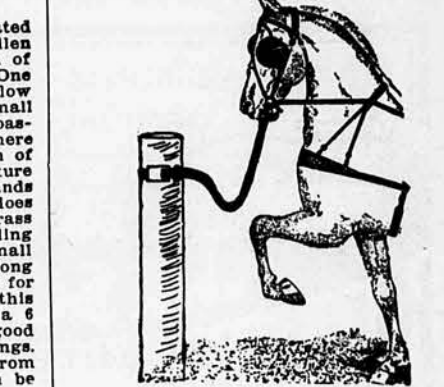
We want men to travel in the country and take subscriptions. If you are willing to make an honest effort, and will work we have an offer for you that is a first class money maker. But you must be honest and reliable, and come to us well recommended. We can give you good territory in which to work anywhere in Kansas, or you can take your horse and rig, or bicycle and canvass in your own community.

If you can make a success as a subscription agent, your success as a salesman in any line is assured. It is the best training a young man can have, and working for a publication like KANSAS FARMER, this is so generally and favorably known throughout the state practically insures your success. Write for full particulars to circulation department.

KANSAS FARMER
Topeka, Kansas.

Safety Hitch Strap Free

This patent Hitch Buckle does away with tying and untying a troublesome knot and keeps the strap from slipping down on the post. The harder the horse pulls the tighter he is hitched, but the buckle can be loosened instantly and it never cuts the strap. Strap is made of web lighter and stronger than leather and will outwear any other strap made. Remember that this



Safety Hitch Strap is the only one made that will stay just where it is fastened and cannot be moved up or down by the movement of the horse. No harness is complete without one. And you can get it for nothing. Send us \$1.00 for a new or renewal subscription to Kansas Farmer for one year and the strap complete will be sent you absolutely free and postage paid. Address **KANSAS FARMER**, Topeka, Kan. When writing advertisers please mention Kansas Farmer.

LIVE STOCK



There are 10 commandments which must be obeyed in building good roads and 9 of them are "Drain the Road."

Prof. J. C. Kendall of the department of Dairy Husbandry of the Kansas Agricultural College went to Jerseyville and Vandalia, Ill., last week to attend the Jersey Cattle and possibly to buy some cattle for the college herds,

Owing to the shortage reports in cattle from all over the range country the feeders of the corn belt ought to make a nice lot of money this season. Range cattle have cut down the profits of the feeders for many years and it now looks like the feeders would have their turn.

Texas cattle moved into Oklahoma pastures number about 25 per cent less than last year while Kansas pastures have their full quota. The latter, however, came in very thin because of the drought. They are also very young. This means a big feeder movement later on.

The crop killers are always with us. In addition to killing off the wheat and corn crops they are now busy with the pigs. They say there is a short crop on pigs all over the country. This may be true but at present and prospective prices of pork it will pay to look well after the comfort of the brood sow and the welfare of the youngsters.

Secretary A. L. Sponsler of the Hutchinson State Fair reports the division and sale of the fair grounds and the purchase of another and much more desirable site immediately north. Under the management of Secretary Sponsler this fair has made a steady growth and now has a handsome cash surplus on hand. Clean fairs will pay and nothing else goes in Kansas.

The State Wide Fair now has better prospects than ever. Secretary, R. T. Kreipe announces extensive improvements in the immediate future. These include an extensive sewage system and the erection of a new and larger swine barn. Topeka has always pleased the breeders in the way their interest have been cared for and this new swine barn will meet the approval of the hog men.

Every man who owns a horse is interested in good roads. Every good road prolongs the life and usefulness

HORSE OWNERS! USE
GONBAULT'S
CAUSTIC BALSAM.
A safe, speedy and positive cure. The safest, Best BLISTER ever used. Removes all blemishes from Horses. Impossible to produce scar or blemish. Send for descriptive circulars.
THE LAWRENCE-WILLIAMS CO., Cleveland, O.

of both the horse and the vehicle. As yet, there are but very few men who know how to build a road and the road problem is a very serious and important one. Until we know how to build a permanent road the one thing to do is to drain the dirt roads we have, then grade them to turn water quickly, build permanent culverts and bridges and use the road drag. When we have done this we have greatly improved our present condition, increased the value of our property and made ready for a permanent road if we want one.

Two records were broken on the Chicago sheep market on May 25. Colorado-fed wool lambs sold at \$9.65 which was 15 cents higher than the price of the preceding day and the record price for this class at that market. The other record was broken when shorn lambs sold at \$8.80 which was 20 cents higher than the price of the preceding day and 10 cents higher than was ever realized before on the Chicago market. Fat wethers sold at \$6.80 on a strong market and our informant states that the market is still going up with the top not in sight. Prospects are good for a continued rise though this may be confined to high dressing stock.

A subscriber complains that he has, as yet, been unable to make a success of raising calves on skim-milk. He states that he has been liberal in feeding and that he has skim-milk. His ration is not balanced. His use of bran with skim-milk gives the calf a double dose of protein and a lack of the starchy, foods, thus probably increasing his trouble. The best bunch of skim-milk calves the writer ever saw were raised on skim milk and kaffir corn with a little blood meal occasionally to prevent scours. Bran has too much crude fiber and is difficult to digest. Skim-milk and corn meal makes an excellent ration.

"Nobody Knows How to Feed a Hog."

Prof. Wm. Dietrich, swine specialist of the University of Illinois made the statement which heads this article in a speech before the Illinois Live Stock Breeders Association at a recent meeting. As Prof. Dietrich has experimented with more than 400 pigs in 7 feeding experiments and 7 digestion experiments since 1904 his ideas are worthy of attention.

Prof. Dietrich has recently issued a little pamphlet describing his investigations, and the following ideas are taken from it:

The appetite of the pig is not always a safe guide as to the amount of feed that may be consumed to the best advantage. Under five or six months of age he will eat too much of a concentrated food, and above that age he will eat too little. These tests show that pigs may be induced to eat 14 per cent more feed for the six months, than pigs otherwise fed.

During the second month of a pig's life it should have a thin slop so that

it will get enough water and not an excess of nutrients.

It was found that maximum gains are produced at a minimum cost by starting the pig on approximately six tenths of a pound of digestible crude protein per day per 100 pounds live weight, increasing the quantity to seven tenths during the first seven weeks, decreasing to six tenths the following four weeks, and then feeding sixty-five pound during the last seven weeks of the growing period. During the first four weeks of the fattening stage this is reduced to approximately thirty-three pounds which is fed till the close. (Larger or less amounts of protein failed of the best results, and the apparent reasons are given.)

In the last experiment of the series it was apparently observed that a definite amount of water in a ration has an important bearing on the extent and the economy of gains made by pigs. When pigs free access to water they apparently drink too much during the hot days of summer and do not drink enough in winter.

Prof. Dietrich suggests the following approximate ration, as coming somewhere near his more exact method. The figures stand for pounds of feed per day per 100 pounds live weight of the pig, and are for the second, third, fourth, fifth, sixth, seventh and eighth months of its life, respectively:

Finely ground corn, 2.6, 2.8, 3, 3.2, 3.3, 3, 2.6,
Soy bean meal, ground fine, .8, .9, 1, .6, .8, 4, 4.
Skim milk, 6, 6, 6, 6, 6, 0, 0.
Water, 6.6, 5.1, 3.8, 2.6, 1.4, 5.5, 4.

SUBSTITUTES.
If corn is not available, rye, barley, wheat, rice, etc., may be used instead. If soy-beans are not at hand, peas may be used but the quantity must be increased as peas do not contain as much protein. This would also increase the carbohydrate, hence the corn would have to be correspondingly decreased. Or these may be left out and more skim-milk added. Some of the protein may also be supplied in the form of clover or alfalfa. If skim-milk is not available more of some other nitrogenous feed may be supplied and also more water as milk is 85 to 90 per cent water.

CLOVER MORE THAN DOUBLED RESULTS.
By giving pigs access to a clover pasture in addition to ground corn, water and mineral matter during the first half of a six months-feeding period, they made 2.7 times as much gain in live weight as was made by the pigs that had ground corn, water and mineral matter but no clover.

By feeding pigs a bulky ration during the early part of their life when their capacity for eating feed is greater than their ability to utilize the digested material, the appetite may be satisfied, the digestible nutrients held down to the proper point, and the capacity largely retained. Later, substitutes concentrates for bulky foods.

IMPORTANCE OF VARIETY.
A ration for maximum efficiency should also be well provided with variety, that is, it should contain a large number of feeds rather than only two or three. The greater the number of feeds in a ration, the greater will be the probability of supplying what the pigs need.

Question of Type a Local Issue.
There seems to be a lack of understanding among farmers as to the real purpose of the breeders of the big type of hogs. Breeders of all breeds of hogs in the corn belt are laying great stress on the fact that they breed the "big type" and this fact is held out as an inducement to buyers. They do not always, however, make it just clear why the "big type" is of superior worth. Breeders of the big type do not have in mind the production of a 1,000-lb. market hog at three years of age but they do have in mind an early maturing, rapid growing type which will weigh 250 pounds, or better, at eight months and which will attain the greater weight at full age if desired. To accomplish this result the hog must have quality whether he be of the "big type" or the "medium type" as without this no hog will finish properly at that age. Thus far the question of type seems to be a local issue. Western breeders in the corn belt incline largely toward the big type while those east of the river, especially among the Poland China men, prefer the medium type.

It is now proposed that these differences be settled in the breeding show at the American Royal and the barrow show at the International.

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Seven Per Cent of Roads Good.
There are over 2,100,000 miles of wagon roads in the United States. The average cost of hauling farm produce over these roads is 25 cents a mile per ton, against 12 cents a mile per ton in France. The calculation is made by the office of public roads of the Department of Agriculture, that if our roads averaged up with those of France we would be gainers by over \$300,000,000 annually. Only 150,000 miles, or about 7 per cent of American roads are "improved," however, this figure is constantly increasing, more rapidly each year, and much of such improvement is permanent, while the time-honored methods of plowing up dirt roads and nearly ruining them each year in the name of improvement are giving way to more enlightened methods of treatment, such, for instance, as the use of the split-log drag. The Department of Agriculture wishes to get into communication with any community which is ambitious to have better roads.

How He Cultivates His Corn.
A Nebraska farmer gives the following directions for cultivating corn: "Do it in such a manner as to retain the greatest amount of moisture possible; then you will be able to raise a good crop even if the season should be a dry one. Make the first cultivation deep; after that plow shallow. Always leave the ground as near level as possible. The more rolling the land the more important it is to give a level cultivation. We always have a dry spell during the growing season, and hence the importance of level cultivation, especially when you are laying the crop by. If the ground is level the water will stay right in the corn. If you throw the dirt up to the rows making the soil from four to six inches higher in the rows than between them, the rain is almost entirely shut away from the corn. A small rain cannot soak down to the roots, and a big rain or a heavy shower under such conditions will gather in the middle of the rows and run off the fields, and your corn will be suffering for lack of moisture almost as soon as the rain is over."

Value of Rape For Sheep Pasture.
Professor Wheeler answers W. M. Rhodes, Long Island Kan. inquiry regarding the value of rape for sheep pasture as follows: Rape has been considered one of the best catch crops which can be sown for sheep pasture. The first experiment tests made in this country were in Ontario where an acre of rape furnished feed large enough to make the rape worth \$16.80 per acre.

Another experiment by the same station reports one acre pasturing 27 head for a period of 25 days, weekly gains per head being 1.82 pounds. The Michigan station produced 202 pounds of gain in seven weeks on nine lambs pastured on one acre. Wisconsin reports gains of 13 pounds per month on rape pasture with a full grain ration. They likewise report as a result of their feeding experiment with rape that it has a value of from \$14.48 to \$20.00 per acre, depending upon the season, somewhat. The Wisconsin station also shows that larger gains were made where other pasture was available in connection with the rape, the gains being made where this pasture consisted of bluegrass.

There is some danger of rape bloating sheep and it likewise tends to produce too laxative a condition where it is exclusive feed consumed. For that reason it would be advisable to have some other roughage available which would tend to counteract these tendencies. There is probably no one single forage crop that would have a greater value than rape unless we except alfalfa which is quite dangerous to us as an exclusive pasture crop for sheep owing to its tendency to produce bad cases of bloat.

Heavy Horses for Uncle Sam.
Specifications for artillery horses, prepared under direction of the Quartermaster General.

The artillery horse must be sound, well bred, of a superior class, and have quality; of a kind disposition, well broken to harness, and gentle under the saddle; with easy mouth and gaits, and free and prompt in the walk, trot, and gallop; free from vicious habits; without material blemish or defect, and otherwise conform to the following descriptions:

A gelding of uniform and hardy color, in good condition; from 5 to 8 years old; weighing from 1,050 pounds,

minimum weight for leaders, to 1,200, maximum weight for wheelers, depending on height, which should be from 15.1 to 16 hands.

Head—Small and well set on neck; with ears small, thin, neat, and erect; forehead broad and full; eyes large, prominent and mild, with well developed brow and fine eyelid; vision perfect in every respect; muzzle small and fine; mouth deep; lips thin and firmly compressed; nostrils large and fine, and branches of under-jaw, adjoining neck, wide apart.

Neck—Moderately long and tapering toward the head, with crest firm and longer than underside; mane fine and intact.

Withers—Elevated, not unduly fine, well developed and muscled.

Shoulders—Long, oblique, well packed with muscle, not too heavy, smooth, rounded, and so formed as properly to support the collar.

Chest—High, wide, very deep; plump in front, and full.

Fore Legs—Vertical, and properly placed; with elbow large, long, prominent, clear of chest, and well placed; forearm wide, thick, long, heavily muscled, and vertical.

Knees—Neatly outlined, large, prominent, wide in front, well situated, and well directed.

Back—Short, straight, and well muscled.

Loins—Broad, straight, very short and muscular.

Barrel—Large, increasing in size toward flanks, with ribs well arched and definitely separated.

Hind Quarters—Wide, thick, very long, full, heavily muscled, rounded externally, and well directed.

Tail—Fine and intact; well carried and firm.

Hocks—Neatly outlined, lean, large, wide from front to rear, and well directed.

Limbs—From knees and hocks downward vertical, short, wide laterally, with tendons and ligaments standing well out from bone and distinctly defined.

Pasterns—Strong, medium length, not too oblique, and well directed.

Feet—Medium size, circular in shape, sound; with horn dark, smooth, and of fine texture; sole moderately concave, and frog well developed, sound, firm, large, elastic, and healthy.

Each horse will be subject to a rigid inspection and any animal that does not meet the above requirements should be rejected.

Extortionate Prices for Catalpa Seedlings.
Will you please make public the fact that some tree peddlers, representing Eastern nurseries, are imposing upon Kansas farmers by selling them hardy catalpa seedlings at \$25 per 1,000? While the catalpa is one of the most valuable trees for Kansas planters who have good, rich soil, this price is

top high. Kansas nurseries have, for the last few years, been making special efforts to secure good, pure seed, and good seedlings have been quoted at from \$3 to \$5 per 1,000.

Kansas tree planters have suffered a great deal of loss because of the careless gathering of seed. Seed of the Southern catalpa and hybrids was planted extensively and sold as Catalpa Speciosa. In 1902, the Experiment Station issued a bulletin on catalpa which devoted considerable space to the means of identifying the various species. And during the past few years numerous specimens of seed have been submitted to the experiment station for identification. The best nurserymen of the state have been making strenuous efforts to secure seed from only good trees of the pure Speciosa.

Seedling trees are easily grown by planting the seed after the ground is well warmed, from the middle to the last of May, in well prepared soil. The seeds are wafer-like and must not be covered deeply. The nurserymen of Kansas grow them in large quantities, and they are considered a profitable nursery crop at \$3 to \$5 per 1,000.—Albert Dickens, State Forester, Manhattan, Kan.

Might Have Been Worse.
A worker at Hull House, who is what she herself calls an "unappropriated blessing," finds much that is amusing in the point of view of many married women toward spinsters.

One afternoon Mrs. Donovan appeared at the settlement house meeting in her best clothes and an aggressive air. One eye was almost closed, one side of her face horribly disfigured.

"Why, Mrs. Donovan, what has happened?" cried the worker; then realizing that her question might embarrass the woman, hastened to add, "Well, never mind, it might have been worse."

"Sure, an' it might," responded the matron. "I might never have been married at all."—The Housekeeper for June.

Merchandise from the United States forms a steadily increasing share of the imports of Canada. In 1869 merchandise from the United States formed 34.03 per cent of the imports of Canada; in 1879, 53.57 per cent; in 189, 45.86 per cent; in 1899, 59.24 per cent; and in 1909 (fiscal year ending March 31), 60.4 per cent. Meantime the share of her imports drawn from Great Britain has steadily declined, having been in 1869, 56.2 per cent; in 1879, 39.34 per cent; in 1889, 38.73 per cent; in 1899, 24.72 per cent; and in 1909, 23.69 per cent.

