

KANSAS FARMER

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VISIT TO AGRONOMY FARM

Farmer's Union of Riley County Study Work of Experiment Station

NEARLY a thousand people attended the Farmers' Union picnic meeting held on the agronomy farm of the Kansas Experiment Station at Manhattan, June 15. On the broad well-kept lawn of the farmhouse a bountiful picnic dinner was spread. Ice cream was served to all present by the agronomy department of the college. Following the dinner a good program was given consisting of addresses by prominent Farmers' Union men and women and by representatives of the Agricultural College, interspersed with appropriate musical numbers. The audience, a portion of which is shown in the picture on this page, was comfortably seated on the lawn in the shade of the trees and the porch of the house was used as a platform. D. H. Hassebrook, president of the Riley County Union, had charge of the program and presided.

President H. J. Waters gave a hearty welcome to the visitors and in the course of his address explained how the Government is recognizing the rights of the farmers and is endeavoring to protect their interests in the matter of food production. He pointed out that they need have no fear of the price-fixing program concerning which there is so much talk at the present time. There is no intention on the part of the Government to fix maximum prices on farm products in the interest of the consumer and at the expense of the producer.

Maurice McAuliffe, president of the State Farmers' Union, was present, and in his talk urged the importance of educating the boys and girls of the farm at home, making a strong plea for the rural high school. W. C. Landsdon, who was Democratic candidate for governor last fall, was not on the program, but was

called to the platform and responded with a strong patriotic talk, especially emphasizing the need for liberal support of the Red Cross.

John Twombly of Beloit, Mrs. Lucy Pottorf of Riley, and Alfred Docking of Manhattan spoke on various phases of the organization work of the union. W. M. Jardine, director of the Experiment Station, made a plea for criticism and comment on the work done by the station. He pointed out that the sole purpose of the station is to serve the people of the state and unless the people study it and offer suggestions or bring to it their troubles, it cannot be of the greatest benefit in building up the farming business.

Prof. L. E. Call explained briefly the different problems being worked out on the station farm at the present time and then with the help of his assistants took the visitors over the farm, pointing out as they went various station projects. While this was being done the women, who were present in larger numbers than the men, remained at the farmhouse and Miss Marion Broughton gave a demonstration on the back porch of the farmhouse in canning peas, beets, and rhubarb.

The agronomy farm is located two and one-half miles northwest of Manhattan and one and one-half miles northwest of the Agricultural College campus. It consists of 320 acres of upland and creek bottom land. Forty acres are utilized by the Department of Animal Husbandry for pasture and feed crops. The rest of the farm—280 acres—is used for experimental work with crops and soils.

The visitors were especially interested in the drainage work and the methods of preventing soil washing. The top-

ography of the farm is such that the soil washes badly and a special effort is being made to control erosion. Small stone and cement dams have been built to catch washed dirt and direct the course of the water; systems of open ditches have been constructed and others will be built to catch water on steep slopes and carry it around the hills; fields that wash the most are seeded to alfalfa and listing for corn or sorghum is seldom practiced because it is likely to increase washing.

The creek bottom land—an area of forty-six acres—on the north part of the farm was originally swampy and produced only wild grass. This area has been tile-drained in such a way that the seep water on the hillside is caught and removed; while the lower land is drained with laterals ninety feet apart. A total of 720 rods of tile was laid at an average cost for labor and tile of \$1.05 a rod. The most of this ground can now be worked as soon as the upland portion of the farm.

Professor Call had explained before starting on this tour of the farm that the experimental work with crops and soils is of three distinct types, namely: (1) the breeding and improvement of crops; (2) a study of cropping systems and methods of manuring that will maintain the fertility of the soil; (3) a study of tillage practices and methods of handling farm crops in order to determine those methods that will produce the highest yields at a maximum profit.

Methods of utilizing sweet clover have been under investigation for some time. The visitors were shown a pasture consisting of 3.8 acres of sweet clover, where six head of dairy cows had been pastured since the first of May. These

cows were in splendid condition and have been making excellent production records. We have learned since this meeting that on June 20 the number of animals was reduced to three and the pasture is supplying this number with an abundance of green feed in spite of the dry, hot weather which has prevailed since that date. Some experiments in the height of cutting sweet clover were pointed out. The results demonstrated conclusively that sweet clover cut close to the ground the second year of its growth is destroyed.

One of the most striking series of plots on the whole farm were those having to do with the preparation of ground for wheat. Even at this date the marked advantages of early preparation were apparent. These seed bed preparation tests have been going on for four or five years. On another page in this issue, in an article by Prof. L. E. Call the results are given in detail.

The time of cutting alfalfa hay was a point to which attention was directed during this farm visit. Plots which have been cut year after year as soon as the plants reached the bud stage are showing evidence of weakness and the stand is getting thin. Grass is crowding out the alfalfa and the yields on these plots are low. It was observed that the most vigorous plants were found on plots where the crop had been allowed to reach the full bloom stage before cutting. This is a matter of considerable value to farmers who are growing alfalfa on uplands where the crop must be given the most ideal conditions in order to maintain the stand for a period of years.

farm crops is one of the important problems.

(Continued on Page Ten)



THE AUDIENCE AT RILEY COUNTY FARMERS' UNION PICNIC ON AGRONOMY FARM AS IT LOOKED TO THE SPEAKERS

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FARM POWER

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

WOOD generally is the best material for the average farmer to use in the construction of a garage. Almost any farmer has enough practical training to enable him to build a garage from lumber. Only a few tools are necessary. Drop siding may be used for the sides, or plain boards will serve as well provided battens are nailed over the cracks. Shingle sides also may be used to advantage. This gives the building a neat appearance.

Shingles or some combination roofing material will make as cheap and durable a roof as such a building needs. Because of the present high price of metal, galvanized iron roofing would be rather expensive.

For the man who is skilled in the use of cement, the plastered metal lath construction makes an attractive and durable garage. If galvanized iron roofing is used with this type of building a fireproof structure results. There is more or less danger from fire with any gasoline vehicle and even if the building is fireproof, an automobile may burn if the gasoline catches fire. For the average man the metal-lath form of building may be more or less unsatisfactory because he may not be able to obtain a nice finish on the plaster.

An eight-foot door gives ample room for the entrance. The type of door which slides on a partly circular track inside the building is popular for the garage. Double doors, which usually swing outward, also may be used.

A window on every side of the garage is practically necessary so that repairing need not be done in semi-darkness at any time. Windows also provide for good ventilation. This is necessary in case the engine is run while in the garage, for the exhaust gases are more or less dangerous if inhaled.

Concrete makes a durable and easily cleaned floor for the garage. When a good foundation is provided a three-inch floor will be strong enough to meet the demands of the small garage. A slope of three inches in ten feet should be given the floor so water will run off quickly. This is necessary when it is desired to wash any part of the car or to give it a general scrubbing. The floor ought to be a few inches above the ground and have a floor drain in the center so that no water will stand on any part of it.

A garage thirteen by twenty feet is of sufficient size to accommodate a single car. This leaves room for a work bench along the side. A building twelve by twenty-two feet gives room for the work bench at the end of the garage. A garage may be much smaller than the dimensions given. Some are made as small as ten by twelve feet. They are large enough to shelter the car, but provide no room for the extras, such as tents, coats, and tires, which practically every car owner sooner or later accumulates. The worst feature of the small garage is that it provides no room for a work bench, tools, and supplies, or room for making repairs and adjustments to the car. Attention is much more likely to be given a car if it is housed in a well arranged roomy garage.

A clearance of at least six inches should be allowed above the top so that it will not strike anything when the car is being driven into the garage. A good height is about eight feet. This ought to give ample room above the top.

A work bench twenty-four inches wide and thirty-four inches high should be conveniently located with respect to the light, and a good supply of tools should be provided. The tools should be arranged systematically in a set of pigeonholes or on a series of hooks so that each one may be found without searching through a box of unsorted articles. A rack placed against the wall will serve well for the storage of surplus oil, extra wire, and repairs kept on hand for future use.

The cost of a garage will be governed

by such a variety of factors that it is nearly impossible to say just which type of construction will be cheapest. A skilled man will find the metal-lath construction entirely satisfactory both as to cost and appearance. The man who is not skilled in the use of such materials, on the other hand, would not get good results. The ordinary man, who has had only the training afforded by the methods generally used in the construction of farm buildings, should use the materials with which he is most familiar.

In planning to build a garage it is always best to do the work at some slack time if possible so that it will not be necessary to hire extra men.—W. W. CARLSON, Engineering Division, Kansas Agricultural College.

Care for Your Auto

The first, most fundamental, and absolutely essential thing about an automobile is that the engine be lubricated. Nothing else is so important. Forget to fill the gasoline tank and you may be inconvenienced when the car stops nine miles from anywhere, or in the middle of a busy street crossing—but the inconvenience is temporary. But take the car out on a run with insufficient oil in the crank case or the lubricator (if your car doesn't oil with the splash system) and the next thing you know a polite repairman will present a bill as long as your arm.

After seeing to the daily filling of oil reservoir, gas tank, and radiator, there is nothing a boy can do for his own or his father's car which will pay better dividends than taking care of the tires. Tires are expensive and wear easily. To prevent wear, then, to add to the mileage a tire gives, is to do a real service.

Start by keeping a "tire history" of each tire on the car. Note the mileage when put on, the date, and the place of purchase. Then, test regularly for pressure. The tester is a little gauge, which slips over the uncapped valve stem and registers the air pressure in the tire.

Tires should be inflated to twenty pounds of pressure for each inch of cross section—that is, a three-inch tire should have sixty pounds of air; three and a half, seventy; four-inch, eighty; and so on. Driving a tire that should hold sixty pounds, with only thirty-five pounds pressure in it, will do more harm in an afternoon than weeks of driving, properly inflated.—The American Boy.

Cleaning the Car

It takes considerable care to keep a car looking well. Soap is injurious to the finish of a car and should be used sparingly if at all. To retain the original polish, the washing should be done with plain water, using a chamois for the final wiping. When the car has been out in muddy weather it should be washed immediately, before the mud has had time to dry and harden.

When an engine misses fire, the trouble is caused by a faulty spark plug nine times out of ten. To determine which plug is missing, take a wooden-handled screw driver and short circuit the plug to the cylinder head. If the plug is working properly the engine will slow down as soon as the short circuit is made, and if it is not working the short circuit will have no effect.

Take a dollar's worth of prepared inner tube patches along in your car. Although they do not afford an absolutely permanent repair for a puncture, they are mighty handy in an emergency.

The greatly increased cost of materials and labor is tending toward advanced prices of motor cars. A number of makers have announced increases in price ranging from \$30 to \$1,000. Most of them are from \$50 to \$150.

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GRAIN FOR OUR ALLIES

It has been estimated that we must furnish our allies two hundred million bushels of wheat this year. On the basis of our present home consumption and probable yields for this year's crop, only forty-five million bushels will be available. There is no other source of supply and unless the people of this nation practice greater economy in the use of food and the substitution of other products, our allies will go hungry, and hunger is a compelling force stronger than arms or munitions of war. The great military genius, Napoleon, once said, "An army travels on its belly." This was never more true than at the present time. In the present world war whole nations are organized for war purposes and food supply is likely to be the determining factor in winning or losing in the great conflict.

Doing these things which will make it possible to supply the wheat needed is a patriotic duty. The man who offers his services as a soldier is not the only one whose actions are directed by patriotic impulses. Even the housewife in the kitchen can respond to the patriotic appeal by striving to make it possible to furnish our allies with the wheat they need.

One of the great savings in the use of grain would result from a suppression of the manufacture of alcoholic liquor. It has been estimated that seventy million bushels of grain could be saved if the nation were dry, and this makes allowance for the manufacture of all the alcohol needed for making munitions of war and for other industrial purposes. What is known as the food control bill in Congress has been held up because of the determined fight made by the liquor forces on the proposed suspension of this great economic waste of food material. The Brewers' Year Book boldly declares that it requires the labor of seventy-five thousand men for six months to produce the grain required for the manufacture of malt and distilled liquors. There are employed in the manufacture of liquor 62,920 wage earners. Fully three-fourths of these are employed as mechanics of various kinds—carpenters, electricians, teamsters, machinists, etc.—men needed in legitimate pursuits. It seems a shame that some men must starve in order that others may get drunk.

It appears now that a compromise will be agreed to in Congress, exempting beer and wine from the control measure. We believe Congress is right in striking at this great food and labor waste and it is to be regretted that there must be a compromise made in order to insure the passage of the measure as a whole. We know farmers of Kansas do not take kindly to producing grain for such purposes.

SUCCESSFUL DAIRY MEETING

A very successful auxiliary meeting of the Kansas State Dairy Association was held in Lawrence last Saturday. The attendance was not large, but those present were very much interested in discussing the various phases of the dairy business. In this section of the state producing milk for the city market is claiming the attention of most of the farmers who are milking cows. Handling and marketing milk was a subject of special interest to those present. In the forenoon a number of dairy farms were visited and an inspection of the barns and milk rooms showed that these dairymen were on the whole making a serious attempt to do the things necessary to keep milk clean and in proper condition for human food.

The extremely high cost of feed made the subject of cost of production a vital

one and Prof. J. B. Fitch urged upon those present the importance of forming a cow test association. At the present time it is a serious loss to be feeding unprofitable cows and the cow test association is a cheap way of keeping books on the herd.

The subject of building sanitary barns and modifying barns already built so as to make them more practical for producing good, clean milk, was discussed by A. S. Neale, of the extension division of the Agricultural College.

Douglas County has a local dairy association and in the eastern edge of the county there is an organization consisting of thirty-three members which ships seven hundred gallons of milk to Kansas City daily. This milk is sold to a Kansas City firm of distributors and the

contract is made with the local organization of producers. The members seem better satisfied with this method of handling the matter than when each was compelled to deal individually with the distributors in Kansas City.

NOT ECONOMY ALONE

There seem still to be a few people who do not appreciate the necessity for food conservation in the present national crisis. A housewife remarked to us the other day: "We are being urged to use cornmeal and rice, but I can't see that these things are much cheaper than wheat products."

The idea in substituting other food-stuffs for the cereals is not solely to save our money, but to provide food for our own soldier boys and for the armies

of our allies. Our allies in the war are cereal-eating peoples, consuming more cereals and less meat than our own nation. The European nations engaged in the war are not raising farm crops this year; they are fighting. Our own country must produce food for the men now in the trenches and for our own boys who will soon be there, and this food must be of a kind that is easy to handle and concentrated in form.

The three things needed in the prosecution of the war are soldiers, money, and food, the most pressing need at the present time being food. Wheat, oats, and barley are needed. Our own wheat crop is short this year and the only way we can supply the amount needed by our allies and our own army is by using less ourselves than we ordinarily do. It is much more difficult for the men engaged in the strenuous business of war to change from their accustomed diet than for us at home to use for perhaps one meal a day some substitute for the wheat products usually eaten.

Vegetables and fruits in tin cans may also be shipped to the front to give variety to the soldier's ration. The supply of tin cans and of canned products on the market is limited and no housewife should be guilty this year of purchasing for the use of her family a single quart of canned products which might be used by the army. That is the reason for the emphasis the Government is placing on home canning and drying.

We must stand back of our allies, and when our own men go to the trenches they must go with every possible provision for their safety and well being. England has the reputation of having the best rationed army in the field. She may keep this reputation until our men get there and then no nation must surpass ours in the care of its men on the firing line.

In looking over the premium list of the Kansas Free Fair to be held in Topeka September 10 to 15, we note that a department of Home-Made Products has been added. This is in line with the effort being made all over the country to arouse interest in preserving and storing food products in the homes, as was formerly done. Premiums are offered in this department for home-dried fruits of various kinds, home-dried vegetables, home-cured herbs, home-cured and preserved meats, and home-made dyes and soap. In each classification the recipe or formula for the product must accompany the entry. This department is something new in fair premium lists, and we refer to it for the purpose of directing the attention of our readers to this feature of the Free Fair. We hope this department will be well filled. A copy of the premium list can be secured by addressing Phil Eastman, Secretary Kansas Free Fair, Topeka, Kansas.