If you have a strong point in your character, don't make it a weakness by admiring it too much.

PORK 7c Versus CORN 72c.

Stock raisers one and all are vitally interested in the above: "Price of Pork; Cost of Production."

You cannot increase the price of pork at present but you can decrease cost of production. How? By getting your hogs in a healthy state, so they will put on the fat they should when you begin feeding grain.

Hogs at all times are more or less susceptible to worms, fever and congestion, from which the largest per cent of the losses of swine are caused, and what does it further signify? Increased cost of fat. Common sense tells us that those worms must live and receive nourishment. Where do they get it? From the high priced corn or other nutriment you are feeding.

You might say, "My hogs are on alfalfa and therefore free from worms," but this is where you are mistaken. Dissections by the score have been made of hogs which have been on grass and alfalfa and the examinations have shown a conjection of parasites, which later develop into worms, or the trouble already exists and the intestines have been found full of worms.

Protect your own best interests by protecting your stock from diseases. Increase your profits, by decreasing cost of production.

Begin at once to use a medicine to eliminate the worms from your hogs so that when you begin to fatten you will not have to use 60 and 70 cent corn to feed a hog which is full of worms craving nourishment.

A good medicine will save you from 10 to 20 per cent in feed and protect you against death losses.

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DAIRY



Alfalfa is not only a soil improver, a money maker and the best known roughage for all kinds of stock but the manure made from feeding alfalfa is much more valuable than that from any other source except it be from some of the other legumes which are similar in nature.

There is much mineral matter in milk, placed there for the building of the bony system of the calf. This matter must be supplied to the dam through the feed. Corn, corn fodder, timothy hay and corn stalks do not have much of it, while alfalfa, cow peas, soy beans, clover, bran, oats, cottonseed meal and such feeds are rich in it. Neither cow nor calf will do well if she is fed on corn and corn fodder alone.

Not enough interest is being shown by breeders and the managers of county fairs in dairy cattle. Horses, hogs, beef cattle and poultry are always provided for in the county fair premium list but the dairy bred cow is neglected or else given so poor a classification that really good animals cannot compete. A full classification would be a great incentive and if this were combined with as liberal premiums as are offered for the beef breeds the showing ought to be a good one.

Governor Hughes of New York has signed the new law which compels keepers of hotels, restaurants and boarding houses who use butter substitutes to announce this fact plainly on the bills of fare, and on the walls of the eating rooms. It also forbids the giving away of coloring matter with butter substitutes, and the use of brands or labels bearing words indicative of cows, the dairy, or the names of the breeds of cattle. Besides other provisions, the law prescribes a penalty running up to \$500 fine and a year's imprisonment.

Of the ten cows in the cooperative test now being conducted by the dairy department of the University of Nebraska and the State Dairy Association the leader is a Holstein belonging to Henry Glissman, owner of Rock Brook Farm, Station B, Omaha. Her name is Ricka, her weight 1,230 pounds and her record for the last 28 days is 1,479.4 pounds milk; 48.6 pounds fat and 46.08 pounds butter. Her record for the first 112 days of the test is 6,112.9 pounds milk; 197.31 pounds fat and 230.02 pounds butter. Her milk tests 3.2 and she is at the head of the class which includes 1 Ayrshire, 3 Jerseys and 5 other Holsteins.

A movement is on foot in a neighboring state to organize the dairymen that pure bred bulls of dairy breeds may be readily distributed among them. The statement is made that there are now many bull calves

that are vealed under present practice but which would do excellent pioneer service if allowed to mature. This idea is an excellent one provided it does not result in the dissemination of pedigreed scrubs. A pedigreed animal that is inferior in quality is likely to transmit his weaknesses and the buyer should be on his guard. If this association is careful in its methods it can do a great work for the dairy business.

An Illinois dairyman who has tested his cows for five years past has been able to bring his herd up to an average return of \$136.85 of which \$84.35 is net profit on each cow. The use of the Babcock test was a revelation to him and aided him to eliminate from the herd cows that were considered excellent producers but were proved to be unprofitable. Of two cows that were thought to be excellent and that ate about the same amount of feed, one was found to produce 386 pounds of fat and the other only 176 pounds. One returned \$5 for every dollar's worth of feed consumed and the other only \$1.40. Moral—use a Babcock test.

Heretofore Kansas has had few dairymen but many farmers who milked cows. Dairying has been a sort of side line with the farmers, too many of whom looked upon it as drudgery. Of course the cream check is always acceptable; and it is mighty satisfying in its regularity but the drudgery remains. Now listen! No work is drudgery that brings in good dollars in plenty and this the correctly handled dairy always does. Again, the price of land is becoming so high in Kansas that the owner will be driven to dairy practice in sheer self defence. Even dollar wheat would not pay interest on it very long as the fertility of the soil goes out with every load of it. Dairying means more money each year and richer land every year. It means financial success.

Keep the Best Heifer Calves.

Not enough attention is given to the calf by many dairy farmers. The demand for milk and butterfat has been so keen that many have bred their cows merely for the purpose of keeping them in milk, says Kimball's Dairy Farmer. No regard has been given to the offspring or to the necessity of perpetuating the dairy herd. When cows become unfit for usefulness they are discarded and others are bought to take their place. This is a haphazard policy at best and virtually invites disaster for the simple reason that when one buys a cow he is getting an uncertainty. He may be bringing into his herd tuberculosis, abortion or some other contagious disease that will be eradicated with difficulty. Besides this, it is difficult for one to buy mature cows that are desirable. There are instances where

people are going out of business, but the majority of cows that are offered for sale are being parted with because the present owners find them undesirable.

This passes upon the calf the full responsibility of continuing a profitable dairy herd. Other things being equal, the calf that starts its life in the fall has a better chance for development than the one that is born in the spring. There is scarcely a barn that is not well adapted to the successful handling of calves. All that is necessary is clean, sanitary surroundings, plenty of sunlight and fresh air and careful feeding. The stables must, of course, be kept clean, dry and well bedded. The calves must be fed regularly and in clean pails. These two items of cleanliness are often overlooked. They are, however, the best means of protecting against bowel and digestive troubles, the worst enemies of the young calf. With judicious handling it is possible to gradually change the calf at an early age from whole to separated milk, thus reducing the expense of feeding the little fellows. Good heifer calves from good common cows and registered dairy sires are in great demand. There is always a call for them and the prices are usually strong, varying from \$40 to \$100 according to the age and appearance of the heifer. On the whole the dairy calf represents a profitable crop if you are inclined to sell, and it is a necessity if you wish to keep a good, paying herd. Many are laboring under the delusion that it is difficult to raise the calves, but with good care and good, common sense this difficulty soon fades away.

Cleaning Milk By Separator.

A French savant figured out to the acre how large a farm could be manured by the sediment in the milk that came into Paris. When there is a deposit at the bottom of a milk bottle you can safely assert that the bulk of it is cow manure. In the manufacture of cream by machinery, centrifugal force, the dirt is carried to the extreme inner circumference of the machine; next comes the skim-milk, and then, near the center, rests the cream, being a lighter body than the watery milk. After a run of milk through the machines, see them cleaned out and you will forever be cured of the milk habit. You never forget it. Operators around a creamery seldom drink milk. This is a reason.

How often when opening a can of condensed milk you smell the odor of the stables! That's the manure condensed with the milk. In the sediment taken from the separating machine after a run of milk, manure predominates, palpably, visually, nauseatingly. Blood and pus and hairs, and seeds and atmospheric detritus, generally make up the filthy conglomeration of foreign matter found in city milk as we know it.

Manure, if it were only filthy, would not be so bad; but Dr. Gorton, in a recent article on milk in the N. Y. Medical Journal, points out that a perfectly healthy cow, a cow that would pass the tuberculin test even after slaughter, would show no lesions, may often void manure alive with tuberculosis bacilli. That this manure has a way of disseminating itself through the barn, getting not only into the milk but into the fodder of the cow ad infinitum, is well known.

Now, granting that this manure does get into the milk, why should it not be mechanically removed at once and not be allowed to steep and ferment in the cans or bottles, to be finally pasteurized or sterilized—save the mark!—and made fit for human consumption? Why not remove the manure et id omne genus instantly after milking, and leave the bacilli to the sterilizer? Given two cans of cream, one skimmed from milk by the hand process, the other separated by centrifugal machine, of course both cans of cream from identically the same source of milk supply; after the can of hand-skimmed cream has become sour, the can of centrifugal machine-separated and purified cream is yet sweet.

Farmers who sell cream to butter factories, separate the cream by hand milk-separating machines, and while these machines will not pasteurize or sterilize, nor will they eject the bacilli, they will clarify the milk and purify it. Usually milk receives an apology for a straining through the spout of the milk can, which holds back the coarse manure, no other. When milk had gone through a battery of eight fine brass strainers of the closest mesh, and then through



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A man's religion seldom appears a success to those to whom he owes money.

UNITED STATES U.S.

Cream Separators

U.S. **Best To Buy**

Everybody knows the name **United States** on a Separator is an absolute guarantee of Superior Quality, Long Service and Absolute Satisfaction.

That is the best sort of economy; it means a saving of money to you. Why then run any risks with "cheap" makes?

See the U. S. Separator Dealer

Let him show you how a **United States Separator** is made, its perfect mechanical construction, strong, solid, one-piece frame, no bolts to shake loose with wear. Scientific construction of the Separator bowl. You can readily see for yourself how the purchase of a **United States Separator** means economy for you. If you do not know a United States dealer let us send you his name.

A request by postal card for United States Separator Catalogue No. 91 and mentioning this paper, will bring you a beautiful hanger lithographed in colors.

VERMONT FARM MACHINE CO.
Bellows Falls, Vt.

U.S.

separators, when the separators were cleaned, enough manure deposit was found to disgust any milk drinker. And such milk came from a farmer regarded as above the average for cleanliness around his barns, etc. It would be a long step towards clean milk if farmers would at once, after milking, mechanically strain the milk by centrifugal separation.—Charles Christodoro in Country Gentleman.

Life Insurance As Investment and Protection.

On the back page of this issue appears the only full page advertisement of a life insurance company ever seen in a farm paper. KANSAS FARMER is glad to be able to print such an advertisement. The people of Kansas are looking for safe and profitable investments as never before. This is true especially of the farmers of this state, as KANSAS FARMER has every reason to know. Life insurance is an investment. It is also, of course, a protection. Business men and farmers recognize as never before that it is impossible to invest funds with more safety than in policies in old line life insurance companies. There are several forms of life insurance, as explained in the advertisement itself, such as straight, or Ordinary Life, Limited Pay Life and Endowment. Which is best KANSAS FARMER will not undertake to say. It depends upon the circumstances of the individual. It is true that Old Line Life insurance costs more than some other kind of insurance. We will not argue here the merits of Old Line or Fraternal insurance, but will simply say this, that in order to be sound and safe life insurance cost must be high enough to pay the cost. There would seem to be no doubt about this. If you buy life insurance below cost you are taking a risk. This doesn't mean that each individual must pay the cost of his own insurance. This will depend upon how long he lives, but on the whole the income must equal, in fact exceed, the outgo. Nothing is more uncertain than the life of an individual; nothing more certain than the life of a thousand men. A few years ago some insurance methods were criticised, and were open to criticism. Even then, however, the money invested in old line life insurance was safe. It is even safer now. No investment in fact is so safe except government bonds. This is universally admitted. The Equitable Life Assurance Society is known as "the strongest in the world." Read what this Society has to say on page 20. It operates under the splendid New York Laws, put in force under the leadership of Gov. Hughes. Do you not owe it to yourself, and still more to your family, to look into the proposition of the Equitable? We all know we need insurance, and yet strange to say it is one of the things we must be urged to take. Mr. Chas. A. Moore, of Topeka, is the general agent of the Equitable for Kansas. Read carefully what he says. Mail him the coupon on the back page as requested and he will send you interesting and valuable information. Your doing this will place you under no obligation. It would be well to do it now before you forget it.

WHEAT PRODUCTION IN THE UNITED STATES.

(Continued from first page.)
 In 1900, it was 28.4 per cent; an average for the three decades of 27.4 per cent, or 6 per cent less than one-third. This is significant in that this average prevails notwithstanding the fact that the great wheat states of Arizona, California, Colorado, Idaho, Minnesota, Nevada, North Dakota, Oklahoma, Oregon, South Dakota, Utah and Washington had an average of 44.4 per cent of acreage of cereal crops in wheat. These states have doubtless almost, or altogether, reached their maximum acreage in wheat, and will gradually reduce their area of this crop in future years. Ten states, California, Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Nebraska, New Mexico and Wisconsin, have already begun such reduction. In 1880 the percentage of acreage in wheat to the entire cereal crop in these ten states was 45.1. In 1900 this had been reduced to 32 per cent, a difference of 13.1. This same change will undoubtedly occur in all of the other great wheat producing states inside of the next three decades as the branch system gives place to the smaller farm.
 If, however, no reduction occurs and not only the present average of 27.4 per cent of acreage of cereal crops be put out in wheat, but the area be ex-

tended to embrace full 33 1/2 per cent, it would amount to only 61,664,862 acres, or 14,359,033 acres above our present acreage, as reported by the Agricultural Department for 1906.

At the present average rate of production during the last decade, 13.8 bushels per acre, 61,664,862 acres would produce 850,975,095 bushels of wheat per year. This at 5.25 bushels per capita would support 162,090,494 persons, a population which, according to Mr. Hill's estimate, would be reached about 1938, or in 30 years.

Kansas Fairs in 1909.

- Following is a list of fairs to be held in Kansas in 1909, their dates, locations and of Agriculture and compiled by Secretary F. D. Coburn:
- Allen County Agricultural Society—Frank E. Smith, Secretary. Iola; August 24-27.
 - Allen County—Moran Agricultural Fair Association: E. N. McCormack, Secretary. Moran; September 8-10.
 - Barton County Fair Association—W. P. Feder, Secretary. Great Bend.
 - Brown County—The Hiawatha Fair Association: C. A. Monney, Secretary. Hiawatha; September 7-10.
 - Butler County Fair Association: W. O. F. Benson, Secretary. El Dorado; August 24-27.
 - Butler County—Douglass Agricultural Society: J. A. Clay, Secretary. Douglass; September 28-October 2.
 - Clay County Fair Association: Walter Puckey, Secretary. Clay Center; September 7-10.
 - Clay County—Wakefield Agricultural Society: Eugene Elkins, Secretary. Wakefield; October 27 and 28.
 - Cloud County Fair Association: L. E. Abbott, Secretary. Concordia; September 21-24.
 - Coffey County Agricultural Fair Association: Henry Jackson, Secretary. Burlington; September 14-17.
 - Cowley County Agricultural and Live Stock Association: F. W. Sidle, Secretary. Winfield; August 31-September 4.
 - Cowley County—Eastern Cowley Fair Association: W. A. Bowden, Secretary. Burden; September 8-10.
 - Cowley County—Udall Agricultural Society: F. H. Chenoweth, Secretary. Udall; September 16-18.
 - Dickinson County Fair Association: W. C. Curphey, Secretary. Abilene; September 28-October 1.
 - Douglas County Fair and Agricultural Society: Elmer E. Brown, Secretary. Grenola; September 22-24.
 - Finney County Agricultural Society: A. H. Warner, Secretary. Garden City.
 - Franklin County Agricultural Society: J. E. Shinn, Secretary. Ottawa; August 31-September 3.
 - Greenwood County Fair Association: C. H. Weisner, Secretary. Eureka; August 17-20.
 - Harper County—Anthony Fair Association: L. G. Jennings, Secretary. Anthony; August 3-6.
 - Harper County Agricultural Association: Chas. H. Sampson, Secretary. Harper; September 7-10.
 - Harvey County Agricultural Society: L. C. Harlan, Secretary. Newton; August 31-September 3.
 - Leavenworth County Fair Association: C. A. Sparrow, Secretary. Leavenworth; September 21-24.
 - Linn County Fair Association: John O. Morse, Secretary. Mound City; September 21-23.
 - Lyon County Agricultural Society: C. E. Reebie, Secretary. Emporia; September 7-11.
 - Marshall County Fair Association: W. H. Smith, Secretary. Marysville.
 - McPherson County Agricultural Fair Association: Carl A. Grant, Secretary. McPherson; September 7-10.
 - Miami County Agricultural and Mechanical Association: Geo. R. Reynolds, Secretary. Paola; September 28-October 1.
 - Mitchell County Agricultural Association: W. S. Gabel, Secretary. Berott; September 28-October 1.
 - Montgomery County Agricultural Society. Independence.
 - Montgomery County—Coffeyville Fair and Park Association: C. L. Hollingsworth, Secretary. Coffeyville.
 - Nemaha County Fair Association: W. H. Fitzwater, Secretary. Seneca; September 15-17.
 - Neosho County—Chanute Fair and Improvement Association: Wilber F. Allen, Secretary. Chanute; August 16-20.
 - Ness County Agricultural Association: Thos. Rineley, Secretary. Ness City; September 22-24.
 - Ness County—Utica Agricultural and Fair Association: R. C. Webster, Jr., Secretary. Utica.
 - Norton County Agricultural Association: M. F. Garrity, Secretary. Norton; August 31-September 4.
 - Osage County Fair Association: E. T. Price, Secretary. Burlingame; September 7-10.
 - Reno County—Central Kansas Fair Association: A. L. Sponzier, Secretary. Hutchinson; September 11-17.
 - Republic County Agricultural Association: F. N. Woodward, Secretary. Belleville; September 13-16.
 - Riley County—Manhattan Agricultural Fair Association: J. Q. A. Shelden, Secretary. Manhattan; September 21-24.
 - Rooks County Fair Association: H. A. Butler, Secretary. Stockton; September 7-10.
 - Saline County Agricultural, Horticultural and Mechanical Association: B. B. Stimmel, Secretary. Salina; August 31-September 3.
 - Shawnee County—Kansas State Exposition Company: R. T. Kreipe, Secretary. Topeka; September 13-18.
 - Sheridan County Agricultural Association: Frank A. McIvor, Secretary. Hoxie.
 - Sheridan County—Selden District Fair Association: Geo. W. Sloan, Secretary. Selden; September 7-10.
 - Smith County Fair Association: H. C. Smith, Secretary. Smith Center; August 17-20.
 - Stafford County Fair Association: D. S. Mull, Secretary. St. John; August 25-27.

Farmers or breeders in need of milking Shorthorns should correspond with Evergreen Home Farm of Lathrop, Mo. They have hornless Shorthorns and price them worth the money.

Rumor has it that efforts are now being made to remove the American Royal to Elm Ridge park at Kansas City in order to allow for its yearly growth. Whether this rumor has any foundation in fact or not the fact remains that the Royal would be better for larger and better grounds. This is a great show located in the very heart of the breeding industry and Elm Ridge is one of the best and most beautiful parks for show purposes in the United States. If the two could be brought together it would leave nothing to be desired. Apparently nothing stands in the way new except lack of railroad facilities.

CREAM SEPARATOR DISCS

Unscrupulous competitors, struggling desperately to retain any separator business, are making such reckless statements as to separator "DISCS" that a few words more on our part may not be amiss.

DE LAVAL "DISCS" are as necessary to the bowl of the cream separator as teeth to the human mouth.

A man can chew without teeth and you can separate without "DISCS", but in both cases at a great disadvantage.

So far as imitating "DISC" separators are concerned, they compare with the IMPROVED DE LAVAL about as artificial teeth do with a perfect set of natural ones.

The DE LAVAL COMPANY owned the first "HOLLOW" bowl and the first "DISC" bowl and have originated all the improvements upon both. Hence they are free to use the best and any combination of the best features, while would-be competitors are forced to get along with ten to thirty year old types of construction upon which DE LAVAL patents have expired.

DE LAVAL "DISCS" fully double the capacity of any separator bowl of the same size at the same speed.

DE LAVAL "DISCS" fully double the separating efficiency of any separator bowl of the same size at the same speed, and enable a perfect separation that is not possible otherwise.

The saving in size of bowl and in necessary speed makes possible much easier running, and more than doubles the life of the separator when built equally well.

But other separators are not built as well as the DE LAVAL, so that the average life of a DE LAVAL separator is five times that of the average would-be competing separator.

DE LAVAL "DISCS" make possible the skimming of cool milk, which cannot be done with most other separators at all, and if at all only with greatly increased butter-fat losses in the skimmilk.

DE LAVAL "DISCS" make possible the running of heavy cream, 40 per cent to 50 per cent butter-fat, with its tremendous advantage in creamery patronage, which is either impossible with other separators or can only be done with greatly increased butter-fat losses in the skimmilk.

DE LAVAL "DISCS" enable the construction of a bowl in the LATEST IMPROVED DE LAVAL SEPARATORS that is quickly and easily cleaned and absolutely sanitary, a combination of most important advantages not to be found in any other separator made.

DE LAVAL separators cost no more than would-be competing separators of relative actual capacity, save their cost every year, and last from two to ten times as long.

98 per cent of the experienced users of FACTORY cream separators now use DE LAVAL machines. The great majority of FARM separator users are already doing so, and within five years we sincerely believe the use of DE LAVAL separators will be UNIVERSAL.

A DE LAVAL catalogue explaining all of the above points is to be had for the asking, as well as an IMPROVED DE LAVAL machine for practical demonstration of them to every intending separator buyer.

THE DE LAVAL SEPARATOR CO.

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WYANDOTTES.

WHITE WYANDOTTE eggs for hatching from choice matings. \$1.50 per 15, \$5 per 100. S. W. ARTZ, Larned, Kan.

RHODE ISLAND REDS.

R. C. R. I. REDS exclusively, fine layers; eggs from selected pens \$1.50 for 15 eggs; from utility flock \$4.50 per 100. J. H. CANON, Preston, Kan.

ROSE AND SINGLE COMB RHODE ISLAND REDS.

Eggs from any mating half price remainder of season. Mixed eggs Rose or Single Comb from several matings, \$1 per setting. Red pullets hatched in midsummer will make winter layers. Write for descriptive mating list. It is free.

H. A. SIBLEY,

Lawrence, Kansas.

BUFF ORPINGTONS.

BUFF ORPINGTONS—Chicks, pens, baby chicks, eggs. More first prizes State Fairs and State Shows than all other breeders. My Poultry Book, containing information worth hundreds of dollars to farmers sent for 10 cents. W. H. MAXWELL, R. 95, Topeka, Kan.

Eggs For Hatching.

FROM FINE STOCK—NONE BETTER. S. C. Buff Orpingtons, extra fine in shape and color, standard weight. Cook strain. 1st \$2 per 15, \$5 per 50, \$9 per 100; 2d pen, \$1 per 15, \$3 per 50, \$5 per 100.

S. S. White Orpingtons, the big white beauties. Eggs \$2 per 15, \$5 per 50. All second pen eggs sold.

White Rocks, Fishel strain, and Rose Comb Reds, extra fine. Eggs same price as Buff Orpingtons. Baby chicks 20c and 30 each from any of above.

Diamond Jubilee Orpingtons, a few settings at \$5 per 15 in setting lots only. These Diamond Jubilee were the S. E. Wisconsin winners including 1st and 2d hen. Baby chicks 50c each.

MRS. LIZZIE B. GRIFFITH, Emporia, Kan.

LEGHORNS.

FINE S. C. B. LEGHORN EGGS \$2.75 per 100. CHAS. DORR, Osage City, Kan.

SINGLE COMB BROWN LEGHORN eggs 15 for \$1, 100 for \$4. H. N. HOLDEMAN, Meade, Kan.

JOHNSON'S LAYING STRAIN rose comb Brown Leghorns. Eggs 15 for \$1, 30 for \$1.75, 50 for \$2.50, 100 for \$4. Write H. M. JOHNSON, Formosa, Kan.

S. C. BUFF LEGHORNS—No stock. Eggs from prize winners. Pen No. 1, \$2 per 15; No. 2, \$1.50 per 15. Incubator lots, \$5 per 100. MIKE KLEIN, Clay Center, Kan.

ROSE COMB BROWN LEGHORNS EXCLUSIVELY. Farm raised. Eggs per setting of 15, \$1; per 50, \$3; per 100, \$3.50. F. K. MAHON, R. R. 3, Clyde, Cloud Co., Kan.

BUFF COCHINS.

BEST BUFF COCHINS IN KANSAS. This variety exclusively. Can furnish eggs from prize winning stock at \$1.50 and \$2 per setting. J. C. BAUGHMAN, Topeka, Kan.

LIGHT BRAHMAS.

LIGHT BRAHMA EGGS from birds scoring 93 to 94 by Judge Rhodes, \$1.50 per 15, large flock \$1 per 15, \$4 per 100. Baby chicks each month \$2 per dozen. MRS. A. P. WOOLVERTON, R. 3, Topeka, Kansas.

PLYMOUTH ROCKS.

FOR SALE.—Eggs from pure bred Barred Plymouth Rocks, 75c per 15, \$4 per 100. HILLCREST POULTRY FARM, R. D. No. 4, Topeka, Kan.

BARRED ROCKS—\$1 premiums, June and July bargains. Eggs 15, \$1; 60, \$3.25; 100, \$5. Chicks 15c each. Breeders for sale. MRS. D. M. GILLESPIE, Clay Center, Kan.

BREEDERS.

Our White Rock breeders are for sale at right prices.

SMITH & KNOPP,

Route 2, Mayetta, Kan.

BARRED ROCK BARGAINS.

After May 1 eggs from my high scoring pens only \$1.50 per 15. Four settings for \$5. Range eggs 75c per 15.

MRS. CHAS. OSBORN,

Member A. P. A. Eureka, Kansas.

PURE BRED POULTRY.

FOR SALE.

EGGS FROM PURE BRED POULTRY. S. C. V. Leghorn and B. P. Rocks. Birds scoring 95. Eggs \$1 per 15 or \$5 per 100 the best of the season at the ELNORA FARM, Centralia, Kan. D. Williams, Prop.

SUNNY CREST.

Stock, fruit and poultry farm. Eggs to sell from M. B. turkeys, R. L. Reds and Leghorns. Registered Jersey calves and Poland China hogs for sale. Write me. MRS. WM. BRUTE, Pierce City, Mo.

"No risk, no gain," may be true in certain instances, but its indiscriminate application furnishes motive and excuse for a lot of fool losses.

If you want to work any woman, and nearly any man, send around a smooth man to say he is calling on only a few of the most prominent people.

POULTRY



If the growing chicks are ailing, look them over for lice. A little grease on the head and under the wings will generally drive them away.

If your young chicks are not provided with shade, you should see that they have some cool place to run to during the hot part of the day. Without shade they will not thrive.

The largest order for baby chicks received at one time by any breeder was given the other day to a Petaluma, Cal., poultryman. It called for 15,000 White Leghorn chicks, all to be shipped at the same time. The chicks were shipped in a specially prepared car.

In Ireland, the poultry products amount to some twenty million dollars annually, and are an equal in value of the hogs, horses and sheep combined. The wholesale value of the eggs and poultry consumed in the United Kingdom is estimated to be over one hundred million. The Secretary of State for Scotland appointed a departmental committee on poultry breeding in Highlands and islands of Scotland. When the committee report appears it will be the first official record of the kind dealing with the poultry industry in any country and marks an important step in advance that cannot fail to have a wide influence.

Do Not Fail to Set a Few Eggs This Month.

It is not too late to get out good breeders, especially of a good laying quality, as later hatched pullets do not start laying until the severest of the winter is past and consequently they run a good chance of having a better constitution than the earlier ones, and make better layers the following winter. Some of our best layers were hatched late in the season.—Mrs. D. M. Gillespie, Clay Center, Kan.

R. C. B. Leghorns Compared with S. C. Browns.

Will you kindly give something on the R. C. B. Leghorns as compared with the S. C. Brown? Are they as flighty? How do they compare in size and egg production?—Mrs. M. E. Huey, Stockton, Kan.

Ans.—Rose Comb Brown Leghorns and Single Comb Brown Leghorns are essentially the same in all characteristics, except in comb. In flightiness, color, size and egg production they are about the same, except as they may differ in individual flocks. The Standard of Perfection has the same description for both these varieties of Leghorns, excepting the comb.

Mrs. Hen Wins.

In a recent egg hatching contest held by Uncle Sam in Oregon the plain and unassuming Biddy came out victorious. With much prejudice to fight against the little hen "sat" bravely away and at the end of the contest showed that she had hatched a percentage of 78.8 while the best the incubators could do was 60.6 per cent. During another phase of the contest only eggs were used that were known to be fertile. Of these the incubators hatched only 78.5 per cent while the old hen made an average hatch of 96.5 per cent. Out of the total number of chicks hatched the incubators lost 16.6 per cent of the hatch while the old hen lost only 2.3 per cent.

It was also shown that incubator chicks weighed less at hatching time and that the death rate of hen-hatched chicks, raised in brooders, was 10.8 per cent while that of incubator hatched chicks was 33.5 per cent. Chicks hatched in incubators and then given into the care of hens died to the extent of 49.2 per cent while only 2.2 per cent of the chicks hatched by the hens died. These results show that for the small poultry raiser there is nothing quite so good as the old reliable hen. Where poultry raising is extensively engaged in for the market the incubator is of inestimable value. This information is being given out from Washington in the shape of a

bulletin which can be obtained from the agricultural department for the asking.

Gleaned At Cornell.

Four methods of comparing the feeding of poultry by wet mash, dry mash, hand-fed grain and hopper-fed grain, practised at Cornell, have shown the best results to come from feeding the dry mash in hopper form, both as regards the health of the fowls, the profit indicated in eggs produced, and the fertility and hatching power of the eggs themselves.

Oyster shell and grit must be fed to fowls kept in confinement. Those fowls not receiving both proved to be unprofitable.

In striving to force the molting by restricting the diet, it was found detrimental both as regards production, time of molting and profits. It was noticed, however, that the best fowls molted last and molted much quicker than those molting earlier in the season.

It is maintained that a fowl needs surplus fat in her body to be in condition to produce eggs. When killing for the table, note the presence of egg yolks in the moderately fat fowl and their absence in the poor ones. The rations fed at the college are: Mixed grain, two parts cracked corn, two parts wheat, one part oats, scattered rather sparingly in a deep litter in the morning, and again at night more abundantly. At noon a mash consisting of 150 pounds cornmeal, 150 pounds wheat middlings, 75 pounds wheat bran, 100 pounds meat scrap, 25 pounds oil-meal and 25 pounds alfalfa meal, is fed in a dry form or mixed with water or milk. When fed dry it is placed in hoppers, which are left open from noon until evening.

The chick rations used are three parts finely cracked wheat and two parts finely cracked corn, fed abundantly at the start, in addition to finely cracked oyster shell, grit and fresh water. After three days, give a ten-minute feeding per day of beef scrap or stale bread in milk, with hard boiled eggs added.

Fresh-air houses should be used for all kinds of poultry. When building new, special openings should be made for cloth windows, which provide this fresh-air condition. In old buildings, a part of the present glass window can be changed to a cloth curtain.

The Overweight Clause of the Standard.

Elsewhere in this issue will be found some notes on the "Revision of the Standard." One short clause therein will make a great difference to exhibitors at poultry shows. The revision committee has recommended that the clause cutting birds for overweight be abolished. The Standard now calls for a cut of two points per pound on all specimens of the American classes that are in excess of Standard weight, provided one pound overweight be allowed. This was a very unpopular clause of the Standard and we have always spoken and written against it. We are very glad to note that the committee has abolished this rule. They have even gone further and decided that specimens in the Asiatic classes weighing more than three pounds less than Standard weight shall not be considered by the judge when shown after November 1, and in all other classes, except ban-

tams, specimens weighing more than two pounds less than Standard weight shall not be considered by the judge when shown after November 1. This is a move in the direction of heavier poultry and more of it. Over two years ago we wrote the following article on this same subject, in the "Helpful Hen," and we are glad to know that our position at that time has been sustained by the Committee on Revision:

"The clause in the new Standard that says the American varieties of fowls shall be cut for excess of Standard weight, is causing quite some dissatisfaction among the breeders of this class of fowls. We think they have just cause for complaint. Some mottoes exploited by poultrymen are, 'Better Poultry and More of It,' 'More Meat and More Eggs,' 'Increase and Improve the Eating Qualities of the Fowl and Augment the Egg Output.' Such aims are commendable in all poultrymen and ought to be encouraged, but in this new clause we find quite a hindrance to 'more meat.' It is true that the Standard allows an excess of one pound over Standard weight before a cut is made, but we fail to see the necessity for any cut at all for overweight. We know that the claim is made that when the American varieties get too large that they become ungainly and lose the shape characteristic of the breed. If the specimen is ungainly, is it not cut in shape and symmetry, then why cut it again, by the overweight clause, for the same defect? Is it a deterioration in a steer to have too much on him, or in a hog to have too much pork? Then why should it be a stigma for the poultrymen to have too much meat on the bones of his chickens? The fanciers of the East are the ones that are answerable for this innovation in the new Standard. Are their fowls getting so small by inbreeding and close confinement, that they can no longer hold their own against the large hardy fowls of the West, and it was therefore necessary to put a spoke in some one's wheels?"