We have just learned that special consideration will be given by manufacturers of tin cans to members of organized canning clubs. There is a great shortage of tin cans for preserving perishable food products and it was feared that this shortage would cripple the efforts of those striving to save perishable products by canning. Several of the companies handling these supplies have agreed to honor orders for cans when such orders are in furtherance of the plans for food conservation of the State of Kansas and the United States Department of Agriculture. Further information can be secured through the State Council of Defense at Topeka or the Extension Division of the Agricultural College, Manhattan.

Plan For Record Wheat Crop

KANSAS normally has been producing practically one-tenth of all the hard wheat grown in the United States. In 1914 when the Kansas crop totaled 180 million bushels, the proportion was one-fifth. This was grown on 9,116,000 acres. Last fall farmers of Kansas sowed nine and a half million acres of wheat. It is not at all preposterous for Kansas to plan for a two hundred million bushel crop in 1918. If conditions had been as favorable for this year's crop as when the record-breaking crop of 1914 was grown, we might easily have harvested two hundred million bushels or more this year.

Wheat is a vital need of our allies in this great war. They need two hundred million bushels this year—an amount that might be produced by the one state of Kansas provided that every man does his part and Providence favors us with conditions equal to those which made the 1914 crop possible.

There are a good many factors involved in growing a big wheat crop. In the first place there must be a large acreage sown. This year the money required for the seed will be no small item. In some sections seed will have to be purchased because not enough will be harvested for seed purposes. The acreage sown to wheat in such portions of the state may depend upon the financing of those who cannot supply themselves with the seed. There is plenty of money in Kansas and enough good wheat for seed will be harvested, but it will require close co-operation to insure the sowing of such a large acreage as will be required to produce a two hundred million bushel crop.

The State Council of Defense for several weeks has been gathering information from over the state on the wheat situation and in the meeting of this Council taking place as we write, the results of this investigation will be one of the important subjects discussed.

Kansas as a state could not do a more patriotic thing than to organize all interests of the state so as to make it possible for our wheat growers to do all that lies within human power to grow the biggest crop of wheat ever produced.

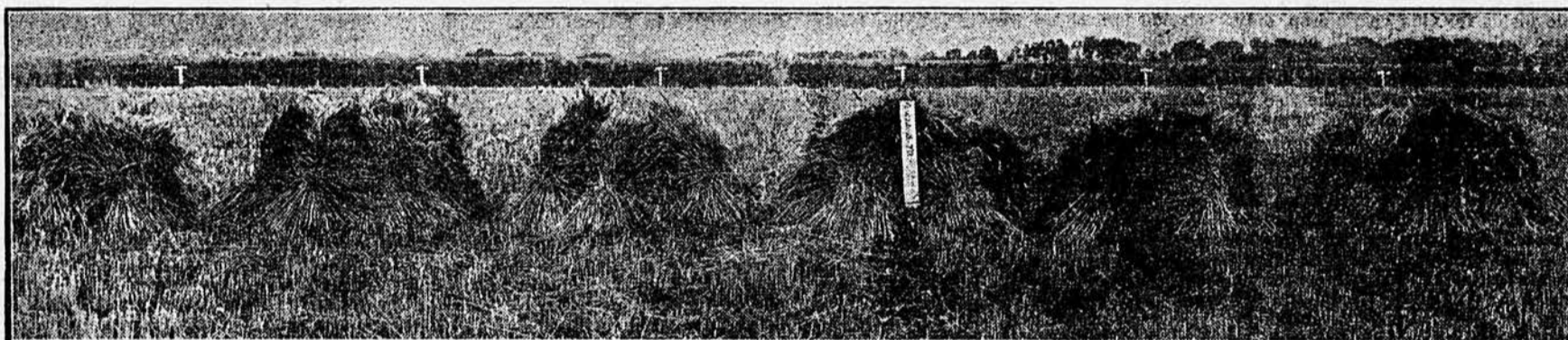
The growing of big yields of wheat is not all chance. There are a number of things involved in growing more wheat to the acre, many of which are within the control of the grower. Growers of wheat are not ignorant of the things necessary to producing large yields. Our Experiment Station has demonstrated that the yield of wheat is greatly influenced by the kind of wheat sown, the time and rate of seeding, the preparation of the seed bed, the kind of rotation in which the wheat is grown, and the methods followed to keep up soil fertility. These are apparently factors within the control of the grower and yet not entirely within control, for, as already stated, many know better than they are able to do.

In our drive for a two hundred million bushel wheat crop next year every co-operating agency in the state should be lined up in the common purpose of enabling every man to do as well as he knows. It may be necessary in some instances to furnish money for seed, implements, or labor. It may be necessary for the Government to protect the grower from possible loss by guaranteeing a minimum price. The job of the Council of Defense is to see that all these different factors are brought into harmony for the furtherance of the one big purpose of growing a record-breaking crop of wheat next year.

MORE WHEAT TO THE ACRE

By L. E. CALL

Yield influenced by kind of wheat sown, time and rate of seeding, seed bed preparation, cropping system, and methods used to maintain soil fertility. Plot shown in upper cut plowed seven inches deep September 15—yield seventeen bushels to acre. Plot below plowed seven inches deep July 15—yield forty bushels to acre.



THE total production of wheat in Kansas has varied from 50,000,000 bushels in 1911 to more than 180,000,000 bushels in 1914. While this variation has been caused principally by fluctuations in weather conditions, it is nevertheless true that there are many factors within the control of the producer that have a tremendous effect on the production of wheat from year to year. There are five important factors that should receive attention in this connection, namely, the kind of wheat that is sown; the time and the rate at which the seed is sown; the way in which the seed bed is prepared; the cropping system in which the wheat is grown; and the methods used to maintain the fertility of the soil.

VARIETY OF WHEAT TO SOW

Kansas did not become an important wheat producing state until after the introduction of hard winter wheat. In the seven years following the introduction of hard wheat the acreage increased eightfold. In fact the average annual increase in acreage during this period was equal to the total acreage the year preceeding the introduction of hard wheat. Kansas would not be an important wheat producing state today if it were not for the excellent varieties of hard winter wheat that are grown. The reputation of Kansas wheat for milling purposes is due to the superior value of hard wheat for bread making.

It is surprising in the face of these facts that the farmers in the hard wheat belt of Kansas should consider growing any variety of wheat that is not of the hard Turkey type, yet this fall several thousand acres of soft wheat were sown in the wheat belt of this state because it was found to be a little more resistant to attacks of Hessian fly. Should the acreage of soft wheat increase in the next three years in the same ratio that it has increased in the past three, it would result in such a mixture of varieties that the reputation the state now enjoys as a producer of hard wheat of high milling value would be greatly impaired if not destroyed. Not only would the quality of our wheat suffer, but we would replace a winter resistant, hardy wheat with more tender, less resistant varieties. Such a condition would result in a calamity the first unusually severe winter. The hard Turkey types of wheat have been developed during centuries of time in European Russia under conditions similar to our own. They have been proven by 35 years of test to be the best adapted to our conditions. We need more hardy, not less hardy varieties.

The Kansas Experiment station has tested during many seasons practically every variety that has any promise of

proving valuable. The average acre yields for the past six years for a few of the best of these varieties have been as follows: P-762, or Kanred, 31.1 bushels; 570, Turkey, 26.5; 382, Kharkof, 25.9; Fulcaster, 23.0 bushels.

These varieties are all hard wheats of the Turkey type with the exception of Fulcaster, which is one of the best varieties of soft wheat that has been grown at this station. As an average the Fulcaster variety has produced less wheat than any of the good hard varieties. In favorable seasons like the last three seasons, this variety has equaled and sometimes surpassed the hard varieties in yield, but in seasons like 1912, when conditions were severe during the winter, it was not sufficiently hardy. The highest yielding variety has been the selection P-762 made at this station from the Crimean variety. This variety, to which has been given the name Kanred, as an average of the past six years has produced 4.6 bushels more than the Turkey variety and 5.2 bushels more than the Kharkof. The superiority of this variety over Turkey and Kharkof has been maintained in variety tests conducted with farmers throughout the wheat belt of the state.

TIME AND RATE TO SOW WHEAT

The time the wheat is sown in the fall usually has an important bearing on the yield. Wheat should be sown early enough to make sufficient root growth to become thoroughly established before winter. The time required for this amount of growth will depend upon weather conditions during the fall months. In warm, late seasons, wheat can be sown much later in the fall than in years when cold weather sets in early. It is not desirable to sow wheat too early especially in seasons when fly is abundant, because of injury from these insects. Early sown wheat may also make so rank a fall growth that soil moisture is wasted and the wheat weakened in vitality. Usually there is a period of ten days or two weeks in the fall during which time wheat may be sown with the best results. This period is usually late enough to avoid injury from fly, yet early enough to allow the wheat on early prepared ground to make sufficient fall growth.

The rate at which the seed should be sown will depend upon the time of seeding and upon the preparation of the seed bed. Less seed should be sown when the crop is sown early than when sown late, more seed should be sown on a poorly prepared seed bed than on well prepared ground. Less seed should be sown when rainfall is light than when more abundant. The best rate to sow will vary in different sections of the state, in different seasons, and on differently prepared

ground, from two pecks to the acre on early sown well prepared ground in West Central Kansas to over two bushels to the acre on late sown poorly prepared ground in the eastern part of the state. The rate and date of seeding have been tested over a four-year period on the agronomy farm. Amounts ranging from two pecks per acre to eight pecks were sown, the first sowing being made September 8 and successive sowings following weekly up to and including October 19-21.

The results indicate that there is a period of about ten days extending from September 25 to October 5 when wheat may be sown in the Manhattan locality with the greatest assurance of a good yield. Seeding later or earlier than these dates usually results in smaller yields. It was also observed that the quantity of seed sown had but little effect on the yield of the early sown crop but that the yield increased with increasing amounts of seed when the crop was sown late in the fall.

PREPARATION OF SEED BED

The manner in which the seed bed for wheat is prepared is another factor that is important in its effect upon the yield. When wheat follows oats or wheat it is important to start the preparation of the seed bed as early in the summer as possible in order that weeds may be killed, moisture conserved, and plant food liberated. Other things being equal, that ground which is plowed earliest will produce the best crop. An experiment has been conducted at this station extending over the past six years in which wheat has been grown continuously and the seed bed prepared by plowing at different times during the season. The preparation has been the same upon each plot of ground for each of the six years. The results of this test have shown that ground which has been allowed to grow up to grass and weeds during the summer and prepared for wheat by disking just before seeding has produced the smallest average yield—7.9 bushels per acre. Ground plowed about the middle of September has produced fifteen bushels per acre, that plowed the middle of August 21.2 bushels, and that plowed the middle of July 22.4 bushels per acre. This experiment shows clearly the value of starting the preparation of the seed bed as early in the season as possible. If the ground cannot be plowed early, it will pay to disk the ground and then plow as soon as conditions will permit. In this test, ground disked in July and then plowed in September produced on the average nineteen bushels to the acre as compared with fifteen bushels for ground plowed at the same time but which had not been disked previously.

Good seed bed preparation in itself is not sufficient to maintain a high production of wheat over any long period of time. The ground gradually becomes wheat sick when wheat is grown continuously, regardless of the methods used in preparing the soil. It is, therefore, possible to produce maximum yields of wheat only when wheat is grown in a suitable rotation with other crops and when every means is taken to maintain the fertility of the soil.

The methods now employed in the important wheat sections of the state are not maintaining a high standard of production, as will readily be learned by consulting the records of the State Board of Agriculture, where it will be found that the average yield of wheat has declined over seventeen per cent in the last thirty-five years, while in this same period of time great progress was made in the improvement of the varieties of wheat grown. Too little attention has been given to the matter of rotating wheat with other crops and to the use of wheat straw, barnyard manure, and other forms of organic matter for the purpose of maintaining the fertility of the soil.

The value of good rotations and the use of barnyard manure as factors influencing the yield of wheat is well shown by the experimental work conducted at this station. Ground which has grown wheat continuously for the last ten years produced in 1916 less than seven bushels of wheat to the acre. On the same kind of soil, under similar conditions, wheat grown in a three-year rotation of two crops of corn and one of wheat produced sixteen and one-third bushels to the acre. In a similar rotation when cowpeas grown for hay replaced one corn crop in the three-year rotation, an additional increase of one-half bushel of wheat was secured. In a sixteen-year rotation where alfalfa was grown four years followed by two crops of corn and then wheat, the yield of wheat was eighteen and one-half bushels per acre.

Barnyard manure in every instance increased the yield of the crop. When wheat was grown continuously an application of two and one-half tons of manure annually increased the yield of wheat from 6.9 bushels to 18.4 bushels per acre. In the three-year rotation of corn, cowpeas, and wheat, an application of five tons of manure once in three years on the corn crop increased the yield of wheat from 16.7 bushels to 19.4 bushels per acre. The same quantity of manure divided equally between the corn and wheat crop in the same rotation increased the yield from 16.7 bushels to 25.6 bushels, a total increase of almost nine bushels per acre.

CANNING BEANS AND PEAS

Home Canning Is Kitchen Patriotism—Put Spare Time Into Cans

IF YOU have cans or can get them, do not fail to can a liberal supply of beans and peas. These vegetables have high food value, and a supply of them in cans will help to solve the problem of what to put before the family during the winter.

Green or string beans should be canned the same day they are picked. String, cut, snap, or shell. Blanch in boiling water for three to five minutes. Remove and plunge into cold water for a few seconds. Pack immediately in jars, place rubber in position, add one level teaspoonful salt to the quart and fill jar with boiling hot water. Seal partially, but not tightly. Sterilize two and one-half hours if using hot-water bath outfit, or seventy minutes if steam-pressure outfit with five to ten pounds of steam, remove jars and tighten covers.

Do not fail to try the following "half and half" recipe for canning beans: Select both tender green pods and those mature enough to shell easily. Fill jars with an equal amount of tender pods and of shelled beans. Blanch and can according to directions given for canning string beans.

Peas are also in season now. They should not be too mature, and like beans and other garden vegetables should be canned while fresh. Shell and blanch in boiling water for five minutes. Plunge into cold water for a few seconds. Pack in jars—pints recommended. Add one-half teaspoonful salt and about the same amount of sugar to each pint jar. Place rubber and top in position. Sterilize three hours in hot-water bath or seventy-five minutes under ten to fifteen pounds of steam, then tighten lids.

The word "sterilize" as used in the recipes given refers to the cooking of

the vegetables in the jars. "Sterilize two and one-half hours" means cook for that length of time after the water around the jars in the hot-water bath is boiling. "Seventy minutes in steam-pressure outfit at five pounds of steam" means that the vegetables are to be "processed," or sterilized, seventy minutes after the steam gauge on the steam canner registers five pounds of steam.

in any home by any housewife or by a boy or girl. It is nothing more than a bucket, an empty lard can, a wash boiler, or any kitchen vessel provided with a reasonably tight-fitting lid and a false bottom to keep the jars from resting on the bottom of the vessel or too close to the fire. Where much canning is done it will pay to construct a false bottom to fit the vessel used. A small

instructions for using the cold-pack method, with tables showing the time required for various fruits and vegetables, are given in a bulletin entitled "Canning Instructions," which may be obtained for the asking either from Otis E. Hall, Extension Division, Kansas Agricultural College, Manhattan, or the State Council of Defense, State House, Topeka.



WASH BOILER WITH REASONABLY TIGHT FITTING LID AND PROVIDED WITH CONVENIENT FALSE BOTTOM MAKES GOOD HOT-WATER BATH OUTFIT FOR HOME CANNING—TWO KINDS OF FALSE BOTTOMS SHOWN

Five pounds of steam is equal to a temperature of 228 degrees Fahrenheit.

While there are several home canning methods still in use, the "cold-pack" one-period method given above seems to be the only one that works equally well with all types and makes of jars and at the same time enables even those without experience to can all vegetables and meats as well as fruits and berries. A hot-water bath outfit can be made

wire stand or rack will make a convenient false bottom for a pail or lard can. A solid bottom which will not permit the water to circulate under the jars should not be used. The cut on this page shows an ordinary wash boiler with two different types of false bottoms. These can be conveniently lifted out when the products in the jars have been sufficiently sterilized.

Additional recipes for canning and full

Community Drying Plant

The first community drying plant ever established in Nebraska, and so far as is known the first in the United States, began operation in North Lincoln recently. Fifty-seven families were represented at meetings of the North Lincoln Community Club when the project was undertaken.

This plant is known as the Lincoln Rotary Club Community Drier, as the Lincoln Rotary Club provided the money (about \$150) for its construction. It was built by the Agricultural Extension Service, which is helping the Community Club operate it. Families bring their fruits and vegetables to the church in which the drier is located, prepare their products with utensils and machinery provided for that purpose, place them in the drier, and return twenty-four hours later to take away the fully-dried product. Electricity consumed by the big electric fan costs 1½ cents an hour, 120 trays of product being dried every twenty-four hours.

Concentrate products, especially soup mixtures, "so that each container will hold as much canned food and as little water as possible.

Guarding Health and Morals of Soldiers

THE people of this country, and especially the mothers of the boys who enlist, are rightfully much concerned over the conditions surrounding army camps. We are glad to learn that the War Department is making a systematic crusade for the purpose of guarding the health and morals of the soldiers gathered in these various camps. Vice dens near army camps all over the country are being closed up. Through the Official Bulletin published by the Bureau of Information of the Government, the War Department authorizes the following statement:

That there shall be no "red light" in our new national army is the determination of the Government, and with that object in view the War Department has been pursuing a vigorous campaign in the vicinity of the camps now in existence, as well as in the larger cities adjacent to our military establishments. The popular theory that our citizen soldiers have been hounded by a "vice trust," organized to vend their wares in the regions where troops are being mobilized, is without foundation. The people with whom the Government has been dealing mercilessly are scattered adventurers, gamblers, dramsellers, proprietors of vicious resorts which have sprung mushroom-like out of the ground like gypsy camps at county fairs. In addition to these, the regularly established districts in the larger towns have been investigated and forced to close on the shortest possible notice.

In all cases the Government has worked with the honest and able co-operation of municipal and local authorities. The State Councils of Defense have done much valuable work. Chiefs of police throughout the country have been requested to give their attention to this phase of vice regulation, and the results vindicate the enthusiastic patriotism with which the authorities have carried out their trust. The tenderloins in the Texas cities—old-fashioned red light

districts which up to a few weeks ago seemed as permanently planted in their towns as the city hall—have withered over night or gone their way. El Paso, Fort Worth, Waco are now surprisingly free of the easy-money establishments which once made night hideous and filled the police courts in the morning hours. The world in those parts has grown safe for the army of democracy.

Farther north, St. Louis has closed the lid tight upon the objectionable centers. Mayor Bell of Indianapolis has been doing energetic and effective work in his town and has co-operated in keeping undesirable resorts away from the environs of Fort Benjamin Harrison.

San Francisco's uptown tenderloin is also closed tight against the vice interests, and downtown the all-night pianos of the "Barbary Coast" no longer rattle

forth their delirious ragtime. The cleaning-up process has extended all the way to Plattsburg, where the wandering undesirables have been told plainly to pack up and go.

To organize this great protective movement has been a work of tremendous detail and has involved the notifying of many thousand police heads in every region which might touch upon the military establishments. Twenty-one thousand letters were circulated among police authorities. The press throughout the country has done invaluable service to the Government through the medium of special articles setting forth investigated facts and advising means of discouraging the sort of business which the War Department has determined to stamp out in the vicinity of cantonments and training camps.

The work of Secretary Baker has been especially vigorous in this regard, as he has recognized from the first that healthy citizen soldiers could not be produced in unwholesome surroundings. He has never underrated the importance of the moral side of camp sanitation and, in cases where cities were slow to comply with his request, has not hesitated to inform the laggard officials that unless his policy was followed out promptly the camp site would be moved to other localities.

It is safe to predict that the Government's big campaign of house cleaning will result in a far lower percentage of disease among our soldiers than now prevails in foreign military camps.

Automobile Industry in War

It is pointed out in the Official Bulletin published daily by the Committee on Information of our Government that the American automobile industry is the most highly organized and the most extensive of its kind in the world, and the same system of standardized parts and quantity production of machines which has enabled the United States to have 3,500,000 automobiles on the road where all other nations together have less than 1,000,000, will be turned to the making of aircraft.

The whole answer to the problem before us is standardization. The American development of the airplane motor will be a standardized motor. If necessary, parts exactly alike can be turned out in quantity in one factory and shipped to a different place to be assembled. As the work develops our engineers can constantly be engaged in further perfecting the motor and as the industry expands in quantity it can also improve the quality of its output.

The best gasoline is none too good these days. Be sure to use a strainer, or else the dirt will soon clog up the carbureter.



SQUAD OF KANSAS SOLDIERS LINED UP FOR MESS CALL.



ARE YOUR CROPS PROTECTED?

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

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

THIS IS THE COMPANY

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

THE GRAIN GROWERS HAIL INSURANCE COMPANY

Elmer F. Bagley, Secretary, Topeka, Kansas.

WE NEED YOUR HELP

WE FEEL confident that there are thousands of KANSAS FARMER readers who will gladly respond to our appeal for help in the emergency now facing us. You do not want us to cut your name from our list, but by neglecting from day to day to send in your renewal you are seriously embarrassing us and causing us much unnecessary expense.

We are now confronted with a new order from the Post Office Department compelling us to stop sending KANSAS FARMER to a large number of our subscribers who are in arrears. We have in the past been allowed to give you several months in which to renew. The Post Office Department now says it will not carry at the second-class rate papers to those who are not paid up, and its word goes. We have no further recourse but to meet these requirements.

It has ever been the policy of KANSAS FARMER to keep close to the grass roots and under no circumstances to permit other than genuinely helpful material to appear in its columns. We, who are responsible for it editorially, have had real farm experience and keep in such intimate touch with farm conditions that we are able to give you the practical farm viewpoint of whatever appears.

In making this personal appeal to you we feel sure we can count on your loyalty to the cause which KANSAS FARMER represents. You can help us so easily and, what is more, we are going to make it financially worth your while to renew at once and send us in addition the renewals of your friends and neighbors.

You will find the date to which your subscription is paid on the label of the paper you are now reading. Turn to it now while it is fresh in your mind and register a vow to respond to this appeal for your help and co-operation. On page thirteen you will find our special renewal and club offer. It is worth a careful reading, as it will save you money.

Do not fail us in this emergency. We need your help.

T. A. BORMAN, President and Editor.
G. C. WHEELER, Associate Editor.
W. J. CODY, Secretary-Treasurer.
C. C. YOUNGGREEN, General Manager.

Home Canning Outfits

Be Patriotic! Be Economical! You can be of great help to the country by doing your share toward conserving all food stuffs. Eliminate all waste. You can be economical, reduce the high cost of living and provide for the future welfare of yourself and family by storing surplus foods. Don't delay. Write today and investigate the Butler Home Canning Cookers.



Practical Economical Simple

They are just the thing for home use. Cook quicker, better, with less trouble than old style methods. Adapted to all fruits and vegetables. Cooked products have better color, flavor and shape, being cooked whole in the jar or can.

Butler Cookers are strong, yet light in weight and easy to handle. Substantial enough to last for years. The low price for which you can get these great cookers and the wonderful work they do make them almost a necessity for every household.

Steam or Hot Water

Bath Methods.

uncertain. Don't delay. Write today. Do your patriotic duty and help conserve the food supply.

Write today for free descriptive literature giving full information about different styles. Present prices not guaranteed. Steel market uncertain. Write today. Do your patriotic duty and help conserve the food supply.

BUTLER MFG. CO.
687 Butler Bldg., Kansas City, Mo.
Steel Tanks, Grain Bins, Truck Bodies,
Barn Ventilators, Culverts, Etc.

Help Conserve the Nation's Food Stuff

2⁸⁵ and up

Kansas Farmer Dairy Club

Samples For Test Must Be Carefully Taken

TO DETERMINE the amount of butterfat a cow produces it is necessary to have the exact weight of the milk and the percentage of butterfat which it contains. This percentage of butterfat is referred to as the test. The fat is that part of the milk which makes butter and is its most valuable constituent. Milk or cream is usually sold on the basis of the butterfat it contains. Because of this a cow's production of fat is of great importance. Mere quantity of milk does not of necessity make a cow a big butterfat producer.

Testing the milk regularly is the only means of finding out how much butterfat the cow produces. The first step in determining production is to weigh the milk, but without the test this will not give any information as to the total amount of butterfat produced.

The rules of the Kansas Farmer Dairy Club require that one test of the cow's milk be made each month. This test is made from a composite sample of the milk the cow gives on the fifteenth day of the month, this to be taken as the average butterfat test for the month. The percentage of butterfat will vary slightly from day to day, but it has been found that a single test made the middle of the month will approximate very closely the average percentage of fat for the month.

The per cent of butterfat is a fixed characteristic. A cow's milk will not vary much in test during the year. As the year progresses it will gradually get richer, the highest test being just before the cow goes dry. After you have once had a fair test made you can predict with a reasonable degree of accuracy how the test will run from week to week.

To increase the total quantity of butterfat, the quantity of milk must be increased. No method of feeding can vary the test.

It is of no value to have a butterfat test that is inaccurate. You want to know exactly how much butterfat your cow is making—you can know this by getting an accurate test.

In order to make this test reliable the sample must be properly taken. Unless it is a representative sample of the milk produced the test will be inaccurate. There are several things which tend to bring about this result. The first milk drawn is much poorer in fat than the last. The strippings may test as high as 14 per cent, while the first pint drawn frequently tests less than one per cent. The sample, to be representative, must be taken from the pail containing all the milk the cow gave at one milking.

Another source of error is due to the fact that the butterfat globules begin to

rise to the surface as soon as the milk is drawn. A sample taken from the top after the milk has stood a few minutes will not be a true sample. The milk should be poured from one pail to another several times and the sample taken at once while it is thoroughly mixed. This will give a true sample of that milking.

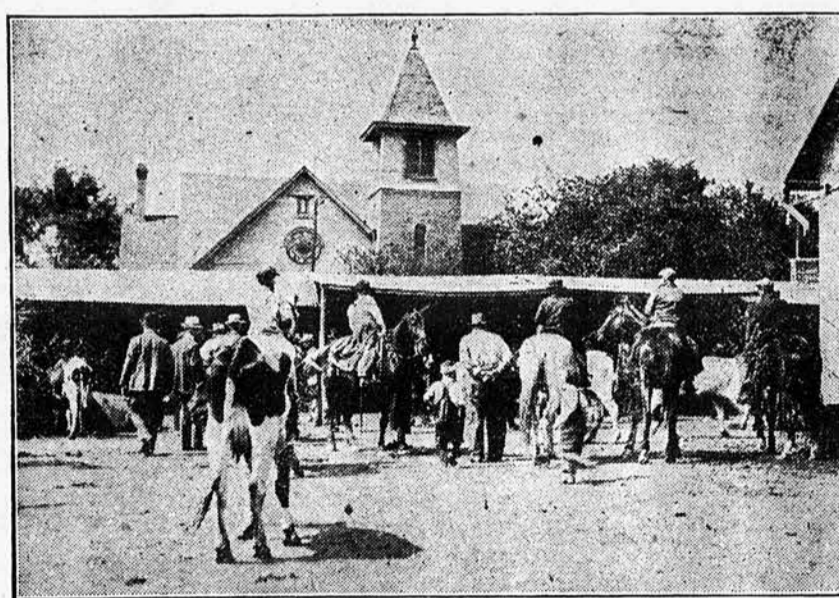
The morning milk is nearly always richer in butterfat than is the evening milk, thus if a sample of either is taken as representative of the day's milk, the result will be inaccurate. This is overcome by making a composite sample. This is simply putting together the samples from the two milkings. If the cow is being milked more than twice a day, a sample from each milking of the day must go into this composite sample.

The samples are most conveniently taken by using a little long-handled dipper holding one ounce. Take enough from the morning milk to fill the two-ounce sample bottle half full. Fill the bottle with the sample from the night's milking. Unless the bottles are filled the milk will churn and it will be more difficult to make the test. The sample of milk must also be kept sweet, otherwise the test cannot be accurately made. Half of one of the corrosive sublimate tablets placed in the sample bottle will keep the milk from souring. These preservative tablets are deadly poison and should be plainly labeled, carefully handled, and kept out of reach of the smaller children. Also keep the poisoned sample carefully guarded until it is mailed.

Since proper sampling is so essential to correct testing, we will summarize the instructions given above. First provide the bottle in which to place the sample, putting into it one-half of a preservative tablet. Milk the cow dry and pour the milk from pail to pail at least three times. Take the sample at once, fill the bottle half full, and cork. Take sample of night milk in the same way, filling the bottle full. Cork the bottle tight and place it in the container, packing it with cotton so there will be no danger of its being broken in the mail. Address to Prof. O. E. Reed, Dairy Department, Kansas Agricultural College, Manhattan, Kansas. Put your own name and address on the package and in addition write "Member of Kansas Farmer Dairy Club." Be sure to put your name and address on each package for unless this is done you will lose your test for that month.

Banker Takes Personal Interest

Many bankers over the state are taking special interest in the dairy club work. An illustration of the personal



THESE BOYS ARE CO-OPERATING IN GETTING THEIR COWS HOME FROM EMPORIA AFTER THE DISTRIBUTION BY MR. NEWMAN OF THE CITIZENS NATIONAL BANK

effort being put into the club work is furnished by the following letter from C. R. Hoyt, cashier of the Thayer State Bank. Mr. Hoyt now has four boys enrolled in the club work. He says:

"I have one more boy I wish to enter in your good dairy club—George French. We bought a cow for him Saturday and she freshened on Sunday. Please forward blanks for his records so he may begin as soon as the milk is good."

"One of our boys, Clyde Hines, started saving milk from his cow ten days ago and mailed a sample to Manhattan on June 15 for the test. Since that time the cow has almost quit giving milk. As soon as he let me know about it I purchased him another cow. This one will freshen in a few days, so he will begin a little later than at first intended. You may receive his test from the first cow, but please make no record of this. Had I known all the facts concerning the first cow, I would not have had him mail a sample for the test. I trust he is provided with a better cow this time."

"Howard Weis, the boy whom we entered in the advanced class, expects to have his cow and begin his record very soon. Luther Cross seems to be getting along nicely with his cow."

It is this sort of personal work with the boys and girls that makes club work valuable. Those who devote time to encouraging young people in this way will be well repaid for their trouble.

The father of one of our club members who completed his year's record in April was in the KANSAS FARMER office this morning and told us the boy was going to continue in the advanced class with a pure-bred cow. He has made a fine record with the grade cow in the first year's work, but is ambitious to own a pure-bred cow. The grade cow is in much better condition to make a good record next year than she was at the beginning of last year's record, and we were rather interested to learn that this cow will be sold to a member of the new dairy club. We hope to see her make an even better record than she did the past year.

Club Prizes at Hutchinson

The Kansas State Fair to be held in Hutchinson September 15 to 22 has shown its appreciation of the splendid work done throughout the state by the boys and girls in their club work by creating a Boys' and Girls' Club Department, the superintendent of which is Otis E. Hall, of Manhattan, state leader of club work. A special premium list is offered to boys and girls of the state belonging to clubs working under the leadership of the extension division of the Agricultural College in co-operation with the United States Department of Agriculture. This offering of prizes for club work is one of the progressive steps taken by the fair management.