"It goes without saying, that the primary object of the fancy as well as commercial poultry should be the betterment of all varieties of fowls, for however we may differ in the choice of our breeds, in the choice of the colors, or in the choice of the shape of our fowls, we all agree that our main object is to increase the utility of all fancy fowls. Why then is this handicap put upon the breeders of American fowls? Is a large, ungainly Plymouth Rock more ungainly than a large, overgrown Langshan or Brahma? Is a light two pound Leghorn hen all right and a heavy nine pound Plymouth Rock all wrong? Why make any discrimination against any breed? As Daniel Webster would say, 'We pause for a reply.'"

How's This for Mud?

Of all the yarns that ever came down the line, regarding deep mud, the following should be entitled to the blue ribbon. It happened in the place where mud originated.

A man was walking along the roadside one summer day and noticed a fairly good looking hat out in the road. Reaching out with his cane he gave it a cut and was startled to hear a voice exclaim: "Here, what the deuce are you doing?"

Then he made the astonishing discovery that the owner of the headpiece was under the hat, up to his ears in mud.

"Great Heavens!" exclaimed the man who had hit the hat. "Is that mud as deep as that?"

"Deep!" cried the victim. "Why, man alive, I'm standing on a load of hay!"—May Lippincott's.

Flies will soon leave if you saturate cloths with oil of sassafras and lay them near windows and doors.—National Magazine for June.

WHITE PLYMOUTH ROCKS EXCLUSIVELY. For seventeen years I have bred White Plymouth Rocks exclusively and have some fine specimens of the breed. I refer to Judge C. H. Rhodes and Judge J. J. Atherton as to the quality of my stock. I sell eggs at reasonable prices and these I ship are from the same fowls that I hatch from myself. Eggs \$2 per 15, \$5 per 45, and I pay expressage to any express office in the United States. THOMAS OWEN, Sta. B., Topeka, Kansas.

CORRUGATED INGOT IRON CULVERTS. The Sulphuric Acid tests adopted by the American Society for Testing Materials shows the quality Ingot Iron 99.94 per cent pure, and when put to the acid in comparison with any galvanized metal on the market will show to be 90 per cent better. Ask for descriptive literature and prices. We pay the freight. Topeka, THE ROAD SUPPLY & METAL CO., Kansas.

CH MEN'S CHILDREN

By Geraldine Bonner

Copyright 1906 by the Bobbs-Merrill Company.

Continued from last week.)
 felt that she had told enough. It
 harder telling, too, than she had
 The last and greatest secret that
 determined to keep from her sisters
 of Dominick's love for another
 that she regarded as his transfer
 not yet having guessed that his
 never been hers. Now she raised
 and looked at the two solemn-
 men, angrily and bitterly, through
 that her eyes still held.
 know and I don't care what's
 him," she said defiantly. "I stood
 the bargain, and that's all I
 made him a good wife, as good
 I knew how. I've been bright and
 when his family treated me like
 not complained and I've made the
 staying indoors and going no-
 when any other woman would have
 some sort of fun out of her life.
 aged that miserable little flat on
 enough money, and tried to keep
 when any one else in the world
 are run up bills all over for Mrs.
 pay. Nobody can say I haven't
 part all right. Maybe I've got my
 set of us have—but I haven't ne-
 duty this time."

she abruptly from her seat, pushing it
 feeling that she had better go be-
 said too much. She realized that in
 and overwrought state she
 some too loquacious and afterward
 For the moment she believed all
 Her sisters, full of sincere sym-
 her, believed it, too, though in
 cooler reflection they would prob-
 cation some of her grievances; not-
 one as to the small income, three
 a year, representing to them com-
 fort, not to say affluence.
 rose. Hazel rose too, her face full
 of concern.

"Is it, Berny?"
 at another woman, is it, Berny?"
 at whispered.
 had told so many lies that she did
 er about a few more. Moreover, she
 mitted not to let her sisters know
 se Cannon—not yet, anyway.
 she said with short, scorn, turning
 up her feather boa. "Of course it's
 not that kind of a man. He's too
 a sissy. Another woman I'd like
 me that."

he a sardonic laugh and turned to
 disposing her boa becomingly and
 her hat. Hannah, shaking her-
 from the encircling embrace of the
 able, rose too, exclaiming,
 go yet. You must tell us more of
 we not heard anything for years
 set me so. If Dominick's not in
 somebody else, what's got into
 doesn't he care for you any
 man doesn't stop loving his wife
 cause whatever. It isn't human
 it's in Dominick's nature," said
 his wife, pulling on her gloves.
 that isn't human nature, but it's
 of the man I'm married to and
 that concerns me. Remember,
 to say a word about this. It's all

should we talk about it?" said the
 Hazel. "It's bad enough to have
 open. You don't want to go round
 about a member of your family
 brown down."
 pressing invitations to remain
 Berny was deaf. She had said her
 wanted to go. The interview had
 ally eased her of some of the chok-
 operation that had followed Mrs.
 and it was a source of comfort
 that she had now broken the ice
 continue to come and pour out her
 and sorrows into the ever-attentive
 her sisters. But now she wanted
 way from them, from their pen-
 questions, and their frank curiosity,
 sity of normal, healthy-minded wo-
 see lives had lacked the change and
 which hers had been full. She cut
 by short and left them to their
 acted speculations, staring blankly
 other, amid the scattered millinery
 bordered room.

she reached home, she found on the
 a note which the Chinaman told
 been left by a messenger. It was
 Cannon and contained but a few
 these, in a businesslike brevity, ex-
 the writer's desire to see her again.
 tely suggested that, if she could
 his office on any one of the three
 afternoons, between the hours of
 four, he would be deeply honored
 ed.

frowning and abstracted, was
 with the note in her hand when
 opened the hall door and came up
 His eye casually fell on the
 paper, but he asked no question
 hardly seemed to see it. Yet her
 suspicion was so sensitively active
 lack of interest seemed fraught
 and, pushing the letter back
 envelope she remarked that it was
 from her dressmaker. Even the fact
 answer was an indifferent, barely-
 sound seemed insignificant to
 she took the letter into her bed-
 hid it in her handkerchief box, as
 her husband, instead of being the
 the most curious and jealous of

CHAPTER XVIII
 "Buford's Good Luck."
 "Klondike Monologue" at the Or-
 Buford, the actor, made a sudden
 expected hit. The morning after his
 appearance, both Dominick and Berny
 the paper eulogistic notices of the
 e. Dominick was particularly inter-
 He remembered Buford's state of
 at Antelope and was glad to
 the unlucky player was, in the par-
 ing papers contained more lauda-
 an enthusiasm which taxed the
 of the writers who found that
 they had been using to describe
 star vaudeville performances were
 able for so sparkling an occasion.
 a rambling monologue of mining-
 anecdotes, recollections, and experi-
 Buford's appearance in an immense,
 overcoat with buttons made of gold
 and a voluminous fur cap on his
 given the last touch of grotesque-
 a fine tinsel spangle fastened on
 of his nose. This adornment, on his
 hardly noticeable, was soon the
 point of every eye. It looked as
 if, vibrating movement, which
 perted to that portion of his visage,

made the tinsel send out continuous, uneasy
 gleams. The more serious his discourse was
 and the more portentously solemn his face,
 the more glimmering active was the spang-
 gle, and the more hysterically unrestrained
 became the laughter of the audience. Al-
 together, Buford had made a success.
 Three days after his first appearance, peo-
 ple were talking about "The Klondike Mon-
 ologue" as a few weeks ago they had been
 talking about the last play of Piner's as
 presented by a New York company.

From what Buford had told him, Domini-
 ck knew that the actor's luck had been bad,
 and that the period of imprisonment at An-
 telope was a last, crowning misfortune.
 Through it he feared that he had forfeited
 his Sacramento engagement, and the young
 man had a painful memory of the long jere-
 mial that Buford, in his anxiety and afflic-
 tion had poured out to himself and Rose
 Cannon. That the actor was evidently em-
 erging from his ill fortune was gratifying to
 Dominick, who in the close proximity
 forced upon them by the restricted quarters
 of Perley's Hotel, had grown to like and pity
 the kindly, foolish and impractical man.

Now, from what he heard, Buford's hard
 times should be at an end. Such a hit as
 he had made should give him the required
 upward impetus. Men Dominick knew, who
 had theatrical affiliations, told him that Bu-
 ford was "made." The actor could now
 command a good salary on any of the
 vaudeville circuits in the country, and if "he
 had it in him" he might ascend the ladder
 toward the heights of legitimate comedy. It
 was odd, considering his age, that it had not
 been discovered sooner.

Berny was very anxious to see him.
 Hazel and Josh had seen him on one of the
 first evenings and pronounced him "simply
 great." She extorted a promise from Domi-
 nick that, at the earliest opportunity, he
 would buy tickets for her, and, if he could
 not accompany her himself, she could go
 with one of his sisters. Dominick did not
 want to go. He had no desire to see
 Buford and be reminded of the three weeks'
 dream which had interrupted the waking
 miseries of his life, and more than that he
 hated, secretly and intensely, sitting beside
 Berny, talking to her and listening to her
 talk, during the three hours of the perform-
 ance. The horrible fakeness of it, the ap-
 pearance of intimacy with a woman toward
 whom he only felt a cold aversion, the close
 proximity of her body which he disliked,
 even accidentally, to brush against, made him
 shrink from the thought as from the per-
 petration of some mean and repulsive de-
 ception.

He stopped to buy the tickets one midday
 on his way to lunch. He made up his mind
 to buy three, then Berny could either take
 her two sisters, or Hazel and Josh, whose
 craving for the theater was an unassuageable
 passion. The good seats were sold out for
 days ahead and he had to be content with
 three orchestra chairs for an evening at
 the end of the following week. He was turn-
 ing from the ticket office window when a
 sonorous voice at his elbow arrested him:
 "Mr. Ryan," it boomed out, "do I see you
 at last? Ever since my arrival in the city
 I have hoped for the opportunity of renewing
 our acquaintance."

It was Buford but a rejuvenated and prosper-
 ous Buford, the reflection of his fortune
 shining from his beaming face and fashion-
 able figure. The red rapped look had left his
 features and the hollows beneath his high
 cheek-bones were filled out. He was dressed
 in gray with an almost foppish nicety,
 a fedora hat of a paler tint on his head, and
 a cravat of a dull red rising in a rich puff
 effect below his collar. His shoes shone
 with the glassy polish of new patent leather;
 the red-brown kid gloves that he carried ex-
 haled an attractive odor of rusia-leather.
 He held out his hand to Dominick, and the
 young man grasped it with real heartiness.
 "Glad to see you, Buford," he said, "and
 glad to hear you've made a success of it.
 I haven't seen it myself, but I hear it's a
 great show."

Buford, who had seen him buying the,
 said blandly,
 "But you're going? You've been buying
 tickets, haven't you? Oh, I've got to have
 your opinion—nobody's I'd think more of
 than Mr. Dominick Ryan's."
 Dominick, with the consciousness that he
 had just been planning not to go reddening
 his face, stammered with embarrassed eva-
 siveness,
 "I've just been buying tickets and couldn't
 get them before the end of next week. You're
 such a confounded success that everything's
 sold out days ahead. My wife wants to see
 you, and that's the best I could do for her.
 Her sister went on the second night and
 says you're the hit of the program. And
 then the papers! You'll soon be one of
 the stars of the nation."

Buford acknowledged these compliments
 with cool, acquiescent complacency.
 "I have struck my gait," he said, nodding
 his head in condescending acceptance. "I
 have at last won my spurs."
 "But you didn't expect to come down here
 when you were at Antelope. Didn't you tell
 me your engagement was for two weeks in
 Sacramento, and that you were afraid you'd
 forfeited it by being snowed in there? How
 was it you came down after all?"
 "The luck turned. The tide that comes in
 the affairs of men came in mine. I must
 say it had got down to about the lowest ebb.
 You're right about forfeiting my engagement.
 Got to Sacramento three weeks behind time
 and found they'd procured a substitute, and
 all I had for my pains was a blackguarding
 because the Lord had seen fit to snow me
 in in the Sierras."

Dominick laughed, and the actor allowed
 a slight, sour smile to disturb the profession-
 al gravity of his face.
 "Yes," he nodded, "that's the way of the
 transgressor, especially when his transgres-
 sions ain't of his own doing. After I'd been
 there two weeks, I hadn't a V between me
 and starvation. I looked for jobs with the
 water squelching in my boots, and finally I
 had to do a turn in a fifth-rate variety per-
 formance that showed in a sort of cellar
 down a flight of stairs. That's where the
 Klondike Monologue was born. Like lots
 of other good things, it had a pretty mean
 beginning. I just pieced it together from
 bits and scraps that were the tallings of
 the two years I had spent in the Arctic mill
 up there. It caught on from the start—let
 the public alone to recognize a good thing when
 they see one! That dirty cellar was pretty
 well sprinkled the first week, and the second
 they had the standing room signs out. I
 didn't introduce the spangle till the end of
 the engagement. Some people think it a
 great touch."

(To be continued.)



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Are you looking for a new home Southwest? Let me recommend the Pecos Valley. I don't own an acre there, and have no land to sell. What follows is an unbiased statement, as exact and careful as I can make it.

Pecos Valley is in the eastern New Mexico plains country. It is watered by mountain streams and underlaid by a vast water sheet from which spout artesian wells.

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Soil is rich and deep. Climate is mild in winter, cool in summer, and healthful. Plenty of sunshine.

Prosperous towns await you, and a fine railroad—the Santa Fe—thus guaranteeing good markets.

I can cite you hundreds of cases where farmers have come to the Pecos Valley with practically nothing, and after a few years' steady work have well-stocked farms, clear of debt, with money in bank.

I can tell you of wonderful crops of alfalfa and fruit, regularly grown on irrigated land. I can prove to you that this is the ideal place for raising cattle, hogs, sheep and horses. Here are bred the best beef animals in the world, bar none; it's the home of the Hereford. Hogs, fattened on Pecos Valley alfalfa,

bring extra prices. Well-grassed stock ranges of wide extent are close at hand.

I can convince you that there is no finer land lying outdoors which can be bought so cheaply and which is so sure a money-maker.

The Pecos Valley is not an experiment. In 1908 there was shipped over the Santa Fe from that section to outside markets 2,335,373 pounds of grain.

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Cut out this advertisement and mail it to me with your name and full address. I will mail you illustrated land folders which tell the story in detail and send our homeseekers' monthly, *The Earth*, six months free. Questions promptly answered.

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HOME CIRCLE



An Hour or Two in the Woods.
Those people who live close to nature can not realize what a privilege is theirs. Only those whose work is in-doors, whose daily quota of fresh air is filtered through screens at best, and diluted with the dust and microbes of the city can fully enjoy a breath of country air. The city dweller can not live close to nature. Between him and Mother Earth is ever the brick pavement or cinder walk. The grass is always neatly clipped on his lawn, the flowers grow in beds of accurate geometrical shape, all the trees stand in rows and the only flowing water he sees is what flows into his bath-tub every morning! To such an one an hour in the country is like a cup of water to one who is thirsty.

It was with some such feelings as these that we boarded a car not long since loaded with bags and baskets and buckets and—matches. For we were going to the woods. There were six of us, three grown-ups and three boys of fourteen or fifteen. You may take this from me as a tip that no picnic can be a success without at least one boy. Boys are the salt of the earth, and the world would very soon cease moving if the boys should all grow up and no more come to fill their place. Boys are a great care to their parents and in truth it is a rather ticklish matter bringing them up, but at heart they are the finest of God's creatures. They are terribly ashamed of their best qualities and wish very much to appear rough and bold and bad. But some of us like to break through the black outside husk of a walnut and then the hard inner shell, in order to find the sweet meat inside, and some of us can find the sweet meat of a boy and do not mind the rough shell he wears around it. For there is no one so gentle, no one so true and no one so loyal and serviceable as the boy, if you take him right.

But I was not writing an essay on boys, only a little paragraph about a day in the woods. And I must be at it.

We went just as far as the city car could take us, and then walked a half-mile or so, climbing a fence with fear and trembling (all except the boys, who are never afraid!) lest we be driven out for trespassing. But there was not even a sign, "No trespassing," not a dog barked, and not a single human being interrupted our solitude.