The rules governing the competition in the Boys' and Girls' Department are given in the state fair premium list, which has just been printed. The canning club prizes are for exhibits by mother-daughter clubs and for exhibits shown by boys and girls who are club members. A good list of prizes is offered for exhibits by members of corn clubs, garden clubs, sewing clubs, and poultry clubs. Pig club prizes are open to bona fide members of the state pig clubs.

In each of these different classifications a special prize of twenty-five dollars is offered for club members, this prize going in each instance to the group or club making the best showing.

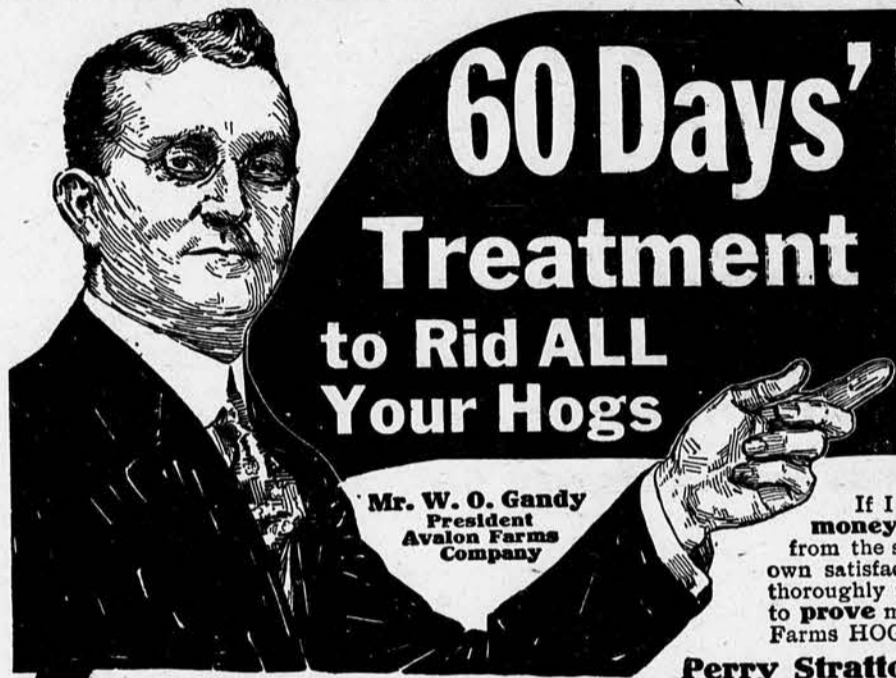
A big fair like the one held at Hutchinson each year can be of great educational value to all who attend, and by offering these prizes for club work the boys and girls will have their interest in the fair greatly stimulated. The club exhibits are to be given a prominent place in the new Agricultural Building which is now being constructed on the state fair grounds. This department should be one of the most valuable and instructive of the whole fair. We urge that every boy or girl club member in the territory tributary to Hutchinson plan to compete for the many prizes offered by the Kansas State Fair. The

premium list giving the rules and regulations in full will be mailed on request by A. L. Sponsler, Secretary, Hutchinson, Kansas.

B. G. Welch, a banker of Kingman, Kansas, has sold 135 heifer calves to boys and girls of that community. His purpose is to increase the interest in handling cattle. He took the notes of these boys and girls at seven per cent

without any other indorsement than their own signatures. The calves were shipped in from Wisconsin and sold to the young people at cost. The notes are made out for eight months, at the end of which time the calves will all be collected and sold at auction, the owners being permitted to bid. The boys and girls are to receive all of the profit above the purchase price—\$75 a head, and the interest for eight months.

At Irving, Kansas, a patch of ground, offered for the season without rent, has been planted to corn, beans, and tomatoes, in connection with the work of the Marshall County Farm Bureau, and a community canning plant put in operation. The children of the community, under the direction of A. H. Christensen, local leader in charge of the work, will have a large part in helping to carry it on during the summer.



60 Days' FREE Treatment to Rid ALL Your Hogs of Worms

Mr. W. O. Gandy
President
Avalon Farms
Company

If I don't make your hogs make you more money—produce more pounds of pork for you from the same amount of feed and prove it to your own satisfaction—I don't want your money! I am thoroughly in earnest in this offer. I am making it to prove my faith in the remarkable value of Avalon Farms HOG-TONE. I want you to accept it.

Perry Stratton, the Berkshire Breeder, Accepted This Offer! So Should You!

did not seem to be doing well and began by feeding them Hog-Tone. In about five weeks' time you would not have believed they were the same hogs! They grew with the other hogs and when feeding time comes they are the biggest scrappers in the bunch."

Mr. Stratton, whose Berkshire farm near Momence, Ill., is famous throughout the land, writes: "Avalon Farms Hog-Tone, being in the liquid form, is so easily fed in the swill that you obtain the desired results without difficulty. I took a couple of shoats that

Accept This Offer! Think What It Means to You!

The price of hogs is going higher every day—and is bound to go higher from now on. There is a **serious** hog-shortage. Especially a shortage of high-grade porkers—**hogs absolutely free from worms—big hogs with sound, clean flesh!** "Nearly every hog is infested with worms," declares the U. S. Dept. of Agriculture. The malignant Thorn Head Worms—Stomach Worms—Liver Worms—Lung and Bronchial

Worms weaken the hogs—affect every sow's litter—make millions of hogs easy victims of cholera, scours, thumps, rheumatism, enteritis, gastritis—rob surviving hogs of nourishment their food should bring, cut down their weight and quality at marketing time. Use HOG-TONE—and rid your hogs of **all** worms—bring them all to market in high-grade, high-weight, worm-free condition.

AVAALON FARMS HOG-TONE

The Liquid Worm Killer and Hog Conditioner FOR ALL YOUR HOGS—SEND NO MONEY!

I will ship you one big \$1.00 bottle of Hog-Tone for each eight hogs in your herd—the day the coupon below, filled in, reaches this office. That will be sufficient to treat all your hogs 60 days or more, according to size. This will mean just 12½ cents per hog for all the treatment, and that treatment is guaranteed by me to free your hogs of all worms—to enable them to put on more weight from the same feed—to fill them with strength and vitality—to resist disease attacks. This is the same offer that these men named below grasped—and were glad they did.

"Sometime ago I received your AVALON FARMS HOG-TONE and used it on one pig that I separated from rest of the bunch which was a good average one. Sold the bunch at seven months old which averaged 226½. The one that I used your Hog-Tone on weighed 260 lbs. This hog was sold 38 days before the bunch."

EMERA H. MILBURN, Lapel, Indiana

"Find enclosed check for the Hog-Tone you sent me. It sure did the work on my pigs. The second day after the first dose the pigs began to pass worms—round ones. I tried out two hogs and they got awful fat. I am well satisfied with Hog-Tone." J. T. LEECH, Pampa, Texas

I Don't Want You to Send Me a Cent!

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Avalon Farms Hog-Tone is a highly concentrated liquid medicine for hogs only. It contains highly important medical ingredients which are liquids and which cannot be combined in Medicated Salts, Stock Foods or Condition Powders of any kind. Avalon Farms Hog-Tone is safe. It is easily mixed with any slops, with drinking water or dampened feed. It is only given every third day for the first six weeks and after that only once a week. 100 per cent strong.

It cleans out every kind of worms that infest hogs. By doing so, it gives protection to your hogs from easily contracting Cholera, Rheumatism, Scours, Thumps, caused by worms and indigestion, Enteritis, Indigestion and other diseases that destroy literally millions of hogs. A simply wonderful tonic and conditioner—gives hogs voracious appetites, aids digestion, helps them thrive, grow and put on fast increases of flesh. Splendid for pregnant sows—the litter is stronger and thrifter, too.

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Canada extends to you a hearty invitation to settle on her **FREE Homestead lands of 160 acres each** or secure some of the low priced lands in Manitoba, Saskatchewan and Alberta. This year wheat is higher but Canadian land just as cheap, so the opportunity is more attractive than ever. Canada wants you to help feed the world by tilling some of her fertile soil—land similar to that which during many years has averaged 20 to 45 bushels of wheat to the acre. Think of the money you can make with wheat at over \$2 a bushel and land so easy to get. Wonderful yields also of Oats, Barley and Flax. Mixed farming in Western Canada is as profitable an industry as grain growing.

The Government this year is asking farmers to put increased acreage into grain. There is now a great demand for farm laborers to replace the many young men who have volunteered for service in the war. The climate is healthful and agreeable, railway facilities excellent, good schools and churches convenient. Write for literature as to reduced railway rates to Supt. of Immigration, Ottawa, Canada, or to

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Canadian Government Agent.



Getting Farm Work Done

A WISCONSIN farmer who year in and year out profitably employs two men on his 160-acre farm, has been induced to tell how he gets his farm work done. The agricultural extension division of the Wisconsin University prints his story as a circular. It will suggest many helpful things to other farmers having similar problems to solve. He says:

"Every paper I take up has something in it about the great need for more food and I guess there is something to it, for we must feed a lot of people in Europe as well as our own growing population.

"Naturally enough I feel the need of having more to sell at the prices which conditions seem to promise. I have been thinking several cold days this spring, as I rode the gang plow behind four big horses, plowing sod for corn, what I could do to help out.

"One of my neighbors said one day, 'What's the use of plowing in such cold weather? We are going to have a late spring and there will be lots of time to plow.'

"But I just told him to remember how cold it was last spring until along about corn planting time, and how it turned off warm and he still had to plow his big sod field before he could plant it. I asked him if he remembered how the horses on the gang plow lathered and puffed and had to rest part of the time because the sod had grown tough and the weather was warm and the horses hadn't been hardened up by continuous work.

"I made that mistake once, too, but you bet I won't do it again if keeping the plow going whenever the ground is fit to plow will prevent it. Those cold days were great for plowing sod and hardening up the horses for the summer's work.

"I have been trying for several years to work out a plan that will help in getting the work done. The great thing is to get everything done at the right time and keep the odd jobs out of the way of the field work. The plan which has been helpful to me may be useful to others who haven't a plan as good or better, and if anyone has a better one I want to know about it for I'll adopt it at once. I believe every man who reads this can improve the plan, and I wish he would.

"Uncertainty of the weather and the shortness of the season in which to do a lot of things make farm management difficult. This plan is one for keeping pace with the seasons and making the most of good weather.

"Rule 1.—Field work must have all the time the weather and soil conditions will permit us to give it. This is the work which determines the amount of food we can grow. Nothing, except necessary work like feeding and milking, should be allowed to take us from the field work, and it should be planned where possible to get the milking done and keep the horses working ten hours a day. The best farmer is the one who gets the other work out of the way and keeps the teams moving whenever the land is in condition for field work.

"Rule 2.—There is a lot of work which I call wet-land work; in this class falls the cutting of weeds and brush in the fence rows, the repairing of fences, the cleaning up of the wood lot, the repairing of buildings, the laying of concrete walks, the digging of trenches for laying water pipes from the well to the house and to the barn, and a score of other tasks which should be jotted down in a notebook as they are thought of, and done when field work cannot be done. The rule is: 'Plan no wet-land work when there is work in the field which can be done.'

"Rule 3.—There is a great variety of work which we can do under shelter and which we should do on rainy days. Shelling seed corn, mending the harness

and repairing tools are typical examples. If these matters are not cared for in rainy weather, they are in danger of stopping field work just when the time of men and teams is worth the most. It is necessary to have some means of thinking of these tasks when the rainy days arrive or we will let these golden opportunities slip by unimproved.

"One farmer I know keeps his notebook in his pocket to jot down the tasks which can be performed on a rainy day. This enables him to plan quickly the work for a rainy day. In planning rainy day work, do first the jobs which are in danger of getting in the way of the next dry weather work. The rule is to leave no rainy-day work to be done when it is not raining, for in this climate our profits are limited by the amount of outdoor work we get done.

"We farmers work with Nature and must keep pace with her if we are to expect good crops. I have often thought of my work as 'rush work' and 'get-out-of-the-way work.' My problem is to make all the odd jobs which can be done most any time of year if I get at it, keep out of the way of the field work and the regular work in the dairy.

"Rule 4.—Feeding and milking dairy cows, sowing oats, planting and cultivating corn, and harvesting oats, are examples of work which suffer if not done at the right time. If we neglect our cows we shall soon have no milking to do. If we delay sowing oats until the warm, dry days of late spring, we will have a light harvest, and if we put off cultivating corn for one week after it is large enough to cultivate, the fields will be weedy and the crop poor. This class of work is rush work on my farm, because the profits depend upon doing as much of it as possible and doing it well. In rush seasons we put in long days, expecting to ease up on rainy days or when the rush is over. At these rush times we follow the rule, 'Do nothing today which can as well be put off until tomorrow.'

"Rule 5.—Work which we can do any time within a wide latitude requires our very special attention, because the time comes when this work cannot be put off longer and it may stop the rush work. For example, seed corn may be tested and shelled any time after it is thoroughly cured, but if the work is neglected until the fields are ready to plant, then that most profitable work in the cornfield may be delayed. This may be called 'get-out-of-the-way work.'

"It takes more planning, more thinking and more force of character to do this work in seasons when there is no rush work than it does to concentrate on rush work, for the season calls us to the rush work, while it is only by using our heads that we can get the other sort of work out of the way in advance.

"The rule I try to follow when there is no rush work to be done is found in the old phrase, 'Put off nothing until tomorrow which can be done today.' We must apply this rule methodically and with industry if we are going to get ahead very fast. My notebook in which I jot down the odd jobs which should be done has proved helpful to me.

"These rules have been working themselves out in my mind during many years of experience. They have been useful to me. If they help you I shall be well paid for the trouble of writing them out."

Helping Our Neighbors

It is too late now to do much planting for increasing production. Most farmers already have all the crops planted that they can cultivate right. Some have more than they can take care of. In some cases would it not be patriotic for neighbors who have their own fields clean and cultivated to spend a little time visiting the weedy fields

of neighbors who have gotten behind with their work—taking tools with them and making the land give its best yield? Some of us need encouragement when the weeds are hiding the crops, and a few "parties" of this kind would help to change crop failures to profitable returns. It might also improve the patriotism of all concerned.

It has been suggested that "we can often help our country best by helping our neighbors."—J. E. PAYNE, Oklahoma.

Fight Pernicious Weeds

As a country gets older, weeds become a more serious handicap to crop production.

Some are easily controlled, while others are almost impossible to eradicate. It is necessary to be constantly on the lookout for new and dangerous weeds. Pernicious weeds are commonly introduced on the farm by the sowing of impure seed. Often a good stand of alfalfa has been ruined by vigorous weeds which choked it out before it became well established.

Weeds are primarily a robber crop. When growing with crop plants, they rob the soil of much food and moisture which should be used by other plants. Weeds are usually hardy and prolific. They will thrive especially well in carefully prepared soil if given a chance. Unless kept down by proper cultivation and crop rotation they will soon overrun the land. Weeds are eradicated at great expense. Good clean seed should always be sown—the best obtainable is none too good.

A large number of weeds are common in Kansas. Practically all of them are familiar to the farmer and gardener. Some of the most troublesome are bindweed, dodder, curled dock, buckhorn, fox-tail, Russian thistle, crab grass, chicory, and pigweed.

The botanical department of the Kansas Experiment Station employs a seed analyst who is kept busy with seed testing work. Whenever in doubt as to the character of a new weed, send a specimen to this department. Seed samples will also be inspected and a report made as to the weed seeds contained and their character.

The bindweed, a deep rooting perennial plant, is the most difficult to eradicate. Its roots send up shoots from a depth of two feet. When left to itself it spreads rapidly in a field—as much as ten feet in a season. It will thus be seen that unless radical and prompt measures are adopted for its eradication, it is only a question of time before it will take an entire field. As a matter of fact, crops cannot be raised at all where the land is infested with a heavy

stand of bindweed. We discussed this most pernicious weed at some length in our issue of June 16.

Time to Cull Herds

Owing to present high prices for feed and labor, culling dairy herds of low producers is needed more than ever before. Inferior cows lower herd profits, but they can be detected by individual milk and butter records.

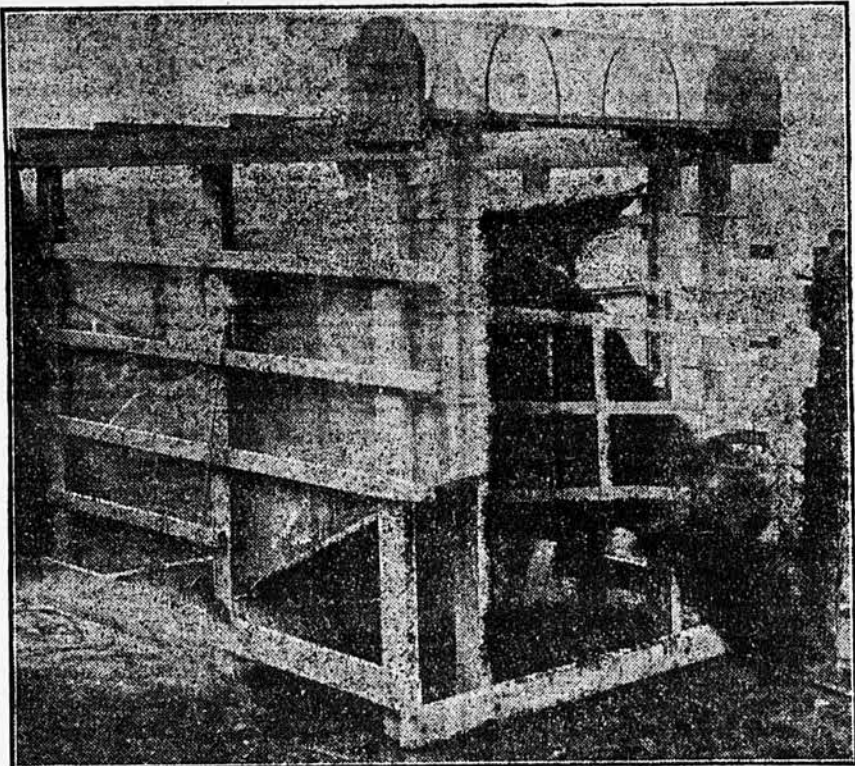
Low yields mean small profits or more often actual losses. The cost of milk production was figured at 13 cents a gallon by the Ohio Agricultural Experiment Station for seventy-six yearly records from thirty-one dairy herds during 1910 to 1916. Feed, labor and supplies have since increased about 30 per cent, making the cost at least 16 cents a gallon. These herds are all above the average in production. Unless the cow is a good producer, the cost of milk production will be much above this figure and a consequent loss. All cows not up to standard should be culled out and sold for beef.

Individual records of each day's milk and the amount of butter produced will show up the questionable animals. Scales and the Babcock test are finding a greater place every day on dairy farms. Private and official testing are becoming more popular because they show where profits come from and what cows cause any losses. A standard is thus set for building up future profitable dairy herds.

Trapping Flies on Dairy Farm

While driving from Carlyle to Colony a few weeks ago we stopped at a farm where we were told a fly trap was in operation. The cows were just being brought in from the pasture and seemed to know what the trap was for. In the picture a cow is shown just coming out of the trap. It is a most ingenious contrivance and from what we could observe by watching it work it catches most of the flies on the cows. The owner of these cows said that after they have got the flies cleaned up on the farm it is not necessary to put the animals through the trap more than two or three times a week. The principle employed is undoubtedly the correct method of attacking the fly problem. They are caught in the trap soon after they hatch and perish before they have had a chance to deposit their eggs. We understand this trap has been successfully used on a good many farms in that section.

Really there is nothing to canning fruit and vegetables except care, cleanliness, fresh products, jars and heat.



FLY TRAP IN OPERATION.—FLIES BEING TRAPPED AS COWS GO TO BARN FOR MILKING

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Hence the great mistake of putting off the purchase of a New De Laval Cream Separator in summer, whether you already have a poor machine or none at all, and every dairy farmer should keep in mind not only that a De Laval will pay for itself in a few months but may, if desired, be bought on such liberal terms as to actually save its own cost while being paid for.

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Alfalfa For Work Horses

THE value of alfalfa as a work horse ration is not fully appreciated. In a recent circular issued by the State Live Stock Registry Board it is stated that there is approximately thirty-five per cent more available protein in one pound of alfalfa hay than there is in one pound of shelled corn. This fact emphasizes the necessity of looking upon alfalfa hay as a concentrate rather than a roughage.

Allowing the work horse to eat large amounts of alfalfa is not only wasteful but dangerous, for the overloaded and distended digestive apparatus crowds upon the heart and lungs, making it difficult for the horse to breathe freely, thus depriving him of a sufficient amount of oxygen when at hard work.

Furthermore, practically all the protein that is not utilized by the body must be eliminated through the kidneys. This results in hyperstimulation or even inflammation of these organs and excessive urination.

Feeding excessive amounts of protein also has a cloying effect upon the whole animal system, resulting in impaired nutrition, filling and swelling of the legs and hocks, inability to stand hard work, excessive sweating, and impaired respiration.

However, the feeding of from four to ten pounds daily of alfalfa hay that has not been cut until quite mature, and that is free from dust, mold, or smut, has proved to be a very satisfactory practice.

Whenever possible horses fed alfalfa hay should also have access to prairie, cane, or kafir hay, straw, or corn fodder to add bulk to the ration and satisfy the craving that always results when very rich feeds are fed for long periods of time.

When compelled to use alfalfa only as the roughage portion of the ration, one should not feed more than one pound daily per hundred pounds live weight.

The use of mature, well cured, clean alfalfa hay will reduce the cost of feed very materially when substituted for a part of the prairie or timothy hay portion of the ration. One pound of alfalfa hay may be substituted for one-half to two pounds of prairie or timothy hay until from one-third to one-half of the prairie or timothy hay has been replaced by alfalfa hay, the amount depending upon the quality of the alfalfa.

Treating Cattle for Bloat

Bloating in cattle or sheep is a common ailment and one with which every live stock man is liable sooner or later to have experience. The disease is usually caused by the eating of large quantities of green feeds, such as alfalfa, clover, or green corn. These feeds ferment readily and produce large quantities of gas. Sudden changes in feed or inflammation of the rumen, or paunch, may cause bloat. Dr. J. H. Burt, assistant professor of veterinary medicine at the Agricultural College, gives the following information and offers suggestions for the treatment of bloat:

"The paunch or rumen occupies the left side of the abdominal cavity, hence the distension of the abdominal wall by the collecting of gas in the rumen occurs principally on the left side. The gas forms quickly and the distended wall is highly elastic.

"The animal stops eating and ruminating, the ears droop, and the back may become arched. In the more severe cases the walls of the abdomen are distended on both sides, the respiration is quickened, and the mucous membrane congested—these are the usual symptoms. Death results from asphyxia, caused by the distended paunch interfering with the movement of the lungs.

"This form of acute indigestion can be largely prevented by practicing preventive measures. All changes of feed should be gradual, especially if the ration fed is heavy, or the new ration consists largely of green succulent feed.

"Cattle pasturing on green clover or alfalfa should be kept under close observation. It is not advisable to pasture cattle on clover or alfalfa which is wet with rain or dew.

"Bloating usually can be quickly re-

lieved by puncturing the wall of the paunch with the trocar and canula. The operation is simple and generally is not followed by unfavorable results. The instrument is plunged through the walls of the flank on the left side, midway between the border of the last rib and the point of the haunch.

"The trocar is then withdrawn from the canula. After the gas has escaped through the canula, the trocar is replaced and the instrument is removed. The instrument should be thoroughly boiled after being used, and kept clean until again needed.

"In bad cases it may be necessary to remove part of the food through an opening made in the side. This will require the services of a veterinarian.

"It is advisable to wash the skin with some good antiseptic before inserting the instrument. In bad cases it is sometimes well to give the cow a dose of Epsom or Glauber salts dissolved in plenty of water. One should add two to four ounces of turpentine, or three or four teaspoonfuls of charcoal. This will absorb the gases accumulating in the paunch."

Work horses are often sick on Monday. Investigation of such cases has usually brought out the fact that the horse has been fed as much grain on Sunday when at rest as when at hard work. Reducing the grain feed one-fourth on days the horse does not work prevents this sickness, known as azoturia.

VISIT TO AGRONOMY FARM

(Continued from Page One)

jects of the Experiment Station. There are in the crop nursery over seven hundred different strains and varieties of grain. Many of these have been introduced from foreign countries in other states, but the greater portion of them have originated at the Kansas station. The visitors were shown a twenty-acre field of the variety of Kanred wheat which was originated at the Kansas station. This variety has been tested at the station for the past six years under field conditions and has produced on the

The breeding and improvement of average over four and one-half bushels more to the acre than the ordinary Turkey wheat. Last year it was planted on the farms of twenty-two farmers in the wheat belt of Kansas and produced on an average six bushels more to the acre than the variety regularly grown by the farmer. A ten-acre field of black-hulled kafir which has been bred up on the station farm was seen, also a field of Kansas Orange Sorghum produced at the station by head selection methods.

Soil fertility experiments are attracting more interest as the state gets older. One hundred and fifty one-tenth acre plots are devoted to working out practical cropping systems and methods for maintaining the fertility of the soil. This work is planned to cover a long period of years. Corn, wheat, alfalfa, and other crops are being grown continuously and in rotation. The visitors were told that last season the yield of wheat on ground cropped continuously for ten years was less than seven bushels to the acre, while that grown in rotation with alfalfa and corn produced at the rate of eighteen and one-half bushels to the acre. The application of barnyard manure at the rate of ten tons once in four years increased the yield of corn nine bushels to the acre as compared with corn grown continuously, and six bushels to the acre as compared with corn grown in rotation but without the barnyard manure. A similar application of manure to wheat increased the yield almost 200 per cent as compared with plots where wheat was grown continuously without manure.

This picnic meeting of the Farmers' Union was pronounced a complete success by those present and it was decided to make it an annual event. Visiting the farm in this way gives a fuller realization of what the Experiment Station is trying to do, and a mutual understanding between the people for whom the station is conducted and the station authorities is sure to increase its usefulness.

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FREE! This Interesting Book Shows Every
Type of Vessel in the Navy and Gives
Full Text of the President's Great War Message



Greatly Reduced. Actual Size 10 x 13 Inches.

"Our Navy" should be in every patriotic American home. Besides containing pictures, just released by the censor, of every type of vessel in United States service and scenes of life on board the ships, it gives the full text of President Wilson's Great War Message to Congress. This document should be read, studied and preserved, as it not only tells why we are at war and what it is hoped will be accomplished, but it defines Americanism, and reading it will make everyone a better citizen, prouder than ever that the country over which waves the star-spangled banner, is his country. The book also contains a new copyrighted photograph of President Wilson. It measures 10 by 13 inches, is permanently bound and beautifully printed. Thousands of these books have already been distributed.

Yours Is Ready---Send for It TO-DAY

By special arrangement with the publishers, we have been able to secure the exclusive right to distribute this book in this territory.

USE THE COUPON

There is absolutely no charge for the book. IT'S FREE. Kansas Farmer is anxious that one be in every home. We'll even pay the postage. Merely send in your subscription for one year with One Dollar to Kansas Farmer, and a copy of "Our Navy" will be sent you ABSOLUTELY FREE.

No matter when your subscription expires, you will want to take advantage of this big special offer. The supply of "Our Navy" is limited. Play safe. Send in your order at once. Today.

KANSAS FARMER,
Topeka, Kansas.

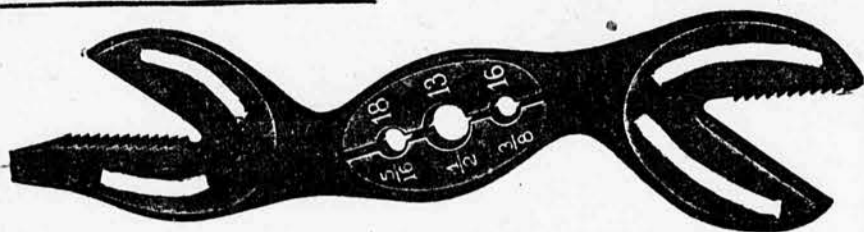
Gentlemen: Inclosed is One Dollar. Mail me at once a copy of "Our Navy" and enter my subscription for one year to Kansas Farmer.

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ALLIGATOR WRENCH AND HANDY TOOL FREE



The Alligator Wrench requires no adjustment; simple; always ready for use; never slips. Works in closer quarters than any other wrench. It is light, strong, compact. Easily carried in the pocket.

THREE DIES FOR CUTTING or cleaning threads in bolts used on farm machinery. It is drop-forged from the best steel, scientifically tempered, nothing to get out of order.

OUR SPECIAL FREE OFFER We will send the handy Alligator Wrench free and postpaid to all who send \$1.00 for a one-year subscription to Kansas Farmer, and 15 cents extra to pay packing and postage—\$1.15 in all. Address
KANSAS FARMER --- --- **TOPEKA, KANSAS**

Classified Advertising

Advertising "bargain counter." Thousands of people have surplus items of stock for sale—limited in amount or numbers hardly enough to justify extensive display advertising. Thousands of other people want to buy these same things. These intending buyers read the classified "ads"—looking for bargains. Your advertisement here reaches over 60,000 farmers for 5 cents a word per week. No "ad" taken for less than 60 cents. All "ads" set in uniform style, no display. Initials and numbers count as words. Address counted. Terms, always cash with order.

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

HELP WANTED.

WANTED—MAN AND WIFE TO TAKE charge of farm from July 10 until November 1. Address Joe Bell, McDonald, Kansas.

FARMERS, 18 OR OVER, WANTED (men-women) U. S. Government jobs. \$90 month. Hundred vacancies. Common education sufficient. Write immediately for free list of positions. Franklin Institute, Dept. E-82, Rochester, N. Y.

REAL ESTATE.

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

COWS, FORD OR OTHER LIGHT TOURING car in exchange for town property in Hastings, Oklahoma. R. E. Prather, Lincoln, Missouri.

FOUR SECTIONS GOOD FARMING AND grazing land, Lincoln County, Colorado; one to three miles from railway. About half tract chocolate loam soil, balance sandy loam. Good stream touches two sections. Very mild winters. Trees along stream make fine shelter. Ideal ranch for mixed farming—will pasture 400 to 500 head of cattle all year. Another section splendid chocolate loam soil four miles from town—good wheat land. Will sell single sections or whole tract, if taken soon \$12.50 per acre. Reasonable cash payment, balance to suit. Will pay for itself in short while if farmed right. Most healthful and ideal climate in which to live. M. Sigbert Awe, Minneapolis, Minn.

CATTLE.

120 HEAD OF HIGH GRADE HOLSTEIN cows and heifers, priced for quick sale. H. F. McNutt, Oxford, Wisconsin.

FIVE HIGH-GRADE GUERNSEY HEIFERS from tested dams with cow testing association records. J. W. Marley, Oswego, Kansas.

REGISTERED GUERNSEY BULL FOR sale. Good condition, proven breeder. Sixteen months old. Bargain if taken at once. M. I. Patterson, Victoria, Kansas.

REGISTERED HOLSTEIN BULL READY for service. Two of his dams averaged 100 pounds milk in one day and 35 pounds butter in seven days, officially. \$100. Wisconsin Live Stock Association, Appleton, Wis.

HIGHLY BRED HOLSTEIN CALVES, either sex, 15-16ths pure, crated and delivered to any station by express, charges all paid, for \$25 apiece. Frank M. Hawes, Whitewater, Wis.

FOR SALE—VERY CHOICE HIGH- grade Holstein calves, either sex, three to six weeks old, at \$20 per head, crated for shipment. Or if you want dairy cattle of any age, I will buy them at a commission from the best herds in Southern Wisconsin. Albert M. Hanson, Whitewater, Wisconsin.

TRACTORS.

40-50 AVERY TRACTOR AND PLOW rig. Shidler Brothers, Lake City, Kansas.

HORSES AND MULES.