Short-tailed rabbits leaped out of the grass and bounded away, birds whistled and sang in the trees above us, squirrels chased each other up the trees, and bugs and spiders and beetles abounded, and it was all too lovely for words. The boys quickly built a fire of leaves and wood, we set a great can of coffee to boiling, opened our bags and baskets, and fell to. Long sticks served as toasting-forks, upon which we fastened strips of bacon and cooked it deliciously. Sometimes the bacon fell off into the fire, but we fished it out and with tears of joy and smoke devoured it, and never did good plain eating taste half so good as out there in the woods with good appetite for a sauce and good fellowship for dessert. When at last the fire had burned out, and only a few live embers lay on the bed of feathery white ashes, we cut new sticks and toasted marshmallows to see whose would swell the largest and take the richest brown.

Then the boys, children of nature, went exploring, and the grown-ups read "The Tempest," that immortal drama of the forces of earth and air.

At last the lure of adventure caught even them, mildly, and they joined the boys in weaving wildest romances about an old dug-out which they found. And they could even see, at least, by a great effort of jaded imaginations, what seemed so clear to the fresh fancy of the boys, the semblance of an old Indian, peeping around from behind a distant tree, his scant blanket on his back, and a long feather on his head. The boys tried to entice us into wading in the tiny trickling creek with them, but too soon the espied a

big "craw-dad" and we declined. They fished the crab out, a curious ugly creature, and were intent on "showing him who is boss," by which they meant to kill him, but yielded to our entreaties and slung him high up on the bank, whence he scurried with remarkable speed, back to his native place, the muddy side of the creek.

Ah, well, it was a simple, idle day we spent out there in the woods, but it was worth while. For I am not sure that there is anything that can do one so much good as to forget all one knows of care and trouble and unrest, and just become a little child, with nature for one's mother.

"The Greatest Shortcoming of the Farmer."

We are in receipt of the following letter:

In your issue of May 22, 1909, I find an article under the heading, "The greatest shortcoming of the farmer" by Ruth Cowgill, which I feel that I cannot let pass unchallenged. I do not know the qualifications of the writer, whether real investigations were made or not, but am of the opinion that not much time was spent in the effort to get at the real truth.

Before making my answer let me say that I believe my knowledge of both country and city life places me in position to know whereof I speak.

I was born and raised a farmer, educated at Manhattan some years ago when prices for farm products were the lowest and farming as an occupation offered little. Being of a mechanical turn of mind I went to town or the city, and engaged in the tinning and plumbing business, handling windmills, pumps, gas engines and water supplies, and at the same time owning land in the country. Now if there is a man on earth that sees more of the convenience and inconvenient, sanitary and unsanitary things in both city and country than a plumber I would like to meet him.

While it is true that more people in towns and cities have water in the house it must be remembered that in order to have water in the average farm house the farmer must build his whole water works system, whereas in the city all that is necessary is to tap the main in the street and pipe in. However, I find Mr. Farmer in southern Kansas and Oklahoma, building his own water works system, piping to house, barn, lawn, garden, and every where that water is needed. I see him putting in hot air furnaces, gasoline lighting systems, gasoline engines, which pump the water, run the washing machine, turn the cream separator.

In the gas belt the farmer burns gas in the cook stoves and ranges, and lights the buildings. Again, Mr. Farmer invests in "fireless cookers," incubators, telephones, carriages, automobiles and what not else. Does not the farmer's wife receive any benefit or relief from drudgery? Away out in Beaver county, Okla., in "No Man's land" where doubtless many citizens of the East and possibly some in Topeka think they would meet Indians, buffalo, outlaws, etc. There are found here farm houses costing from fifteen hundred to three thousand dollars, completely modern throughout.

These things I know, because I am a farmer and mechanic, living on a fine alfalfa farm and doing mechanical work for my brother farmers in the surrounding country for a distance of 30 miles around.

Compare, if you please, such a life for the fairer sex with a patch of ground in the average Kansas town, 100 by 150 feet, on which is located, a house, barn, outbuildings, a horse or two, a cow, one or more pigs, and possibly chickens, and open well dangerously near privy pit, barn or pig pen, enough, enough! Take a trip over the city with your plumber some day and be convinced. True there is plenty of room for improvement in the country, but many country people prefer hand labor, thinking to economize, for example, the Russians and a great many German.

I give it as my candid opinion after

FASHION



8483.

8483—Child's Rompers.
These useful little garments for children, are growing in popularity and no child should be without them. These rompers may be worn by either boy or girl. They completely cover the dress while at the same time give perfect freedom while at play. The neck may be cut square or high finished by a narrow band. A tape or elastic inserted at the lower edge holds the fulness in place at the knee. The pattern is cut in 4 sizes—2-4-6-8 yrs. The 4 yr. size requires 2 1/4 yds. of 36 inch material. Pattern here illustrated will be mailed to any address upon receipt of 10c in stamps or silver.

8498—A Pretty House Jacket.
This pretty little garment for wear is most simple and becoming. graceful fulness that may be left left to fall free from the shoulder model would develop well in plain dotted challis, or the wash fabric lawn, cotton crepe and dimity. The is cut in 6 sizes—32 to 42 inches bust. Size 36 requires 4 3/4 yds. of material. Pattern illustrated mailed to any address upon receipt in stamps or silver.



8500—A Chic Blouse.
Ladies' Shirtwaist, with sleeve of piece with side front and side back in sizes 32 to 42 inches bust measure. 36 requires 2 1/4 yds. of 36 inch material attractive and easily constructed is one of the newest and smartest son has given us. It is made sleeves cut in one piece with the and side back. Broad pleats are in Gibson style over the shoulder neck is slightly low in front finishing rolling collar. The pattern also for high neck completed by a band. Suitable development may Scotch madras linen, checked or the mercerized fabrics. A pattern illustration will be mailed to any on receipt of 10c in stamps or silver.



8513.

8513—Girls' One Piece Dress.
A remarkably pretty little frock is here shown, that is suitable for development in chambray, linen, pique and challis. Deep pleats over the shoulders give the required fulness, which may be confined with a belt of the material or of leather. The pattern is cut in 5 sizes—2 to 10 yrs. The 6 yr. size requires 2 1/4 yds. of 36 inch material. Pattern here illustrated will be mailed to any address upon receipt of 10c in stamps or silver.



8500.

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having lived in towns, cities, and the country for over thirty years that there are more women becoming "a jaded, over worked old woman" in the towns than in the country.

It might be well for President Taft to appoint a commission of farmers for investigating city life.

THE REMEDY.
The writer of the article in question says, "we must look to the root of the matter."

While I am in favor of good houses, etc., I say the remedy is education. Teach agriculture at the agricultural college, teach agriculture at the com-

mon school. Teach agriculture farmers' institutes, teach agriculture in the home, teach mechanics anything and everything boys and girls should know them interested, get their attention. Make them students of nature they may know beneficial insect life from the injurious they may feed, breed and handle intelligently, that they may with a broader range of vision you will have reduced "the drain" of the farm by the children

minimum.—M. L. Dickson, Englewood, Kan.

The above letter was read with great interest, and I am very glad indeed to publish it, since it serves to point the moral to the tale I strove to tell, said moral being that modern conveniences on the farm are no dream of a visionary, that many farmers can afford to have them, and that the wives of said farmers are the happiest, kindest and most altogether charming women in the world.

The insinuation that I was ill-informed, and that my investigation was only superficial is quite unjust, since five years of my life have been spent in writing for the farmer, in visiting his home, whether it were in the short-grass country, the wheat-belt, or the green and fruitful eastern section. The result has been a respect and affection for the farmers of Kansas, which no mere passing acquaintance could give and an insight into his problem, and limitations which even a life's experience on a farm could not give, since things seen from a certain distance are more accurately discerned than things held too close to the eyes. And while my visitations to the country, have not been for the purpose of "investigating," but only because I wanted to know the farmer, or because I was happiest in the country, yet, having eyes, I could not but see, having ears, I must hear, and I learned that men with money in the bank, in no possible peril of want or poverty, were allowing their frail wives to draw up heavy buckets of water from the well, to overwork, to expose themselves to all kinds of weather. And when I said to Mrs. Farmer, "How lovely to live in the country! To live so close to nature, to hear the birds sing, and to see things grow! You must be very happy," then it was she who looked at me with pitying eyes for my ignorance, she who told me that I knew not whereof I spoke. And all her cry was, "Oh, the work, work, work!" And she looked at me cynically and said, "It is alright to visit in the country," and I felt myself a selfish and unseeing favorite of fortune to be able to "visit" in the country, while my sister must slave there.

I do not wish to be over-particular, but my critic, the writer of the above letter, must acknowledge that I said nothing about town women or town men. Their troubles and their shortcomings are not at the present moment interesting me. I write for the people who live in the country, my interest springs from the kindest of feelings, inspired by the unvarying kindness I have learned to expect from them.

Education is a good remedy for many ills, and I am glad that there are such men as the writer of the above, men who have been educated to think, and to put their thoughts into the work they do, who by the object lesson of their own skill, can show other men what can be done to make life a pleasanter and more comfortable thing for those who are not so strong as he is.

If now, Dickson will write and tell us something of his practical knowledge of modern conveniences in the country home, we shall be very glad to publish it, for there are many who are thinking of improving their homes, yet have only the vaguest ideas of how to do it. To such, suggestions from one who has done it will be most helpful.—Ruth Cowgill.

Hints to Housekeepers.

A tablespoonful of salt in a kerosene lamp will prevent that disagreeable odor which sometimes pervades a room in spite of the utmost cleanliness.

When too many oysters have been creamed for filling plates they can be reheated the next day by adding a little more milk and fresh seasoning. Heat in a double boiler or they may burn.

Much time is saved if paper linings for cake pans are cut in quantities and kept ready for instant use in a dust proof box with tight lid.

To fill cracks in walls, mix plaster of Paris with vinegar instead of water; it will not set for about fifteen minutes, and can be nicely smoothed over before it is hard.

To clean leather, such as purses, hand bags, suit cases and soft leather of any kind, use any reliable wall paper cleaner. Follow directions closely and rub only one way.

Sunshine is a killer of germs and a

powerful disinfectant. As much as possible should be let into all the rooms, a little fading carpets and curtains will result, but the doctor's bills will decrease.

A teaspoonful of ammonia in a quart of water is a very good preparation for cleaning the hair brush. Dry the brush in the air after washing, but never in the sun.

All stains should be treated as soon as possible, for the chances of complete success are then greater than if the applications are postponed. To remove ink stains from white goods, squeeze the juice of a tomato on the spot, working it in with the hands, or apply a weak solution of oxalic acid, or cover with powdered salts of lemon and let it remain a few minutes, then wash in cold water and soap.

Ink stains even of long standing may be removed from gingham by wetting the spots in sweet milk and then covering them with table salt; repeat if necessary. Of course to have real success, the treatment should be given before the article is washed.

The above method is also the best for taking out ink spilled on carpets, repeating it as often as necessary.

Plain salt will usually be effective if used at once before the ink dries in, and a fresh stain can also be taken out by soaking in sour milk over night.

When the article which has been stained is of delicate color or fabric, here is a method that will not injure it in the least: Take teaspoon of cream of tartar and one of powdered citric acid and mix them well; heat a dinner plate and lay the stained part in it and moisten with hot water. Now rub the powder into the stain, using the bowl of the spoon a continue to apply it till the spot has disappeared. Then wash in cold water and dry it.

If one wishes to remove indelible ink marks, make a solution of cyanuret of potassium and apply to the spot with a small camel's hair brush. When the ink disappears, wash the goods well with clear water. This is a poison, so be careful of it.

Ink spots on the fingers will vanish if you rub them with the tip of a match moistened in water. Or rub with a small pumice stone, or use acid phosphate.

A teaspoonful of butter put into the water in which vegetables are boiling will prevent them from bubbling over.

In putting down oilcloth, matting or a strip of carpet, when you do not have the metal binding, try this plan: Cut strips of oilcloth one inch wide, and bind with that, letting it extend under one half inch, and lap over the same. Tack closely and it will last for months.

In sewing, the puckering of seams may be avoided by soaking the spool of thread in water over night and letting it dry before using. Colored thread may be made smooth and strengthened as well by soaking in olive oil.

In pulling threads for any piece of fancy work or hemstitching the threads will draw more easily if rubbed with a piece of good white soap. Another way is to slightly moisten the threads along the line to be drawn.

When sewing on lace, always hold the lace towards you, otherwise the lace is likely to be drawn and the goods puckered.

Comforts made of cotton batting which have become matted with use may be lightened by hanging over a radiator or where the heat from the stove will pass through them for several hours.

Sometimes during cold weather milk will refuse to sour, and in this case a teaspoonful of vinegar added will often give immediate results.

When sachet powder has lost its fragrance, it may be used as a deodorizer by placing a teaspoonful in an old cup and dropping a tiny coal on it. The smoke is very fragrant and if carried around the rooms imparts a very pleasant perfume.

To remove blood stains, spread the spots thickly with moistened laundry starch. Place in the sun and when dry, if the stain is not gone, repeat.

Rust stains that have been fixtures for several years may be removed in a few minutes by a process that does not rot the goods in the least. Squeeze lemon juice over the spots, then hold over the steam from a tea kettle and the spot will disappear in a very few minutes. Add more juice from time to time to hasten the fading.

Nutmegs should be grated at the blossom end first.

ATLAS PORTLAND CEMENT

Makes The Best Concrete

The cement bought by the U.S. Government for the Panama Canal
SEND FOR OUR FREE BOOK "Concrete Construction about the Home and on the Farm." Contains over 100 drawings and illustrations.
 THE ATLAS PORTLAND CEMENT CO., Dept. 107 30 Broad Street, N. Y.
 Daily output over 40,000 barrels, the largest in the world.

This STACKER Builds Bigger Ricks and Saves One Man's Wages every 40 Acres



You know what that means to you in these times of scarce hired help. You means to be short a couple of men at haying time.

I know it too. Seven years ago I needed help so badly—that I invented the "Jayhawk". I built a stacker that saved my 1000 ton crop—and my neighbors and friends persuaded me to manufacture them on a large scale.

The Jayhawk builds any size rick. Don't make any difference where the rake dumps hay—the Jayhawk picks it up—elevates it and dumps it just exactly where you want it. That means a big saving in time and money.

The "Jayhawk"

is the only stacker on wheels. It is the only stacker that can be moved about as easily as a sweep rake. It is the only stacker that works well on windy days. The Jayhawk has saved entire crops in many cases. Yet with all its many advantages it costs no more than other stackers. Better see your dealer at once.

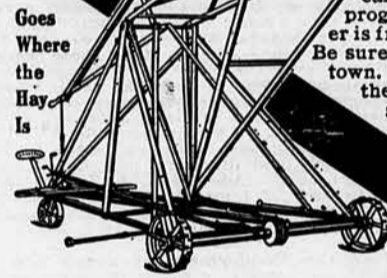
If he does not sell the Jayhawk—write us his name—and we will send you one of our large folders. "How to Stack Hay, Better, Faster, Cheaper, with Less Help." You will then learn how much you can save with the Jayhawk Hay Stacker. Most progressive dealers sell the Jayhawk—but the folder is free for your name on a postal card.

Be sure to see your dealer the next time you are in town. It will pay you to make a special trip because the Jayhawk will surprise you by its big money saving features. But write anyway for our free folder. A postal will do.

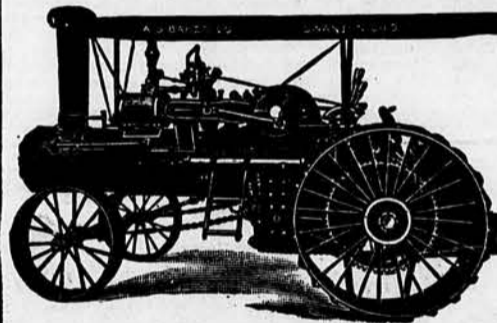
Mr. F. Wyatt.

F. Wyatt Mfg. Co.

13 Fifth St., Salina, Kans.



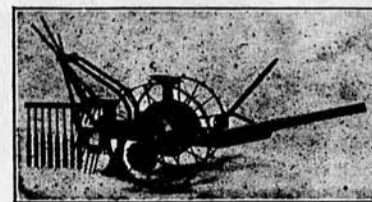
WE ARE AGENTS FOR THE Famous Baker Plow and Thrasher Engines



also manufacturers of the PRAIRIE QUEEN SEPARATOR. We have a full line of engines and separators on hand for your inspection. Write for catalog

THE PRAIRIE QUEEN MFG. CO. Newton Kansas.

Light Draught Potato Harvester



A digger that digs where others fail. Guaranteed to work under all kinds of field conditions with only two horses. Better write for our circulars and field scene pictures.

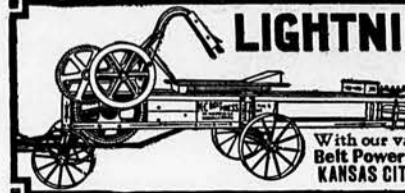
STEVENS MFG. CO., Marinette, Wis. Builders of High Grade Potato Machinery. Transfer and distributing points in every potato raising section.

A Real Potato Digger.

SPECIAL RATE TO JANUARY 1, 1910.

NEW SUBSCRIBERS can get KANSAS FARMER from the date the order is received until January 1 next, for only 50 cents. Orders at this special rate can be sent direct to KANSAS FARMER, Topeka, Kan., or to any agent. Subscriptions will be started the week they are received. Order at once—the sooner your order is received the more you get for your money. Send stamps if handiest.

LIGHTNING HAY PRESSES



For 25 years the Reliable Balers. Simple, Free from Breakage, Greatest Capacity and Best Work—Strong and Durable. Consider these Facts for a Profitable Investment. With our various styles can meet your requirements, Horse & Belt Power. Self Feed Attachments. Write for our Catalog. KANSAS CITY HAY PRESS CO., 129 Will St., Kansas City, Mo.

PUBLISHERS' NEWS

Witte engines, for gas, gasoline or kerosene are strictly first class, and especially adapted to farm use. They are sold under a five year guarantee. Made in all sizes. See ad on page 13. Address Witte Iron Works Company, 527 West 5th St., Kansas City, Mo.

If you are going to need a gang plow this season, find out about the Liberty Gang Plow. It is illustrated on page 13. Read carefully the claims made for it. Write for folder and name of nearest dealer. Address Rock Island Implement Company, Dept. 3, Kansas City, Mo.

The government bought Atlas Portland cement for the Panama canal, and the government is a good buyer. You want to know about concrete. The makers of Atlas Portland Cement have a book which tells as much about it as any book the writer of this knows of. It is free. It is entitled "Concrete Construction About the Home and the Farm." It has over 100 illustrations. See offer on page 15. Write for the book to Atlas Portland Cement Co., Dept. 107, 80 Broad St., New York.

The Santa Fe System has an ad on page 15, which tells about lands in the famous Pecos Valley in eastern New Mexico. The Santa Fe does not own land there, but is interested in the development of that section, and asks investigation of Pecos Valley. You will be interested in the beautiful illustrated literature offered. Read carefully the ad. Address C. L. Seagraves, General Colonization Agent, 1176L Railway Exchange, Chicago. Mention Kansas Farmer.

A Great Hay Press.

The Lightning Hay Press has had a successful history covering 25 years. It is a great press, simple, free from breakage, does unsurpassed work, is strong and durable. Horse and belt power. Made in various styles. Write for catalog to Kansas City Hay Press Co., 129 Mill St., Kansas City, Mo. Turn to the ad on page 16.

More Money from Butter Fat.

The great Blue Valley Creamery Company of St. Joseph, Mo., has a new ad in Kansas Farmer on page 10 of this issue. It deserves careful reading. The company has a very valuable booklet, "The Secrets of Successful Dairying." It shows how you can make money, more money, from your cream. The present price of butter-fat is quoted in the ad. This company pays highest prices, and pays you with a check immediately. If you want more profit, it will, at any rate, pay to write for the company's plan of doing business.

The "Jayhawk" Stacker.

Mr. F. Wyatt of Salina, Kan., is still offering his well known "Jayhawk" stacker to our readers. See the interesting illustrated announcement on page 15. It builds any size rack. It builds it right. It saves a man's wages every 40 acres. This stacker is built on wheels, the only stacker so built. Mr. Wyatt has a large folder which tells all about it. It tells "how to stack hay, better, faster, cheaper, with less help." Send a postal for it. See your dealer about the Jayhawk. If he doesn't handle it he ought to. In the meantime write to F. Wyatt Mfg. Co., 13 Fifth St., Salina, Kan.

You Can Try a Singer Without Cost.

The Singer Sewing Machine Company has an announcement regarding its plan of selling machine prices. Some sell much lower very fair. It is simply an offer to let you try a Singer in your home without a penny of expense. Of course the offer means just what it says. There are no strings to it. The ad on page 5 says something about sewing machine prices. Some sell much lower than others. The Singer sells for more than some other makes as every one knows. And there is a reason for the higher price. Will you not send for the booklet "A Wireless Message from the Singer Tower." Sending for the booklet places you under no obligation to buy. Address Singer Sewing Machine Company, Room No. 1174 Singer Bldg., New York.

Secrets of Success.
Thirty-eight years is a considerable period to have one thing better than it has been done by anyone else. Yet, such is the record of the Joseph Dick Manufacturing Company of Canton, Ohio. This concern has made the well known Blizzard Ensilage Cutter ever since ensilage cutters were in general use. Not only that, they have maintained from the beginning an unquestioned supremacy in their field. Blizzard Ensilage Cutters stand for reliability and the most advanced ideas. Mr. Joseph Dick is continually striving to improve our past performance. This is only part of the secret of his success. The other part is a steadfast adherence to quality. Better write for the catalog of this firm. Address Joseph Dick Mfg. Co., 1418 Tuscarawas St., Canton, Ohio. See ad on page 8.

Salt City Business College.

Attention is called to the ad of the Salt City Business College at Hutchinson, Kan. This is one of the strongest institutions in the West. It is centrally located in one of the good business towns in Kansas. The writer visited this school recently and can recommend it to all young men and women desiring a thorough business education. Professor Moody, the president, says it is impossible for them to meet the demand of business men for competent young men and women in every line of commercial activity. A post card or letter to Prof. Moody will bring you a catalog which will tell you all about the school and town. Kindly mention Kansas Farmer when writing. If you contemplate taking a business course, no matter when, you should read the Salt City Business College catalog. It will help you.

Binder Twine.

We wish to call the attention of our readers to an advertisement of binder twine appearing in this issue on page 9. Messrs. A. J. Child & Sons, St. Louis, Mo., have bought at trustee's sale 200 tons of new Standard binder twine and are offering it at considerably less than the regular price on twine. They advertise that they are making customers a saving of two to four cents a pound, or \$1 to \$2 per bale. This is well worth taking advantage of, and besides they pay the freight in Illinois, Indiana, Iowa, Missouri, eastern Kansas, eastern Nebraska, and northern Arkansas; in other states they make an allowance for freight. This is a snap and well worth taking advantage of. Small samples by mail on request. It would pay you well to write them. Address A. J. Child and Sons, 511 No. Main St., St. Louis, Mo., 91.

A Handy Invention for Farmers and Stockmen.

One of the handiest inventions we have ever seen was called to our attention when we received the advertisement for The Lucas Mfg. Co. which you will find on another page. Farmers and stockmen certainly have hard work lifting heavy wagon boxes, stock racks and hay racks. This new invention eliminates all the heavy lifting and saves all the time usually wasted. Lucas brackets bolt onto boards, which you can get by busting up your old rack. Then these brackets hang over the sides of the wagon box, making a perfect 12 foot hay rack, which supports 4,000 pounds over roughest roads. When brackets are reversed, a perfect stock rack is made. Be sure to read their advertisement and send for their folder which tells plainly and illustrates just how Lucas brackets work. Address A. L. Lucas, personally, care of Lucas Mfg. Co., Station D, Slater, Mo., and get full information about this time and work savor.

Profitable Employment for Young Men.

With the opening of spring the street railway companies of the cities and the electric interurban lines are needing many additional men as motormen and conductors. The business of these roads increases largely during the summer season from increased travel between towns and cities and additional local business in the cities with the opening of the parks. The positions of motorman and conductor are very desirable for young men ambitious to secure a pleasant and profitable employment, with opportunity for advancement. Motormen and con-

OF YOUR CEMENT MONEY

SAVE 20%

Send for our free book, "Practical Cement Facts," it tells how. It gives facts that no other cement book contains. It gives in detail how to choose and use cement so as to obtain the best results. It tells why we grind.

Ash Grove Superfine

Portland Cement at least 10 per cent finer than "standard ground" cements. And why this fine grinding makes ASH GROVE SUPERFINE do 20 per cent more work than those cements—why it will save you 20 per cent of your cement money. Send for our book—a postal will do.

ASH GROVE LIME and PORTLAND CEMENT CO.
Dep't 4 Kansas City, Mo.

THIS FREE BOOK TELLS HOW

KANSAS CITY VETERINARY COLLEGE

Thorough and complete course. Great Demand for Graduates as Practitioners, Teachers, Investigators, Sanitary Officers, Army Veterinarians, U. S. Inspectors. Catalog and other information sent on application.

DR. S. STEWART, Secretary,
1342 East 15th Street, Kansas City, Mo.

SYCAMORE MINERAL SPRINGS, SABETHA, KANSAS

The medicinal properties of these springs are unquestionable. The most persistent cases of RHEUMATISM, KIDNEY TROUBLE and STOMACH COMPLAINTS have been cured here. Hundreds of Kansas people visit these springs every year. Delightful health and pleasure resort; excellent hotel accommodations. Rates reasonable. Located 6 miles from Sabetha, Kan. For further particulars address

SYCAMORE MINERAL SPRINGS HOTEL, Sabetha, Kan.

ductors earn \$60 to \$100 a month. Any young man between the ages of 20 and 40 is eligible, and he will be able to secure employment in almost any city by writing the National Railway Training Association, Kansas City, Mo., whose advertisement appears on another page and with whose officers a representative of this paper is personally acquainted.

The Shawnee Alfalfa Club.

The May meeting of the Shawnee Alfalfa Club was a very successful one in spite of the fact that it was held in the midst of a very busy season. The attractive location of the meeting was the address by Director Ed. H. Webster of the Agricultural College Experiment Station. As the active head of the experiment stations at Hays, Manhattan and McPherson, the first of which is the largest of its kind in the world, Director Webster speaks with more than ordinary authority. He stated that the experiment station is now working to determine the different varieties suitable for Kansas. Heretofore farmers have gone ahead raising alfalfa without noticing the fact that there are a great many varieties of this most useful plant. The result is that many types are to be found in any field of alfalfa. Some of the plants have stems lying close to the ground while others stand erect. Some have broad and numerous leaves while others have very narrow ones. Some have thick, woody stems and others grow thin ones. Some have many blossoms and others few. Some are subject to various forms of disease while others are vigorous. Some types freeze out easily while others are hardy. Some have hairy stems and leaves, others are smooth. These facts and others make it plain that there is as much need for judicious selection of alfalfa seed as for corn seed. It is also apparent that seed breeding is most important. The experiment station is working along these and other lines and its work is of vast importance as it cannot be done by the individual farmer.

"I have been in almost every state in the Union in the past two years, and I have talked alfalfa in all of them. I believe it will grow in every part of the country, and that it will eventually become a part of the crop of every farm, even the farms on the unfavorable soil of Maryland and Virginia. The experiment stations have done little with alfalfa. Alfalfa growing is comparatively new.

"In our experimental work, with pots of

alfalfa in greenhouses, we seek a kind that will have as many leaves on the plant as possible. Most of the nutrition is in the leaves. Five kinds of plants grown two years ago at our station averaged respectively 67, 61, 52, 49 and 34 leaves to the plant. What we want is the 67-leaf kind of plant.

"Resistance to frost is another thing to be developed in the breeding of alfalfa. A hard frost to which some plants with us were exposed killed back only 2 per cent of the plants of the Turkestan variety, while of another variety 40 per cent were killed.

"You ought to get seed grown on soil and under conditions similar to those with which you must deal. Know where your seed was grown. This is true not only of alfalfa, but of all grains. I think there is a good business in every community awaiting one farmer, with taste and talent for it, who will raise seed to sell to his neighbors. He can raise it where they can see how he grows it and what it does in the field, and they can know the soil and conditions."

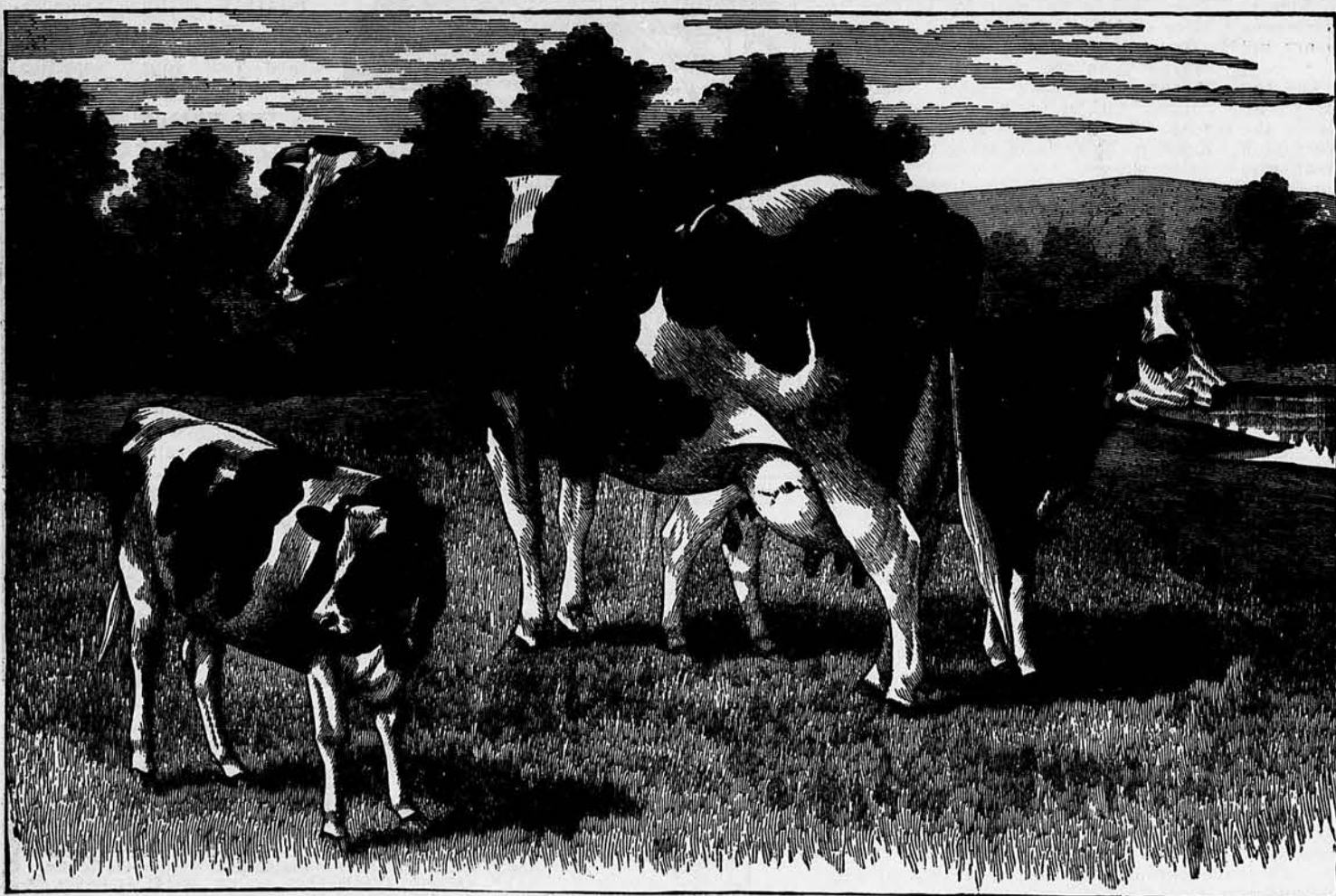
Bradford Miller, president of the association, said the reports of the meetings of the Alfalfa Club have got into Eastern papers and been circulated far and wide, and that the club was thus going a great deal of good.

The topic chosen for next month's meeting is "Curing the First Crop and Handling the Ground Thereafter."

This was the annual meeting and the time for the election of officers but, owing to the sickness of the secretary-treasurer, who could not be present with his annual report, the election was postponed until the next meeting which will be held on June 26.

The Enid Fair and Live Stock Show.

Secretary F. S. Kirk announces that the Enid Fair and Live Stock Association will have their great building finished within the week. The remarkable success of their first show and sale and the tremendous energy exhibited in erecting this enormous building marks an epoch in the pure bred industry of the Southwest. Their annual show will be held in December of this year when they will make the same classification and offer the same premiums for Shorthorns that are given in the International. Added money from the American Shorthorn Breeders Association makes this possible. The premium lists will be out in a few days.



Great Auction Sale of Holsteins

55 head of registered and high grade cows and heifers of DeKor, Mercedes and Pieterje families, many with calves at foot and others close springers.

EVERY COW IS TUBERCULIN TESTED AND NO AFFECTED ANIMALS WILL BE OFFERED.