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

PLEASE MENTION KANSAS FARMER WHEN WRITING TO ADVERTISERS

BUSINESS CHANCES

FREE FOR SIX MONTHS—MY SPECIAL offer to introduce my magazine, "Investing for Profit." It is worth \$10 a copy to any one who has not acquired sufficient money to provide necessities and comforts for self and loved ones. It shows how to become richer quickly and honestly. Investing for Profit is the only progressive financial journal and has the largest circulation in America. It shows how \$100 grows to \$2,200. Write now and I'll send it six months free. H. L. Barber, 431.28 W. Jackson Boulevard, Chicago.

DOGS.

FOR SALE—COLLIE PUPPIES, HAND- some, useful. \$7. Frank Barrington, Sedan, Kansas.

AIREDALES AND COLLIES—GREATEST of all pups. Grown dogs and brood matrons. Large instructive list, 5c. W. R. Watson, Box 128, Oakland, Iowa.

CANARIES.

FOR SALE—CANARIES, MATED PAIRS, beautifully yellow. Some crested. Mrs. Iver Christenson, Jamestown, Kansas.

WANTED

WANTED—SECOND HAND ENSILAGE cutter. John Haldeman, Route 3, Hope, Kansas.

CANARIES WANTED—WRITE AGE, kind, price, etc. Missouri Squab Company, St. Louis, Mo.

WALNUT LOGS WANTED, FOURTEEN inches and up. Give number and size first letter; distance to R. R. W. A. Schwartz, Louisburg, Kansas.

THE STRAY LIST.

TAKEN UP—BY BARNEY McCABE, RE- siding seven miles north of Iola, Allen County, Kansas, June 12, 1917, one bay mare, about twelve years old. The mare has a white face, black mane and tail, three white feet and some harness marks. Appraised at \$40. Geo. Seymour, County Clerk, Allen County.

FARM AND HERD.

The amendments to the by-laws submitted on May 15 to the members of the American Jersey Cattle Club for a vote have resulted in the adoption of a new schedule of fees covering the registration of domestic-bred Jerseys. The new fees will go into effect on September 17, 1917, and will be as follows: Females one year old or under, to members \$1 each, to non-members \$2 each; females over one year old and not more than two, to members \$2 each, to non-members \$3 each; females over two years old, to members or non-members \$10 each; males one year old or under, to members \$2 each, to non-members \$3 each; males over one year old and not more than two, to members \$3 each, to non-members \$5 each; males over two years old, to members or non-members \$10 each.

If on the market for pure-bred stock, read KANSAS FARMER live stock advertisements. You will find what you want.



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

All right use of life, and the one secret of life, is to pave ways for the firmer footing of those who succeed us.—**GEORGE MEREDITH.**

Summer Comfort for Baby

Keep the baby warm, but not too warm. The lighter weight shirts with little or no wool are best for summer weather.

Have a loose, warm, light-weight wrapper or sack that can be slipped on in the cool of the day and be easily removed when it becomes hot.

All garments should be loose with no bands which might blind and retard the circulation.

contains nothing that will injure the leather.

Even if given ail of this care, shoes will soon look old and will be shapeless if the heels and toes are worn off and not rebuilt. When the heels or toes wear down, the shoes should be taken to a shoemaker for rebuilding.

Neglected shoes always spoil one's appearance, while well cared for shoes greatly improve the appearance of the simplest dress or suit.

White canvas shoes should be brushed frequently with a stiff brush to remove the dust. The brush should be used always before cleaning and its use after applying most cleaners will add to the appearance of the shoes.

Food Insurance

New discoveries in canning and drying fruits and vegetables make it possible to save many more of these for winter use than we have saved in the past. How many of us have saved Irish and sweet potatoes by drying when we have found them beginning to rot? We have sorted these out and have tried to use them first, but even this method permits a waste, for all cannot be used before decay takes place. Through the use of the drier it is possible to save a much greater per cent of the potatoes, for they can all be dried at once before the rot spreads.

Saving surplus fruits and vegetables should be the practice every year, but especially this year when we are facing a food shortage that can be averted only by saving foods that we have not saved before, and using them to the best possible advantage.

Many bulletins and circulars are being issued at this time in the interest of food economy and conservation and it is well to give these the consideration due them, for in them will be found many practical helps.

Two such bulletins have just been issued by the U. S. Department of Agriculture—"Farmers' Bulletin No. 839, "Home Canning by the One-Period Cold-Pack Method" and Farmers' Bulletin No. 841, "Drying Fruits and Vegetables in the Home." The subject matter is clearly written and many pictures are used to show the work actually being done. The blanching process for canning is illustrated, also the packing in the jars, and the cooking. All this will be valuable to the woman who is using these processes for the first time. In the drying bulletin the preparation of a number of vegetables, such as green peas, carrots, spinach, and potatoes, is shown, also types of driers, and containers for packing the dried products so they can be kept safely out of reach of insects. Several pages of this bulletin are devoted to the different ways of cooking dried fruits and vegetables.

Both of these bulletins can be obtained free by writing the Division of Publications, U. S. Department of Agriculture, Washington, D. C. They are published for the benefit of the general public and because of their practical value they should be in every kitchen.

Care of Shoes

Well cared for shoes will not only wear much longer than will neglected ones, but will look much better as a result of the care given them.

Shoes that are not worn regularly will keep their shape and will not become wrinkled if stuffed with soft paper. Wooden shoe trees can be placed in the shoes more quickly than can the paper, but the paper is a very good substitute for the shoe tree and is always easy to get. Shoes should be dusted before being put away and should be kept clean and polished. The polish should be selected carefully to make sure that it

Need for National Plea

Criticism of the national and state pleas for the saving of food is heard everywhere. Before criticising any policy of this nature let us remember that we are not the only ones who are asked to help carry it out. Perhaps we are now and for years have been practicing the strictest economy, but there are many people who do not know the meaning of the word, and the help of these must be enlisted if the greatest good is to be accomplished. It would be impossible to urge these personally to change their ways, and the only means of reaching them is by sending the warning broadcast.

If we have not been extravagant, let us interpret the warning as a sanction of our methods and an urgent call for others to follow in our ways, rather than as a criticism of our methods, and let us make a study of the need in order that we may intelligently contribute towards it. This is the broad way of looking at the matter and the way that will help our government and our allies. It is only by each feeling it his duty to have a part in the national conservation of food that the fight on food shortage can be won.

True Spirit of Sacrifice

It is hard for us in America to appreciate fully the meaning of the warning against food waste, especially to the extent that every slice of bread that is wasted means that someone must go without the "staff of life." When we have had a part in the war as long as our allies have now known its terrors and the sacrifices that it makes necessary on the part of those at home, we will understand better the stories we are now hearing of individual sacrifices being made by our neighbors in Europe.

A friend recently told us of a disheartening circumstance in connection with the entertainment of a young English woman who was in America on business in the interest of our allies. A simple dinner had been prepared, consisting of an inexpensive cut of meat, potatoes, one other vegetable, a fruit salad, bread and butter, coffee, and a light dessert. Throughout the meal the young English woman seemed very depressed in spite of her efforts to enter into the conversation and be agreeable. This attitude was so noticeable that her hostess felt hurt until at the end of the meal she learned the reason for the apparent lack of interest in the occasion she had looked forward to with so much pleasure. When there was an opportunity the young English woman said it was almost impossible for her to partake of so lavish a meal, knowing the economy that is being practiced in her own country and the great need for it.

Undoubtedly the time will come when we in America will feel called upon to make as great sacrifices as the European countries are now making, and we can best prepare for adjusting ourselves



to such conditions by beginning now to supply needs in the way of food rather than satisfying the cravings of our appetites which often far exceed the needs of the body.

Make baby's dress as simple as possible, with little trimming. Lace or starched ruffles in the neck irritate the tender skin. It is more comfortable for the baby and easier for the mother if no starch is used in laundering baby clothes.

Before putting your stove away for the summer, all rust should be removed by washing in vinegar to which salt has been added, using a handful of salt to a pint of vinegar. When the stove is dry, apply polish. A few drops of turpentine will give brilliancy to the polish and make it more lasting. Finally, wipe the stove and lengths of pipe to be stored with a rag dipped in paraffin oil. This will protect the stove from rust

and save you a great deal of trouble next fall.

The war on flies should not be neglected for a single day. A day is ample time for these carriers of deadly disease to undermine the health of all members of the family.

War-Time Cake

- 2 cupfuls sugar
- 2 cupfuls milk
- 3 cupfuls flour
- 2 teaspoonfuls baking powder
- Pinch of salt

Bake in a long pan, spread with butter and sprinkle with sugar and cinnamon mixed. This recipe has been tested and has proven itself worthy a place among the recipes.

Boiled custard flavored with peach leaves is delicious. When the custard has reached the boiling point, hold a few clean peach leaves in it for a few minutes. This is an old, old recipe well worth reviving, as many of them are.

FASHION DEPARTMENT—ALL PATTERNS TEN CENTS

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



No. 8061—Girls' Apron: Cut in sizes 4 to 12 years. Fashion and little girls remain true to aprons, especially when made like the one in this picture, with sleeves extending to neck edge, the body part in smooth fit and with plenty of fullness in the skirt section. No. 8066—Ladies' Long Coat: Cut in sizes 36, 40 and 44 inches bust measure. The lines of this coat are those of the smart, practical coat for general wear. Such garment is indeed timely now that the blustery days are a reality. The deep round collar may be developed in fur cloth or self material—unless velvet is favored—with sleeve cuffs matching. No. 8073—Children's Dress: Cut in sizes 4 to 10 years. In keeping with a sensible style standard for children, this dress is made with a tucked waist that has bib effect front and the attractive duchess closing, using large eyelets or rings and ribbon. A half belt at back is arranged at normal waist, but the tab ends of the waist fronts make a front belt unnecessary. No. 8074—Misses' Dress: Cut in sizes 14 to 20 years. More than passing smart, yet designed after the manner of the gracefully simple frock that has so many followers. The treatment of the waist fronts that extend in tab effect is new and novel; the two-gore skirt has its attraction in being plaited at center front. No. 8084—Ladies' Skirt: Cut in sizes 24 to 32 inches waist measure. The smart touches that add to the charm of this skirt are the odd pockets and side yokes. A slightly raised waistline is used and the two gores are gathered at the top where the yokes are joined. The lower edge in size 24 measures 3 yards. No. 8094—Misses' Dress: Cut in sizes 14 to 20 years. One of the most talked of styles for the winter is the Redingote. This one has its waist in cutaway or vest effect below a single button closing and shows decidedly the charm of simple lines. In contrasting goods the new collar makes direct appeal. The two-gore skirt is separate.

We Need Your Help In a Critical Time

KANSAS FARMER READERS CAN BE OF GREAT HELP TO THEIR FAVORITE FARM PAPER NOW

KANSAS FARMER comes to you through the mails. It is distributed under the jurisdiction of the Post Office Department, which has made some new rulings which the publishers of KANSAS FARMER must observe in respect to the procuring and continuation of subscriptions. During these critical times the rulings may be changed at any time, at the option of the Post Office Department.

The Postmaster General has made a ruling which makes it necessary that certain classes of subscriptions may not be carried after expiration. It has always been customary and permissible for the publisher to carry, at his option, subscriptions for a short time after they expire, in order that the subscriber might have an opportunity to renew his subscription and thus prevent his missing any copies of the publication.

The new rule, however, requires that this practice must be stopped.

We feel that you want KANSAS FARMER, because it is strictly a Kansas paper and is striving to help you in your work, and you certainly do not want to miss the good things that this old paper carries each week for the betterment of farm conditions. We do not want to discontinue your paper. We are very anxious to retain every one of our subscribers. In order to do so, we must urge that you send us your renewal subscription at once.

Here are four distinct offers which we submit to you. We will greatly appreciate your acceptance of any of them:

1. May we immediately have your renewal for one year at \$1.00?
2. If you send us \$2.00, we will renew your subscription for three years—a saving of \$1.00.
3. If you will send us the subscription of two of your neighbors for one year for \$1.00 each—\$2.00 in all—we will renew your own subscription one year without additional charge in appreciation of this service rendered.
4. If you will send us the subscriptions of four of your neighbors at \$1.00 each—\$4.00 in all—we will extend your subscription for a period of three years without additional charge.

We have provided a special blank below to be used in sending in your renewal subscription or the subscriptions of your neighbors. May we again urge you to co-operate with us by accepting one of the offers provided?

Special Club Subscription Blank

KANSAS FARMER, Topeka, Kansas.

I enclose \$..... for.....subscriptions to KANSAS FARMER for one year each. For this service I am to receive KANSAS FARMER for { 1 year } { 3 years } without additional charge.

Name

Address

Name

Address

Name

Address

Special Renewal Blank

(To be used in case Club Offer is not accepted.)

KANSAS FARMER, Topeka, Kansas.

Enclosed please find { \$1.00 } { \$2.00 } to pay for my renewal to KANSAS FARMER for { 1 year } { 3 years } as per offer above.

Name

Post Office

R. F. D..... Box..... State.....

SHEPHERD PONY FOR SALE

Shetland pony mare, not registered, coming three years old, bred to a registered Shetland stallion. Broke to ride. Will sell at a bargain if taken soon. Address

D. CARE KANSAS FARMER.

POLLED DURHAM CATTLE.

FOR SALE—Two red and white bull calves, 10 months old, sired by Chief, a son of True Sultan. Priced to sell.

D. C. VAN NICE - RICHLAND, KANSAS
(On Mo. Pac. Ry., 17 miles S. E. of Topeka)

HAMPSHIRE HOGS

HALCYON HERD HAMPSHIRE HOGS
Best breeding, best type. Stock for sale.
GEO. W. ELA, Valley Falls, Kansas

GUERNSEY CATTLE.

Choice Guernsey Calves—Ten heifers, 15-16ths pure, beautifully marked, from heavy-producing dams. \$20 each. Satisfaction guaranteed. L. Terwilliger, Wauwatosa, Wis.

PURE BRED POULTRY

PLYMOUTH ROCKS.

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

BARRED ROCKS—SEVENTY-THREE premiums. Breeders for sale. Eggs half price. Mattie A. Gillespie, Clay Center, Kansas.

SEVERAL BREEDS.

BUFF DUCKS—DARK CORNISH CHICKENS. Sunnyslope Farm, Stillwater, Okla.

FIVE LARGE FLOCKS UNDER ONE sale management, R. C. Reds, Barred Rocks, Silver Wyandottes, White Wyandottes and White Leghorns, all on separate farms and specially bred by experts. Prize winners in all breeds. Eggs, \$5 per hundred, \$1.50 per setting. Order from ad. Address E. H. Hartenberger, Route 4, Box 1, Newton, Kan.

MINORCAS.

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

TURKEYS.

WHITE HOLLAND TURKEYS, 39-pound toms. Eggs, \$3.00, eleven. Mrs. S. F. Crites, Florence, Kansas.

POULTRY WANTED.

MORE MONEY FOR YOUR EGGS AND poultry when shipped direct. Coops and cages loaned free. The Copes, Topeka.

WHEN WRITING TO ADVERTISERS
PLEASE MENTION KANSAS FARMER

FARM AND HERD.