Also a number of good Guernsey bred cows ready to calve. All heavy, free milkers and the kind you want.

Friday, June 18

At State Fair Grounds, Topeka, Kan. The time to buy is when the owner wants to sell. All trains lead to Topeka, Kansas.

Zaun & Crews, Auctioneers.
**Jas. B. Zinn, } Owners
Jas. Dorsey, }**

FIELD NOTES

FIELD MEN.

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



PURE BRED STOCK SALES.

- Percherons.**
 Nov. 9—J. C. Robison, Towanda, Kan.
 Nov. 11—Percheron Breeders, Sale at Manhattan, Kan. Will H. Rhodes, Manager.
- Jersey Cattle.**
 Spet. 30—Mrs. Wm. Britte, Pierce City, Mo.
- Herefords.**
 Sept. 29—Miss Lou Goodwin, Blue Rapids, Kan., dispersion.
- Poland Chinas.**
 Aug. 3—J. A. ... and W. L. Clark, Conway Springs, Kan.
 Aug. 26—A. W. ... Cleveland, Kan.
 Sept. 23—J. R. Sparks, Hunter, Okla.
 Oct. 6—J. D. Spangler, Sharon, Kan.
 Oct. 20—Roy Johnson, South Mound, Kan.
 Oct. 20—Roy Johnston, South Mound, Kan.
 Oct. 21—Herman Groninger & Sons, Bendena, Kan.
 Oct. 27—Geo. W. Smith, Pawnee City, Neb.
 Oct. 27—G. M. Hull, Garnett, Kan.
 Oct. 29—J. H. Harter, Westmoreland, Kan.
 Feb. 12—D. A. Wolfersperger, Lindsey, Kan.
 Feb. 16—J. H. Harter, Westmoreland, Kan.
- Durocs.**
 Sept. 3—H. A. J. Coppins, Potwin, Kan.
 Oct. 27—Pearl H. Pagett, Beloit, Kan.
 Nov. 5—Miner & Cross, Guide Rock, Neb.
 Nov. 8—C. L. Carter, Cabool, Mo.
 Nov. 9—A. L. Aitkin and W. W. Weast, Parsons, Kan.
 Nov. 12—S. W. Alfred & Son, Sharon, Kan.
 Jan. 31—J. E. Joinas, Clyde, Kan.
 Feb. 1—Pearl H. Pagett, Beloit, Kan., and R. G. Sollenbarger, Woodston, Kan. Combination sale at Concordia, Kan.
 Feb. 3—E. M. Myers, Burr Oak, Kan.
 Feb. 3—Rinehart & Slagle, Smith Center, Kan.
 Feb. 4—W. C. Whitney, Agra, Kan.
 Feb. 7—Frank Elder, Green, Kan. Sale at Clay Center, Kan.
 Feb. 8—Samuelson Bros., Manhattan, Kan.
 Feb. 9—Samuelson Bros., Cleburne, Kan.
 Feb. 10—Samuelson Bros., Blaine, Kan.
 Feb. 17—Thompson Bros., Garrison, Kan.
 Feb. 18—T. E. Goethe, Leonardville, Kan.
 Feb. 21—W. T. Fitch, Minneapolis, Kan.
 Feb. 22—Pearl H. Pagett, Beloit, Kan.
 Feb. 23—F. G. McDowell, Corning, Kan.
 Feb. 23—R. G. Sollenbarger, Woodston, Kan.

they have a uniform color and no markings. Will some good breeder of Duroc Jerseys or O. I. C.'s give his experience?

In the real estate pages this week Wm. Kindt, Marquette, Kan., is offering for sale two farms near Salina, Kan., that are very desirable in every respect. One is a short distance from the Wesleyan University. Both are fine farms and cheap at the prices quoted. Write Mr. Kindt, Marquette, Kan., and mention his ad in Kansas Farmer.

Many of our readers will be interested if they will look over the land advertisements which appear on page 7 of this issue and of every issue. The publishers believe these individuals and firms are reliable and that they offer propositions worth investigation on the part of our readers. In writing any of these land advertisers please say you saw their announcements in Kansas Farmer.

"Sheep Farming in Missouri" is the title of a very interesting and valuable bulletin by Prof. F. B. Mumford of the Animal Husbandry department of the Missouri State University and issued by Secretary Geo. B. Ellis of the State Board of Agriculture. This bulletin shows that Missouri has a larger investment in sheep than any adjoining state and with 300,000 more in numbers than Illinois. The Missouri Sheep Breeders Association is the largest association of its kind in the United States while the average value per head of Missouri sheep has increased more during the past four years than in any other state in the Middle West. Missouri has a very strong dog law which makes this profitable industry possible.

Mr. P. McConnell says in the British Live Stock Journal that "without disparaging any other breeds which are noted for the production of both beef and milk, it may be pointed out that the Shorthorn has always been famous for both qualities right through its history. The improved Shorthorn achieved its predominant position as a world wide breed by reason of its remarkable combination of the properties of beef making and milk production. The official standard of the London Dairy Show requires a greater annual yield of milk for the Shorthorn than for any other breed except the Dutch while the butter yield per day is the same as that required of the Jersey and Guernsey. What the Shorthorn does in beef making is known to all.

Geo. W. Elbert, Ness City, Kan., has a nice herd of Polled Herefords. He has recently purchased from the W. W. Guthrie estate a very fine herd bull. Mr. Elbert's herd numbers about 20 at the present time and is considered of very good quality. His fine farm adjoins town and is highly improved. Plenty of alfalfa and a big barn

and other equipment makes it possible for him to care for his herd of Herefords in a highly satisfactory manner. Mr. Elbert has lived in Ness county a long time and is a big land owner himself and has made all he has farming in this county. He is also in the real estate business in Ness City, Kan., and has a big list of farms and cattle ranches which he will send anyone interested free. Address Geo. W. Elbert, Ness City, Kan.

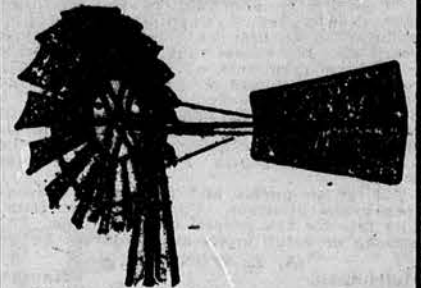
C. O. Anderson, Route 3, Manhattan, Kan., is doing a great business with his Duroc Jerseys this spring. He writes: "My trade has been splendid. I have sold, or have orders for, three times as many pigs as I had last year at this time. Of course many of my old customers are coming back to me for breeding stock. I have never had a bunch of pigs do better. I just got an order for two head from Dayton, Mich. My hogs have lots of range and plenty of alfalfa. I do not raise more than 150 pigs a year, but I take care of them. I think it much better to raise a smaller number and take good care of them than to raise a large number and have half of them runts. Two parties who saw my advertisement in Kansas Farmer came out to the farm and one bought more than \$100 worth of hogs and the other took two good brood sows." Mr. Anderson is an energetic young breeder whom it will pay to keep in touch with. Write him and mention Kansas Farmer, please.

J. E. Woodford of Coffey county, Kan., April 1, 1908, placed ten choice pure bred Poland China brood sows from 12 to 18 months old, that were due to farrow in the latter days of June, on a five acre field of alfalfa. They were given no other feed than the alfalfa pasturage until they had farrowed and their pigs were a week old. After that the sows had in addition to the alfalfa some bran slop until about August 20, when new corn was fit for feeding. He wrote: "The sows from the time they were turned on the alfalfa until the last week in June made a remarkable growth, besides gaining somewhat in flesh. They did well with their pigs, reared an average of seven to each sow, and as sucklers they were a sight to see. The pigs were the most attractive bunch ever raised in Coffey county, as admitted by our breeding competitors. We weighed a gilt from this lot when six months and five days old, and her weight of 225 pounds was not above the average of the whole lot. In our lifelong experience in rearing swine we have found nothing as a grazing crop for swine that in value approaches alfalfa."—From Coburn's "Swine in America."

It is much the best economy to furnish swine a grain ration when they are on pasture, as it results in better gains and a

DEMPSTER WINDMILLS

Many Sizes and Styles. Steel and Wood. Vanes and Solid Wheels. The Dempster Steel No. 2. MADE TO WORK AND LAST.



Noiseless, Long Lived Gears. Center Lift Crank. Three Bearings for Wheel Shaft. Reservoir Oil Boxes. Many other good points. Address Dept. G. **DEMPSTER MILL MFG. CO.** Factory, Beatrice, Neb. Branches: Omaha, Sioux Falls, Kansas City

\$10-25 **\$14-22**
 We manufacture all sizes and styles. It will pay you to investigate. Write for catalog and price list.
CURRIE WIND MILL CO.
 Seventh St., Topeka, Kansas

GALVANIZED STEEL \$12.75
WINDMILL
 Sold direct from factory to user at wholesale price. Strongest guarantee. Send for catalogue. Prices will surprise you.
THE OTTAWA MFG CO.
 702 King St. Ottawa, Kansas

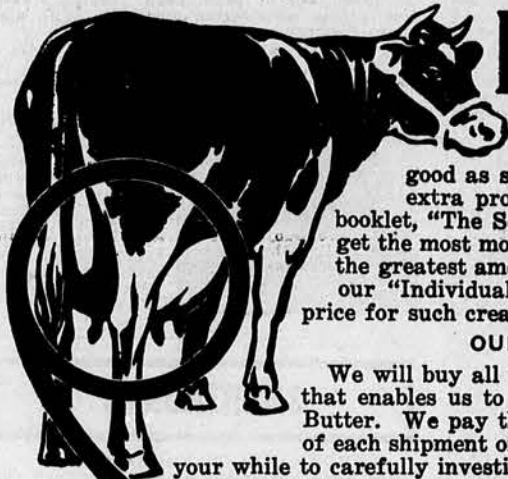
If in need of anything in the line of jacks or Herefords correspond with Yates Bros. of Faucett, Mo. They have stock for sale at all seasons of the year.

E. H. Abrahams of Emporia, Kan., marketed two fine loads of 1,615 pound Hereford steers on the Kansas City market last week. There were 38 head in perfect finish and they brought \$7 per 1000 or \$118.05 per head net.

F. M. Gifford, proprietor of the old reliable Elmwood Shorthorn herd located at Wakefield, Clay county, Kan., is offering a few very choice young bulls sired by his great bull Lord Marr. If you want to buy a good bull worth the money write Mr. Gifford at once, mentioning Kansas Farmer.

H. L. Faulkner, who breeds the big spotted kind of Poland Chinas at Jamesport, Mo., is well pleased with the results of his advertising in Kansas Farmer. He says he lately sold a bunch of fine pigs to New York state through Kansas Farmer advertising and that is going some.

A subscriber wants to know how to mark sows and their litters so one could pick out each sow and pig and be sure of them. He states that it is much harder to keep track of red or white pigs than others because



It's just like found money

Every cent of extra profit you can get out of your cream is as good as so much found money. Wouldn't you like to know how to get this extra profit? Of course you would—then write us today for our valuable booklet, "The Secrets of Successful Dairying." In it we show how you can get the most money out of your cream—how to produce cream that will yield the greatest amount of butter fat—how to produce Blue Valley Cream—how our "Individual Shippers' System" will afford you the highest possible price for such cream.

OUR PRICE for Butter Fat this week is 25c.

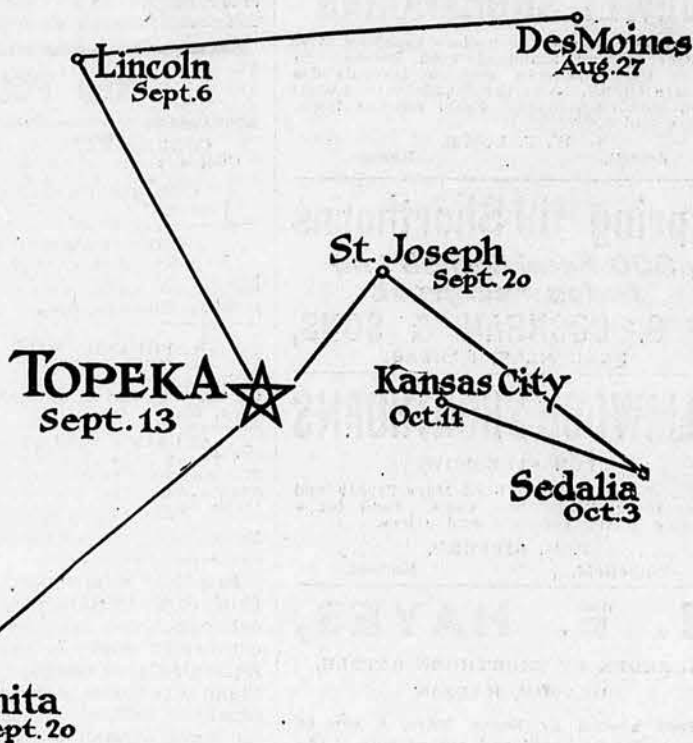
We will buy all the cream you can produce—rich in butter fat—the kind that enables us to maintain the uniformly superior quality of Blue Valley Butter. We pay the highest price, mailing you a check for the full amount of each shipment of cream the same day it is received by us. It is well worth your while to carefully investigate our proposition and satisfy yourself that we can help you get this extra profit out of your dairy herd. Address Desk A.

BLUE VALLEY CREAMERY COMPANY, St. Joseph, Mo.



The Big State Fair & Live Stock Exposition

TOPEKA,
September 13-18, 1909



New Buildings, New Sewer System, New Equipment. Reduced stall rents and increased premiums. Free space for Implements and Machinery. \$20,000 in premiums and the glad hand to you.

Member of the Big State Fair circuit with short shipments for each fair. Also member of the Kansas Grand circuit. Everybody accommodated and everybody welcome. Exhibits in every department, but especially strong in live stock, implements, machinery, agriculture, horticulture, dairy, poultry, apiary and household. Special money for the Boys' Corn Contest and for pure bred live stock. The best track in the state and a large race entry.

For entry blanks and premium list address

R. T. KREIPE, Secretary,

Topeka, - - - - - Kansas

Kansas State Fair

HUTCHINSON, SEPTEMBER
11-12-13-14-15-16-17, '09

"I desire to announce to the stockmen that the live stock classification and premiums will be practically the same as last year, with the exception of about \$750 added to the premiums on Shorthorns mostly for state exhibitors which is to encourage the Shorthorn breeders of Kansas, and a better classification and more money will be given Polled Durhams. In the swine division a full classification will be given this year to Hampshire hogs, also Chester Whites."

\$35,000 in purses and premiums. Seventeen grand divisions. Unrivalled attractions. The fair for the people, by the people. For catalog or detail information address

A. L. SPONSLEER,
Hutchinson, Kansas.

better product. One man estimates that it takes from one-half to one-third less corn on alfalfa pasture than on a straight grain ration to make a hog ready for market. Many let the hogs run on alfalfa until about five to six months old, by which time they reach a weight of 75 to 125 pounds, feeding just a little grain; then they feed heavily for about two months and sell the hogs at eight months old at weights of 250 to 300 pounds. One farmer, who raises about a thousand hogs a year and who in one year sold \$11,200 worth, makes a practise of growing his hogs on alfalfa pasture until about eight months old, feeding one ear of corn per head daily. He then feeds heavily on corn for a month or two and sells at an average weight of 200 to 225 pounds. Another man feeds all the corn and slop the pigs will clean up, all the while grazing them on alfalfa pasture, and sells at six to eight months old at weights of 250 to 300 pounds. Another, who raises about a thousand head a year, feeds all the corn the pigs will eat, beginning shortly after weaning and continuing until the hogs are sold at 10 to 11 months old, averaging about 275 pounds. Another farmer, from weaning time, two months old, until eight months old, feeds the pigs nothing but dry corn on alfalfa pasture, averaging about one-half gallon of corn (3/4 pounds) a day per head. At the end of eight months he sells at an average weight of 250 pounds.—From Courn's "Swine in America."

Spotted Poland Chinas.
When our fathers were boys the Poland Chinas had big white spots on them and the sows had big litters. The writer occasionally has some old fellow ask him where he can buy some of the old fashioned kind. We found a herd of this kind over in old Missouri recently. It belongs to H. L. Faulkner of Jamesport. Mr. Faulkner arranged for some advertising and his card will start in Kansas Farmer a little later. But he has stock for sale any time and don't wait if ready to buy. But please mention this paper when writing.

A Live One.
In these days when hustling counts for so much, we occasionally speak of a fellow as being a live one or a dead one, meaning by this that he is a wide awake hustler or a man that waits for opportunity to knock at his door a good many times before he recognizes the knock. In the live stock auctioneer world there are men that represent both of these schools. An auctioneer sometimes thinks that because he has a special talent for the calling and can make good it isn't necessary for him to make any special effort only on sale day. This is a grave mistake. There are thousands of men that can sell a lot of good stock to a big crowd of good buyers. But what is needed is more men that hustle all the year around, and by hard study figure out the best methods of interesting men in better stock. The up-to-date auctioneer must know the wants of the public, be a student of pedigree, individuality and human nature; such a man is Col. Thos. E. Deem of Cameron, Mo. His advertisement appears with this issue of Kansas Farmer. Write him about desirable date and when do so kindly mention Kansas Farmer.

The Ridge View Berkshires.
Manwaring Bros., owners of the Ridge View Berkshires, Route 1, Lawrence, Kansas, have been breeding good Berkshires so long that their names have become household words. When one thinks of Berkshires it is but natural that he should at once think of the Manwaring Bros. and to thing of them is to want to buy from them. Just now they are selling some extra good hogs to widely separated patrons. Through their advertisement in Kansas Farmer they lately sold a fine young boar to Frank Young of Columbus, Montana, who wrote that the pig came through in fine shape after his four days travel and that he is a good one. The Pioneer Trust Co. of Kansas City, Mo. wrote that they were highly pleased with the fine young boar just bought from Ridge View farm and say they will buy some more hogs later on. C. F. Lewis, Independence, Kansas also got a good boar with which he is pleased. Local sales have been good, as the neighbors like the herd boar. Forest Supreme and especially do they like the pigs by this boar from Forest King Sows. Tell Manwaring Bros. your wants.

A Great Sale of Holsteins and Guernseys.
On Friday, June 18, at the State Fair grounds in Topeka will be held one of the biggest sales of dairy bred cows and heifers ever made in Kansas. Both Holsteins and Guernseys will be sold and every one of them has been tuberculin tested and certified. They are free, heavy milkers and each cow either has a calf at foot or is due to calve within 15 days of sale. Among the Holsteins are members of the De Kol, Mercedes and Pietertje families and the cows and heifers will have calves by such bulls as Clothilde Sparkle 2d 41423, Gem Mercedes Abbeckerk De Kol 44492 and Duke Johanna Parthena 40867. A number of excellent Guernsey cows, just ready to calve will also be offered. There will be 55 head offered in the sale including a few bulls and the opportunity to get just what you want will be such as does not come frequently. It will be a great chance. With the increasing price of land the surest way to make the farm pay is to buy such cows as these and increase the fertility of the soil while making money off the cows. Good cows double the income. The time to buy is when the owner wants to sell. Read the handsome advertisement of this sale and remember that all roads lead to Topeka State Fair grounds on Friday, June 18. This advertisement will not appear again and the opportunity is too good to miss.

J. H. Harter's Poland Chinas.
A visit to the farm of J. H. Harter of Westmoreland, Kan., will convince any intelligent farmer or breeder that he is one of the Kansas breeders who is breeding about the right sort of big Polands. They are big but have all the quality of smaller hogs. When Mr. Harter started in the business several years ago he bought liberally of such big strains as Expansion, Over Chief, Prince Youtell, etc. His present herd boars are Mogul's Monarch and Toulson Prince. The first named is a son of the great boar Mogul, for years at the head of the Carl Jensen & Son herd at Belleville, Kan. Mogul's Monarch is a litter brother to Mogul's Masterpiece, the boar that won first and reserve championship at Nebraska State Fair, 1907. The dam of Mogul's Monarch was by old Expansion so you can see he is bred big. Toulson Prince is a grandson of Victor X. L., winner at St. Louis World's Fair. His dam was also by Expansion. Nearly all of the spring pigs are by Mogul's Monarch. They are out of such splendid sows as the great old sow Lady Youtell 4th, dam of the noted sire Prince Youtell; Silver Beauty by Silver Chief 41077, her dam May Logan by Logan Chief; Queen Pansy by Expansion, dam Burlington Queen by Expansion 2d; Pretty Princess by Ex Medium, he by the great sire King Do Do. Another is a daughter of old Over Chief, Maud Perfection by Granite. She has a fine litter by Captain Hutch. Mr. Harter has for sale a few choice last fall boars that he will price low. The splendid hog ranch owned by Mr. Harter and where he resides and cares for the Poland Chinas himself is located five miles northwest of Westmoreland and three miles east of Postoria on the L. K. & W. railroad. When visiting or writing him kindly speak of Kansas Farmer.

Alfalfa Valley Farm Herd.
Wednesday of last week the writer visited Otto Young's Alfalfa Valley Farm herd of Red Polled cattle. We have known of this popular herd of Red Polls for a good while but this was our first visit there and the first time we ever met Otto Young. His farm, which consists of 1,500 acres, is located in Trego county, but his postoffice is Utica, Kan., which is over the line in Ness county. We spent a big half of the day with Mr. Young and had dinner with him and his family and enjoyed the visit very much. We were driven over the farm and had the pleasure of looking at as fine alfalfa as there is in the state. Mr. Young has about 150 acres in alfalfa. His herd of Red Polls numbers 85 head and he has for immediate sale eight young bulls ranging in age from 10 to 16 months. He will sell these young bulls very cheap. In fact too cheap, we think, but Mr. Young has been pricing them this way lately and says they go at the same old price. He also has some young heifers for sale at very reasonable prices. In looking the herd over we noticed much worthy of mention but the real attractions were two young bulls, only a few months of age, but out of the best cows in the herd that should go to some good herd when their time comes. Mr. Young desires to sell 320 acres of land which is the cheapest proposition in our opinion to be found anywhere. Eighty acres of this will grow alfalfa like that mentioned above and 210 acres of the 320 is tillable. The best of water in abundance and within a short distance of a nice new church and also a school house. The neighborhood is a very desirable one in which to raise a family. There are fair improvements on this farm consisting of house, stable, orchard and other improvements. Mr. Young wants to sell this and is desirous that a good man buy it. It can be had for \$15 per acre and part would be taken in trade for something that is worth the money and not incumbered. Always mention Kansas Farmer when writing Mr. Young.

Secretary F. A. Welch of the live stock department of the Alaska-Yukon-Pacific Exposition which will be held at Seattle, Wash., from June 1 to October 15 writes to Kansas Farmer, as follows: "I very much enjoy reading your splendid farm paper, especially the live stock articles."

The Big Cedar Rapids Percheron Sale.
W. L. DeClow's sale of Percherons held at his home town, Cedar Rapids, Ia. last week, was in every way a success so far as good stock, good management and a good crowd of buyers were concerned. Some of the mares, however, sold much too low for their quality. The sale was largely attended by farmers and breeders from many states and Mr. DeClow has the satisfaction of knowing that he has sown good seed that will bring him a harvest at later sales. The sales follow:

- MARES.**
- 1—W. H. Doonan, Rock Island, Ill. \$900.00
 - 2—W. A. Hale, Anamosa, Ia. 1,000.00
 - 3—Geo. B. Ross, Alden, Kan. 900.00
 - 4—J. E. Kennedy, West Branch, Ia. 710.00
 - 5—E. A. Hanlon, Lone Tree, Ia. 735.00
 - 6—W. H. Doonan, Rock Island, Ill. 900.00
 - 7—L. N. Ellyson, West Branch, Ia. 760.00
 - 8—W. B. Merriman, Dixon, Ill. 985.00
 - 9—E. C. Forest, Miles, Ia. 1,000.00
 - 11—R. B. Talbot, Rochelle, Ill. 725.00
 - 12—G. B. Ross, Alden, Kan. 900.00
 - 13—G. B. Ross 625.00
 - 14—J. E. Kennedy, West Branch, Ia. 755.00
 - 15—E. H. Hanlon, Lone Tree, Ia. 735.00
 - 16—E. C. Forest, Miles, Ia. 1,100.00
 - 17—W. B. Merriman, Dixon, Ill. 750.00
 - 18—U. J. Casey, Iowa City, Ia. 900.00
 - 19—G. B. Ross 625.00
 - 20—W. B. Merriman 650.00
 - 21—S. J. Hagerman, Toddville, Ill. 710.00
 - 22—W. H. Doonan 660.00
 - 25—W. B. Merriman 650.00
 - 27—H. Pehler, Ainsworth, Ia. 700.00
 - 29—G. B. Ross 600.00
 - 30—R. D. Finnigan, Martelle, Ia. 600.00
 - 34—G. B. Ross 600.00
 - 28—W. Hartwell, Miles City, Mont. 1,000.00
 - 26—W. Hartwell 950.00

- Show mare not cataloged, H. Pehler Ainsworth, Ia. 1,000.00
- STALLIONS.**
- Three-year-old "Coudray." C. L. Spicer, Roseville, Ill. 1,150.00
 - Percheron yearling stallion, H. J. Hardesty, West Chester, Ia. 500.00 (Both above stallions at private sale and not cataloged.)
 - Imp. yearling stallion "Harberg." G. B. Ross, Alden, Kan. 810.00
 - Imp. yearling stallion "Hollnot." Marshall White, Centerville, Ia. 700.00
 - Two-year-old "Major Boy," Lewis Bros., Marshalltown, Ia. 50.00
- Six of the best mares and the best two-year-old stallion were purchased by ex-Senator Ross of Alden, Rice county, Kan. Mr. Ross is closely identified with Kansas agricultural interests and is a member of the State Board of Agriculture, a director of the Kansas Improved Stock Breeders Association and president of the Kansas Swine Breeders Association. Among the mares he pur-

chased was the grand championship mare which won the first premium in championship and gold medal in the Mammore's show last season in France and is as good a one as was ever imported to America. It required a king's ransom to induce the French owner to part with this mare and Mr. Ross has been very fortunate in securing such a good one and his selections show his wise judgment and experience as a draft horse man. Mr. Ross also purchased one of the best coming two-year-olds ever imported to America in the freshly imported young Percheron stallion Halbourg. This stallion weighs 1,650 at a coming two-year-old. Is one of the heavy-boned, thick, wide kind with four corners, and the toppest, best acting one you ever saw, sired by the great champion French Government stallion Marsellais, the highest priced service stallion in the Government stud. His dam was the champion mare Gentille in the Mammore's show when carrying this foal in 1906. Mr. DeClow writes as follows: "My buyer who has been in the Perche for eight months selecting the best mares from the old Percheron breeding farms along the Wisne river, will continue his efforts to buy 30 head of the best young exhibition mares to be had, for my harvest sale. He has purchased eight during the past month and will be able to get at least 22 or 24 more before August 1. This harvest sale will be a sale of strictly high class Percheron brood mares. It will include many of the championship winners in the Paris and other shows in France this season."

HEREFORDS

SPRING CREEK HEREFORDS.
100 head in herd. Prairie Donald 3d by Beau Donald 7th in service. Females represent Anxiety 4th, Lord Wilton, Garfield and other families. Few good bulls 7 to 8 months old at easy prices. Write or come. T. A. WALLACE, Barnes, Kan.

HEREFORD BULL FOR SALE.
17 months old, grandson of Imp. Lord Saxon, dam by Stonemason 13th, weighs 1,000 lbs., nicely marked, good top and under line, droop horn and a fine individual in every respect. Will price reasonable. J. W. TOLMAN, Kansas.

HEREFORD BULLS FOR SALE.
13 head sired by Onward 18th and Majestic Baron by Imp. Majestic, ranging in age from 12 to 26 months. All good ones. At least four of them herd headers. Very low prices considering quality. Will also spare few females. S. W. TILLEY, Kansas.



SHORTHORNS

CEDAR BLUFF SHORTHORNS.
100 head headed by Double Standard Orange Cup X5565 (253226.) SHAW BROS., Glade, Kan., (Rooks County).

A RARE BARGAIN.
My herd of Shorthorns is on the bargain counter. Five bulls \$50 each; 12 young cows with calves or coming fresh \$800; 10 heifers \$45; herd bull \$175. Entire herd \$1,550, a rare bargain. J. E. WELLER, Faucett, Mo.

GREENDALE STOCK FARM.
25 YOUNG BULLS by Imp. Ardliathan Mystery and Best of All for sale at bed rock prices. Can also offer some good Berkshire swine and Shropshire rams. Correspondence solicited. COL. ED GREEN, Prop., Kansas.

JEWEL SHORTHORNS
A young herd of up-to-date breeding. Also Percheron and Standard bred horses. In stud: the Percheron stallion Marquis De Wierre (Imp.). Also the Standard bred stallion, Red Beth 31185. Farm adjoins town. Come and see us. W. T. LOWE, Kansas.

Spring Hill Shorthorns
300 Head Scotch and Bates Pedigrees
C. G. COCHRAN & SONS,
PLAINVILLE, KANSAS.

ELMWOOD SHORTHORNS
FOR SALE NOW.
Six choice bulls by Lord Marr 249949 and from some of my best cows. Send for a catalog giving breeding and prices. F. M. GIFFORD, Kansas.

H. E. HAYES,
BREEDER OF SHORTHORN CATTLE,
OLATHE, KANSAS.
Herd headed by Baron Marr, a son of "Cumberbund's Last" and out of Imp. Lady Marr. 5 Scotch bulls and a few females will be priced right. Come and see them.

SHORTHORNS

N. S. LEUZLER,
Breeder of the best in Shorthorns.
Almena, (Norton Co.) Kan.

Evergreen Home Farm.
Milking Shorthorn Cattle, bred Hornless Berkshire Hogs, Oxford Down Sheep, Bourbon Red Turkeys.
LATHROP, MISSOURI

RENO HERD SHORT-HORN CATTLE
Bulls in service, Forest Knight 226084 and Victor Archer 264156. Breeding stock for sale.
Stewart & Downs, Hutchinson, Ks

FOR SALE.
10 choice young bulls from 8 to 12 months old, part straight Scotch.
Choice yearling and short two-year-old heifers.
Good colors, bred right, priced right.
C. W. TAYLOR, Pearl, Kan.
Address mail R. F. D. 2, Enterprise, Kan.

Prospect Farm Shorthorns
The oldest Shorthorn breeders in Kansas. The largest herd of Cruickshanks in Kansas. Herd headed by Violet Prince 145647 and Orange Commander 220590. Young stock of both sexes and some cows for sale. Quality and prices right.
H. W. McAFEE, Topeka, Kansas.
Bell Phone 59-2.

POLLED DURHAMS
POLLED DURHAMS.
Young bulls, cows and heifers for sale. Prices reasonable. Write for them. C. J. WOODS, Kansas.

BELVEDERE X2712--195058
son of the \$1,500 Grand Victor X 1685 150364 heads my herd of Double Standard Polled Durhams. A few extra good blocky, thick-fleshed young bulls for sale. Inspection invited. Farm joins town.
D. C. VAN NICE, Kansas.

JERSEYS
JERSEY BULLS.—My herd bull, Jewell's Decanter by Decanter by Diploma, sire of sweepstakes cow at World's Fair. He is gentle as a lamb and will be priced low—also 8 young bulls with pedigrees. Must be sold quick.—MRS. L. C. FRENCH, Marion, Kan.

FOR SALE.
A. J. C. C. bull calf, 4 months old, dam made 262 lbs. butter with first calf (now has 3d calf). Sire's dam, 22 lbs. 10 oz. in 7 days with 2d calf. As this is the last bull till next crop will put a very low price on him. Registered and crated f. o. b. care.
DR. W. M. SHIRLEY, Kansas.

Linscott Herd Jersey Cattle
Established 1878. Registered in A. J. C. C. For sale, tuberculin tested, 64 heifers under 2 years old, 13 cows under 6 years, 1 yearling bull.
R. J. LINSOTT, Kansas.

RED POLLS
COBURN HERD OF RED POLLS.
Choice young stock of both sexes for sale; also a few cows.
GEO. GROENMILLER & SON, Pomona, Kansas.

FOSTER'S RED POLLS.
15 choice young bulls, a few good females and our 2,400 pound herd bull Dandy S. \$147 for sale at bottom prices. CHAS. FOSTER & SON, Eldorado, Kan.

POLAND CHINA SWINE RED POLLED CATTLE
Best of breeding. Write or come and see. CHAS. MORRISON & SON, R. 2, Phillipsburg, Kan.

ALFALFA VALLEY RED POLLS.
8 young bulls 12 to 16 months old and a few heifers. Can ship over main lines Mo. Pacific and Union Pacific R. R. Priced low. Write or come.
OTTO YOUNG, Kansas.
Utica, Ness County.

In a late number of the "Alumnus," Prof. J. T. Willard presents the clearest exposition yet produced of the courses of study at the Kansas State Agricultural College. This will be found exceedingly helpful in all discussions looking to modifications of the work at Manhattan. In all studies of this kind accurate information is of the first importance.