J. W. Berry & Son, of Jewell City, Kansas, are among the live boosters for Jersey cattle in Kansas. They have succeeded in building up one of the largest herds in the state and one that is noted for rich breeding. Production has been the watchword with this firm and for years they have been breeding Jerseys with that end in view. All herd material added has been of record breeding and their recent purchases of breeding stock are the class of Jerseys that have made the breed famous as profitable dairy cattle. The following letter from this firm will be of interest to Jersey breeders: "Jewell City, Kansas, June 23, 1917. Kansas Farmer, Topeka, Kansas: During the month of May I attended a number of cattle sales in Shelby County, Kentucky, the Jersey Isle of America, and brought home fifty head of yearlings, mostly of You'll Do blood. I am greatly impressed with the beauty, vigor and utility of the You'll Do blood. I have visited the Jersey sections of this country and I have never seen the equal of the animals from this great sire, Oxford You'll Do. I think he is the greatest sire now living. I think none of his progeny sold under \$1,000 at the Cooper sale, and some as high as \$4,000. I bought all of the yearlings at J. A. Stanley's sale and I am now breeding them to a You'll Do bull. I have about thirty head of the granddaughters of You'll Do and am breeding them to a You'll Do bull. J. A. Stanley had the largest bunch of useful cows I have ever seen in one barn, and the fifty heifers that I brought into Kansas are going to make their mark. We have one heifer fresh now, milking thirty-two pounds a day at twenty-one months old, testing 5.6 per cent. Her dam milked sixty pounds at twelve years old and is giving a good flow at seventeen years old. We have now about 130 head of registered and grade heifers, mostly yearlings of the type and breeding that make profitable dairy cows. We have sold about eighty head the past eighteen months through Kansas Farmer advertising. Our stuff was well wintered on silage and alfalfa and are doing well in pasture this summer. They are a beautiful sight to the man that appreciates good dairy stock.—J. W. Berry & Son."



Oklahoma Promotes Poultry Shows

OKLAHOMA has set the pace in legislation intended to promote increased interest in poultry production. A bill was passed by its legislature last March providing funds for supporting shows all over the state. These are primarily intended for educating young people in better methods of poultry production. A poultry show is to be held annually in November at each schoolhouse in the state not included in cities of the first class, and in January each year an egg show will be held. From five to ten dollars is appropriated for each of these shows. The bill also makes a provision for allowing \$250 to each county to aid it in holding a poultry show in December of each year. The bill further provides that \$2,000 be furnished for holding one big state show, this show not to be held in any one county two years in succession.

This is certainly giving most liberal support to the cause of education in poultry growing. It is one of the important industries of the state, as of all the middle western states, and is well worthy of such support.

Cornish Game Characteristics

W. O. H., a Missouri reader of KANSAS FARMER, asks about the Cornish Indian game fowls. He wishes to know their chief characteristics and weight.

The Cornish Indian game is of oriental origin. There are three varieties—the dark, white, and white-laced red. These fowls have pea combs and smooth yellow shanks. Their plumage lies very close and tight to the body. Their most outstanding characteristics are erect carriage, broad, meaty breasts, and thick legs. They are not very heavy layers, generally being considered only as meat-producing birds.

The Standard of Perfection published by the American Poultry Association gives their characteristics in detail. This book is copyrighted and cannot be reproduced. It should be in the hands of every breeder of poultry who endeavors to keep his stock up to standard requirements in form and feather.

Forage for Chickens

A. H. W., Lincoln County, asks what we would recommend to plant as a forage for chickens, a perennial preferred. He says he has a thrifty patch of alfalfa, but wants something in addition.

We cannot suggest any other perennial crop that will thrive in your locality. There is no better permanent forage crop for chickens than alfalfa. Either rye or wheat make fine forage. They supply green feed when nothing else is growing. It is always a good plan to have a patch of either rye or wheat where the chickens can run on it during the winter. Rye will usually make a more vigorous fall growth than wheat. In order to get early winter feed it should be planted earlier than wheat is ordinarily sown in the field, providing the seed bed can be prepared so it will start promptly.

Fatten Chickens in Crates

Sending chickens to market which have not been properly fattened is a wasteful practice. The weight of healthy well-grown chickens can be increased from twenty-five to fifty per cent in two weeks by proper feeding. Three hundred and fifty to four hundred pounds of mash moistened with skim milk or buttermilk and properly fed to good fowls will produce a hundred pounds of poultry meat in from twelve to fourteen days. Proper feeding of the chickens before marketing improves the quality of the flesh. "Crate fed" and "milk fed" are synonymous with "high quality."

Chickens which have been milk-fed in crates should sell for from two to three cents above the market price for unfattened chickens. At this price they are

cheaper to the consumer on account of the reduced waste in dressing.

Faulty Incubation

Mrs. E. B., an Eastern Colorado reader, writes that many of her chickens and turkeys are ruptured when they hatch and few of them live. The rupture is a hard, dry scab where the chick is fastened to the shell. She also lost a rooster recently which had had diarrhea for two weeks, gradually falling off in weight. It ate up to within four or five days of death. Its comb became black or very dark red.

We referred this inquiry to N. L. Harris, superintendent of the agricultural college poultry farm, and his reply is as follows:

"This ruptured condition is usually caused by improper incubation but is frequently the result of weak parent stock or of inbreeding. If the result of weak parent stock, the remedy is to give more attention to the vigor of the breeding stock. If it is caused by faulty incubation it is in all probability the result of chilled eggs. This retards the development and causes the ruptured condition."

"Old fowls dying as this rooster did may be the result of an internal parasite or possibly lice. If badly infested with lice, an immediate cure can be effected by an application of blue ointment. This can be purchased at the drug store, and should be mixed with an equal amount of vaseline. To use it, apply a portion of the ointment about the size of a pea just below the vent, rubbing it well into the feathers."

"If the difficulty is worms in the digestive tract, the use of one-half pound of Epsom salts to each twenty-five or thirty fowls is oftentimes successful as a remedy. This will not only rid the fowls of the parasites, but will promote the action of the liver."

Many fine chicks are materially injured by crowding. They are growing rapidly and are greedy, caring more to get all they can, regardless of the wants of the others. They crowd and tread on and pick each other until we find our once promising flock looking decidedly ragged. Separate them according to size, and give the weaker ones a chance; we may find our best fowls among them. The coops should be enlarged as they grow older. The cockerels should be separated from the pullets when they are three months old. But if you don't wish to keep them for breeders, it would be better to sell them.

Not enough importance is placed on the value of good air-slaked lime for use in the poultry house and on the runs. Properly used, the lime is of great sanitary value. It will counteract disagreeable odors. A free use of air-slaked lime on chicken runs where gapes prevail is exceedingly beneficial. Its use no doubt also destroys other germs and bacilli. The wise poultryman will always have a good supply of lime on hand and use it both inside and out of his poultry houses.

No one who has not tried it can imagine how much better a well-fattened fowl is than one that is just picked up in the yard in the ordinary condition. Shut those that are to be killed and eaten in a pen or coop and feed a mash of food or cornmeal and tallow for ten days and the result will be a deliciously tender and juicy flesh with a flavor that comes of cleanliness.

The hen that lays this winter will literally lay the golden egg. Unless all signs fail, egg prices will soar during the fall and winter months. It will pay to hold onto all the strong vigorous pullets. It never pays to feed culls. They should be marketed as early as possible.

Real Estate For Sale

Will Trade Iowa Farm for Cattle

We will exchange a good Iowa farm for a top quality herd of Hereford cattle. Write, giving full particulars, to
AMOS BURHANS, Waterloo, Iowa

360 ACRES CREEK BOTTOM FARM
160 acres fine alfalfa, wheat or corn land; 20 acres meadow; 180 acres pasture; \$5,000 worth of improvements. Splendid oil and gas prospect. Bargains. Act quick, only \$45 per acre.
M. T. SPONG - FREDONIA, KAN.

NOW IS THE TIME TO BUY FARMS.
War insures high prices for farm products for years. Crops here almost perfect. Improved farms, \$20 to \$40 per acre. Write.
SOUTHERN REALTY CO., McAlester, Okla.

STOP, LOOK and LISTEN!

Deal direct with the owner. Half section improved and half section unimproved, Eastern Elbert Co., Colorado, well located at a bargain. Guarantee full and accurate details in first letter.
F. E. JANKE - STRATTON, COLO.

JERSEY CATTLE.

B. C. SETTLES

Jersey Cattle

Pedigrees Public Sale
Catalogs Management

Palmyra - Missouri

120 Jersey Cows and Heifers

Pure-bred and high grade. Forty bred yearlings, superior individuals, all from profitable dams, now for sale.
J. W. BERRY & SON, Jewell City, Kansas

REDHURST JERSEYS

Grandsons of Golden Jolly and Noble of Oaklands for sale. Also a few fancy cows and heifers of same breeding. Write.
REDMAN & SON - TIPTON, MISSOURI

JERSEY CATTLE

One four-year-old cow, milked 35 pounds 5 per cent milk with second calf. Will freshen in December to service of our great son of Sans Alois. Also four splendid Fiance interest bulls from four to six months old. Write for pedigrees and descriptions.
BISONS FARM - LAWRENCE, KANSAS

Jersey Calf Bull dropped January 4, 1917, out of a rich-milking good-type dam. A bargain. W. T. Ballagh, Nevada, Missouri.

Registered Jersey Bulls, butter-bred, from high producing cows. Photo furnished. Maxwell's Jersey Dairy, Route 2, Topeka, Kan.

SHORTHORN CATTLE.

15 Shorthorn Bulls

Reds and roans. Pure Scotch and Scotch-topped yearling bulls, 10 to 18 months old, at farmer prices. Farm at Pearl. Ship over Rock Island, Santa Fe, Union Pacific and Missouri Pacific. Come and see me.
C. W. TAYLOR, Abilene, Kan.

Dickinson County.

Sycamore Springs Shorthorns

Master of Dale by the great Avondale heads herd. A few young Scotch bulls and bred heifers for sale.

H. M. HILL - LAFONTAINE, KANSAS

Sunflower Herd of Shorthorns

A few good cows and heifers for sale, also choice bull calves. Come and see my herd.
A. L. HARRIS - OSAGE CITY, KANSAS

ALYSDALE HERD OF SCOTCH SHORTHORNS

Prince Valentine 4th and Clipper Brawth in service. Orange Blossoms, Butterflies, Queen of Beautys and Violets. Choice young stock for sale.
H. H. HOLMES, Route 28, Topeka, Kansas

CHESTER WHITE HOGS

FOR SALE
Spring Pigs in Pairs and Trios
Not related, from my undefeated show herd 1916. Ship at weaning. Send for prices and show record. COLEMAN & CRUM, Danville, Kansas.

O. I. C. SPRING PIGS, BOTH SEXES.
Bred glits.
HARRY W. HAYNES, GRANTVILLE, KAN.

Registered Chester White and Duroc Jersey Hogs—Half-ton kind.
L. M. FISH - Bolivar, Missouri

WHEN WRITING TO ADVERTISERS
PLEASE MENTION KANSAS FARMER

EDGEWOOD FARM
REGISTERED ANGUS BULLS. HAVE FIFTEEN STRONG YEARLING BULLS FOR SALE.
D. J. White, Clements, Kansas

POLAND CHINAS**Faulkner's Famous Spotted Polands**

The world's greatest pork hog are raised exclusively on

HIGHVIEW BREEDING FARMS

The largest registered herd of old, original, big-boned, spotted Polands on EARTH.

Spring Boars Now Ready to Ship, Pairs and Trios No Kin.

Spring Pigs Now Ready to Ship, Pairs and Trios No Kin.

H. L. FAULKNER - BOX D - JAMESPORT, MISSOURI

OLD ORIGINAL SPOTTED POLANDS
 Choice March and April pigs of both sexes.
H. A. MATTOX, Route 2, Burlington, Kan.

Langford's Spotted Polands. Gilts bred for fall farrow. Future herd boars. Satisfaction guaranteed. **T. T. LANGFORD & SONS, Jamesport, Missouri**

BIG-TYPE POLANDS AND DUROCS SHORTHORN CATTLE

Booking orders for weaning time. Pigs, \$25 each, trios \$50. Will make 700 to 1,000-pound hogs. Two hundred to select from. Top breeding. Eight choice Shorthorn bull calves. Priced reasonable. Write me your needs.

O. W. LONG, Route 3, Maitland, Missouri.

POLAND CHINA HOGS 150 HEAD IN HERD
 Breeding stock for sale. Immune. Satisfaction guaranteed. Come and see me.

V. O. JOHNSON - AULNE, KANSAS

TOWNVIEW HERD BOARS

Ten big stretchy fellows farrowed in June. Every one a good one. Two choice fall yearlings. I ship my boars and gilts any place on approval. They make good. Prices are right. **CHAS. R. GREENE, Peabody, Kan.**

POLAND CHINA BOARS

Twenty-five choice spring boar pigs sired by Caldwell's Big Bob, Big Hadley Jr., King Price Wonder, Columbus Defender, Big Bob Wonder and Pessy's Tim. Some fine prospects and priced reasonable. Immune.

BERT E. HODSON, ASHLAND, KANSAS.

OLD ORIGINAL SPOTTED POLANDS

Stock of all ages, sired by seven of the very best boars of the East and West. Priced right. Write your wants to the

CEDAR ROW STOCK FARM

A. S. Alexander, Prop. Burlington, Kansas

Henry's Big-Type Polands

Spring pigs, either sex. June delivery. Sired by Mammoth Orange, King Price Wonder, Big Wonder. Choice of lot, \$35. Trio, \$100. Others, \$25. First check, first choice. **JOHN D. HENRY, LECOMPTON, KANSAS**

DUROC JERSEYS.**JONES SELLS ON APPROVAL**

February, March and April Durocs, pairs and trios and herds unrelated. First class pigs at reasonable prices.

W. W. JONES, CLAY CENTER, KANSAS

LONE TREE DUROC FARM
 Herd Boar Graduate Prince by Graduate Col. Sows, Ohio Chief, Tatarax, Model Top and Good Enough Again King blood lines. Spring pigs, two for \$35.00, three for \$45.00; not related.

GEO. J. BURKE, LITTLE RIVER, KANSAS

IMMUNE DUROC-JERSEYS

Forty-five head spring boars and gilts, March and April farrow, by Gano Pride 2d by Gano Pride, out of a Graduate Col. sow. Herd sows best of breeding. Write for prices. **T. F. DANNER, Winfield, Kansas.**

McBRIDE'S DUROCS

Bred gilts for September farrow and boar pigs for sale from four to six months old.

W. T. McBRIDE - PARKER, KANSAS

IMMUNED DUROCS
 With size and bone. Bred sows and males a specialty. 150 early pigs; pairs and trios, no kin. All immuned. Satisfaction guaranteed. **C. G. DITMARS & Co., Turney, Mo.**

GALLOWAY CATTLE.**GALLOWAY BULLS**

SIXTY yearling and two-year-old bulls, strong and rugged; farmer bulls, have been range-grown. Will price a few cows and heifers.

E. B. FRIZELL, Frizell, Pawnee Co., Kansas

AUCTIONEERS.

Jas. T. McCulloch Live Stock Auctioneer. I make sales anywhere. **CLAY CENTER, KANSAS**
 Write for date.

LESTER R. HAMILTON Live Stock Auctioneer
 Write for terms and date. **Clarksdale, Mo.**

BERKSHIRE HOGS.

KING'S BERKSHIRES - Twenty good Berkshire fall boars. One good yearling boar. **E. D. KING, Burlington, Kansas.**

FARM AND HERD NEWS NOTES

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

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CLAIM SALE DATES.**Holsteins.**

Oct. 16 - The Nebraska Holstein Breeders' Consignment Sales Co., Omaha, Neb.; Dwight Williams, 103 Bee Bldg., Omaha.

Poland Chinas.

Aug. 15 - H. L. Faulkner, Jamesport, Mo.
 Oct. 4 - Dr. J. H. Lomax, St. Joseph, Mo. Sale at farm near Leona, Kansas.
 Oct. 5 - U. S. Byrne, Saxton, Mo.
 Oct. 16 - H. B. Walter & Son, Birmingham, Kansas.
 Oct. 17 - Walter B. Brown, Perry, Kansas.
 Oct. 24 - Fred G. Laptad, Lawrence, Kansas.

Red Polled Cattle.

Sept. 4 - Milton Pennock, Delphos, Kansas.

Durocs.

Oct. 24 - Fred G. Laptad, Lawrence, Kansas.

Hampshire Hogs.

Oct. 12 - Kansas Hampshire Swine Breeders' Association and Halcyon Hampshire Pig Club sale at Valley Falls, Kansas. George W. Ela, secretary and manager.

O. I. C. Hogs.

Sept. 4 - Milton Pennock, Delphos, Kansas.

W. C. Kenyon & Sons, of Elgin, Illinois, owners of one of the outstanding herds of pure-bred and high-grade Holstein cattle in that state, report their herd making a fine record again this year. By using only sires backed by records this firm has succeeded in building up a herd bred in the best producing lines of the Holstein breed and at this time their herd is among the heavy producers.

Dr. J. H. Lomax, of St. Joseph, Missouri, held one of the successful Jersey sales of the season at his farm near Leona, Kansas, on June 26. The sale was not advertised as extensively as it should have been and, being held at a very busy time for farmers and breeders, there was only a small crowd of Jersey buyers present. Fifty-five head sold for \$6,970, an average of \$127. No. 5 in the catalog topped the sale at \$325, going to Mrs. Mary Colver, of King City, Missouri. Twelve cows sold for an average of \$230; twelve heifers sold for an average of \$181; thirty-two cows averaged \$180 and the forty-four head of females sold for an average of \$150. The offering was a good useful lot and brought good prices.

W. W. Jones, of Clay Center, Kansas, is succeeding with his Duroc herd. He now has at the head of his herd a splendid son of Illustrator 2d, a yearling hog, Illustrator Improver, out of a Golden Model dam. The sow herd is of the large roomy sows from the Old O'Rron, Cherry Chief, Cherry King, Illustrator and Golden Model blood lines. Mr. Jones has raised this spring about 125 spring pigs and they are coming along fine. There are litters from ten of the leading Duroc boars of the breed and of the most popular blood lines.

B. C. Settles, of Palmyra, Missouri, the well known Jersey sales manager, reports a rapidly growing interest in the Jersey breed as a profitable dairy cattle. For years Mr. Settles has been managing Jersey sales and is in very close touch with the Jersey business. He is a recognized authority on Jersey pedigrees and reports prospects very bright for the Jersey breed throughout the wide field he covers.

Fred G. Laptad, the well known breeder of Poland Chinas and Durocs, has claimed October 24 as the date of his annual fall sale of Polands and Durocs. Mr. Laptad owns outstanding herds of both breeds and his annual sales are always big sale events.

The Holstein-Friesian heifer Von Heim Winnifred Colantha 329334 has broken the record for fat production in the junior two-year class of the thirty-day division, by producing in thirty consecutive days 1,925.3 pounds milk containing 94.245 pounds fat. She freshened at the age of two years, one month, four days. Her sire is Dutchland Governor Sir Colantha 90477; her dam is Winnifred Phebe De Kol 2d 183405. She was bred by Carnation Stock Farm, Seattle, Washington; and she is now owned by Mr. J. von Herberg of Kent, Washington. In the junior two-year class of the thirty-day division she displaces Fairview Korndyke

HOLSTEIN CATTLE.**HOLSTEIN CATTLE.****PREMIER KANSAS HERD OF HOLSTEINS**

World's Record Blood
Many A. R. O. Cows

We offer for sale this week this bull from an ADVANCED REGISTRY dam of good ancestry and sired by Maplecrest Pontiac Korndyke. He is a splendid individual priced at \$300.00, but worth more money. Address

W. W. FINNEY

Clapp Pontiac Korndyke No. 116418—
 Born April 27, 1913

Emporia - - - Kansas

CLYDE GIROD, At the Farm

F. W. ROBISON, Cashier Towanda State Bank

HOLSTEIN FRIESIAN FARM, TOWANDA, KANSAS

BREEDERS OF PURE-BRED HOLSTEINS

We offer special attractions in choice young bulls, ready for service, both from tested and untested dams, at prices within reason. Let us furnish you a bull and improve your herd.

IT WILL PAY YOU TO SEE OUR OFFERING

of high grade young cows and heifers, all-springers, in calf to pure-bred sires, large developed females, good udders, nicely marked and the right dairy type at prices that challenge comparison for Holsteins. A visit to our farm will convince you. Keep us in mind before purchasing. Wire, write or phone us.

GIROD & ROBISON - - - TOWANDA, KANSAS

MAURER'S HOLSTEIN FARM

Has just received another choice lot of young pure-bred cows and springing heifers. Also some extra good registered yearling heifers and a fine lot of registered calves of both sexes. Write for pedigrees and prices, or call.

T. R. MAURER & CO - - - EMPORIA, KANSAS

FIFTEEN HEAD HOLSTEIN COWS AND HEIFERS

Three in milk; one due in a few days, balance yearling heifers. All popular breeding and some A. R. O. cows. Three high grades due this fall, bred to pure-bred bull.

B. P. SMITH, Miltonvale, Kansas

PECK'S HOLSTEINS We have a choice lot of extra large high-grade Holsteins, including fresh cows, heavy springing cows and heifers, and young calves. Registered bulls. Come and see our herd. We meet you at train and guarantee satisfaction.

M. E. PECK & SON, SALINA, KANSAS

HOLSTEINS AND GUERNSEYS

High grade cows and heifers, carloads or less. Calves crated and shipped anywhere, price \$20.

F. W. WALMER

Way Side Stock Farm - Whitewater, Wis.

GOLDEN BELT HOLSTEIN HERD

Herd headed by Sir Korndyke Bess Hello No. 165946, the long distance sire. His dam, grand dam and dam's two sisters average better than 1,200 pounds butter in one year. Young bulls of serviceable age for sale.

W. E. BENTLEY, MANHATTAN, KANSAS

Segrist & Stephenson, Holton, Kan. Breeders exclusively of pure-bred prize-winning record-breaking Holsteins. Correspondence solicited.

HOLSTEIN CALVES

We offer for sale choice, beautifully-marked heifer or male calves, 15-16ths pure-bred, and all from extra large heavy-milking dams, as follows, crated for cars. One to two weeks old, \$15 each; two to three weeks old, \$17 each; five to six weeks old, \$20 each. First check takes them. Write

W. C. KENYON & SONS, ELGIN, ILLINOIS

CEDAR LAWN FARMS

C. A. Schroeder & Sons, Props.
 Forty years of registered Holstein breeding, not dealing. Birthplace of 40-pound cow, Johanna DeKol Van Beers. State wants and get delivered prices on young bulls.

W. C. SCHROEDER - WEST BEND, WIS.

HOLSTEIN CALVES

Very high grade heifer calves, five weeks old, nicely marked, \$25 each delivered to your station. We can supply you with registered or high grade Holsteins, any age of number, at reasonable prices. Clover Valley Holstein Farm, Whitewater, Wisconsin.

Breeders' Directory**RED POLLED CATTLE.**

Mahlon Groenmiller, Pomona, Kansas.

JERSEY CATTLE.

J. B. Porter & Son, Mayetta, Kan.

DORSET HORN SHEEP

H. C. LaTourette, Route 2, Oberlin, Kan.

HORSES AND MULES.

PERCHERONS, BELGIANS, SHIRES.
 Ten stallions ready for heavy stand; also yearlings and two. Young fillies, also mares with colt by side and bred again. All registered. One hundred individuals of first rank for sale.

FRED CHANDLER, R. 7, Chariton, Iowa
 Just above Kansas City

Barn Full of Percheron Stallions and Mares. Twenty-five mature and aged jacks. Priced to sell. **AL. E. SMITH, Lawrence, Kansas.**

Pietertje 252940, whose record for thirty days is 2,064.8 pounds milk containing 93.829 pounds fat. Computed on the 80 per cent basis, the equivalent butter claimed for Von Heim Winnifred Colantha would amount to 117.806 pounds.

Purebred Registered HOLSTEIN CATTLE

To the open minded farmer or dairyman, the results of actual comparative tests of Holsteins with other breeds are striking object lessons of economic investment. The ten largest records of Holstein cows average 1,007 pounds of butterfat and 25,897 pounds of milk in a year. A like number of cows of the nearest competitive breed produced 974 pounds of butterfat, and 18,120 pounds of milk. One good Holstein cow will produce as much as two ordinary cows at a saving in feed and care. There's big money in the big "Black and White" Holsteins.

Send for FREE Illustrated Descriptive Booklets. The Holstein-Friesian Association of America
F. L. Houghton, Sec'y. Box 114, Brattleboro, Vt.

MOTT'S HOLSTEINS

Seventy-five head of high-grade and registered coming 2-year-old Holstein-Friesian heifers for sale, bred to a registered bull. Six choice pure-bred Holstein bulls old enough for service. Come to Herington or send us mail order. We guarantee to please you.

W. H. MOTT - - - HERINGTON, KANSAS

Butter Bred Holsteins

Buy your next bull calf from a herd that won the butter test over all breeds.

J. P. MAST - - - SCRANTON, KANSAS

Braeburn Holsteins

Bull Calves by Walker Copla Champion, whose dam and sire's dam each held world's records in their day.

H. B. COWLES, 608 Kan. Av., Topeka, Kan.

Holstein and Guernsey Calves—Both sexes, 5 weeks old, nicely marked, fawn and white, black and white, mostly 15-16ths. \$25 each, crated for shipment. Satisfaction guaranteed.

Edgewood Farms - Whitewater, Wisconsin

HIGH GRADE HOLSTEIN CALVES

Five to six weeks old, nearly pure, well marked, \$20, express paid.

COLD SPRINGS FARM, Whitewater, Wis.

HOLSTEINS

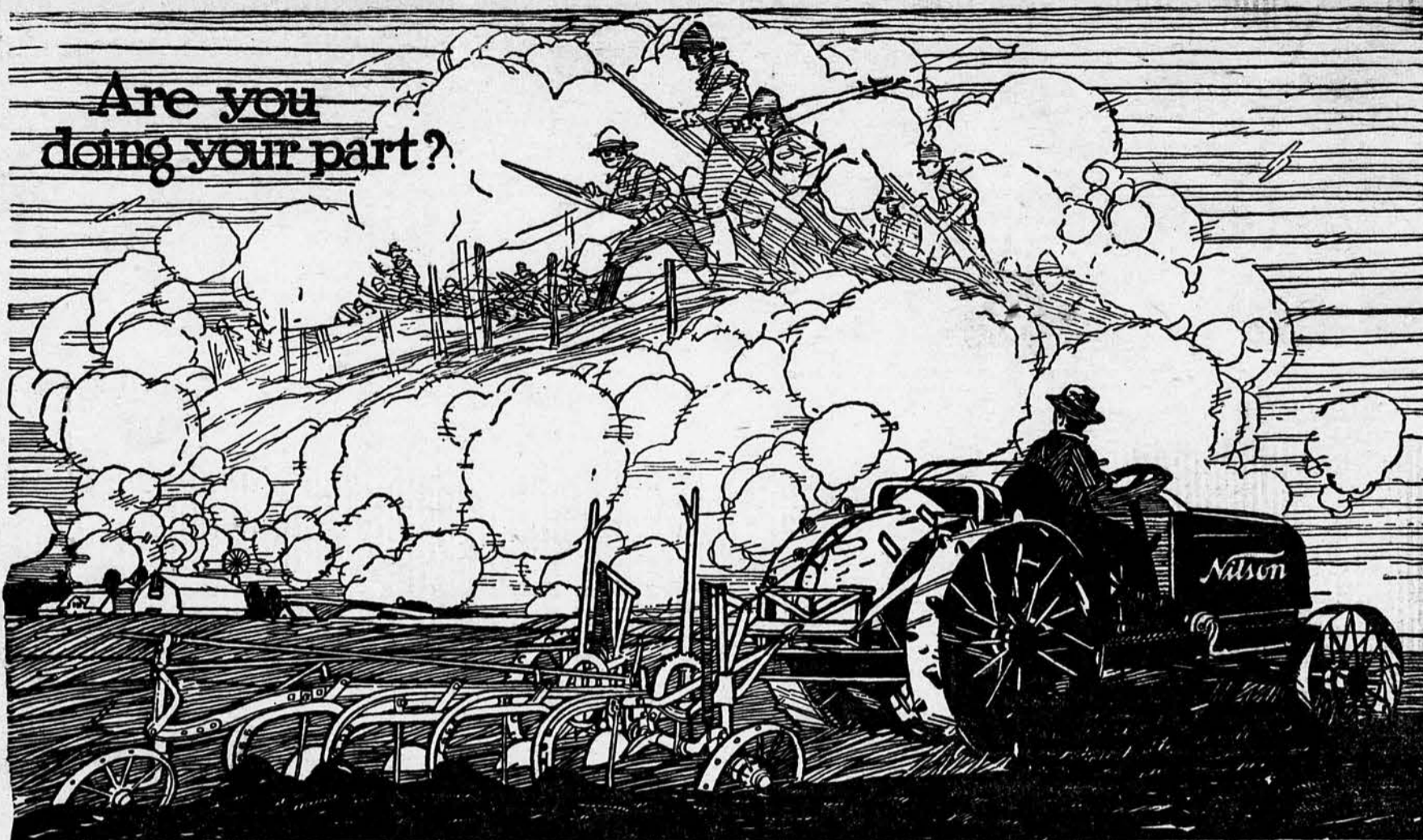
Registered and high grades, cows and heifers. The milky strain, service bulls, carloads or less. High grade heifer calves, \$18 each, crated. Write me. I have what you want.

RAY C. JUDD - ST. CHARLES, ILL.

GREENSWARD HOLSTEINS.

Choice bull calves, heifers, cows. Registered and best breeding. Herd tuberculin tested. We are breeders, not dealers.

MAX J. KENNEDY, FREDONIA, KANSAS



PLOW MORE ACRES AND DEEPER

WITH THE

Nilson

ON America has fallen the responsibility of feeding the world.

The President has issued a proclamation asking that every farmer plow more acres and deeper.

The economical, efficient way to plow more acres and deeper is with a good tractor.

The farmer of today needs a light weight tractor. A tractor with plenty of power. A tractor that won't pack or sink into the ground. A tractor with high road speed for hauling.

The Nilson is such a tractor—the Nilson solves the problem of the light weight tractor by its patented lever hitch which means grip by the drive wheels just as it is needed.

Automatic Traction By Pull Instead of By Weight

If you were to tie a rope to a stump and to the other end your team of horses, put the rope over your shoulder and give the word to your team to pull, you would find yourself with plenty of traction on the ground—wouldn't you? The harder the team would pull that rope—the harder your



feet would grip the ground.

This is the principle of the Nilson and its patented lever hitch—the harder the pull, the harder the wheels grip the ground.



It is because the Nilson carries no dead weight that it is able to do more work at a less cost for fuel and upkeep than any other tractor on the market.

The Nilson Senior at \$1750 has 36 H. P. at the belt, 25 H. P. at the draw bar and pulls a 4-14 inch bottom plow with ease. The Nilson Junior at \$1385 with 25 H. P. at the belt develops over 16 H. P. at the draw bar and easily pulls a 3-14 inch bottom plow.

Waukesha Motor and Hyatt Bearings

Both models have the famous Waukesha Motor, made especially for tractors. The oiling system is a constant, level, automatic supply, fed under pressure by a positive circulating pump through the filtering screens.

In both the Nilson Senior and Junior, heavy duty Hyatt Roller Bearings are used throughout.

High Speed on the Road

The Nilson develops a high speed on the road. It will transport your harvest and supplies to and from market in less time and at less expense than you can possibly do with horses. The Nilson road speed is six miles an hour—a good buggy speed.

Has Stood The Test For Four Years

The Nilson is not an experiment. It is a tried and tested tractor. We have hundreds of letters from satisfied owners who would not think of being without the Nilson.

The Nilson is built on the right principles, with the right power at the right price. It may be adapted for the use of either kerosene or gasoline.

While our capacity is large our output is taxed to supply the demand. If you want a tractor this year, write us at once for catalogue and the name of your nearest dealer. Remember, on the American farmer rests the responsibility of feeding the world. A good tractor will solve many of your problems.

NILSON TRACTOR COMPANY

1651 HENNEPIN AVENUE

MINNEAPOLIS, MINN.

GENTLEMEN.—Please send me your catalogue and complete specifications on the NILSON Tractor. This puts me under no obligations. My farm is.....
acres. I work.....horses.

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