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THE RURAL OUTLOOK

PROF. L. H. BAILEY,

*Cornell University, President of Rural Life Commission in
the "Farmers."*

The Commission on Country Life appointed by President Roosevelt was named for the purpose not of making any inquiry into technical farming, but to consider the general social, economic, sanitary and educational questions of the open country. The commission has no congressional standing. It was appointed by the President in order to divide him personally as to what is the condition of country life in the United States, and what, if anything, may be done by the government to better these conditions. The commissioners are seven in number. They contributed their services gratuitously and their expenses have been paid from other than governmental sources. Certain departments of government detailed officers to accompany the commission in order that they might investigate certain phases of country life to which they had given attention and on which they were qualified to speak.

The commission has endeavored to determine the condition and deficiencies of country life by means of four or five different kinds of inquiries. It sent out more than a half million circular letters to which there were considerably more than one hundred thousand replies when the commission made its report. It was the purpose of these questionnaires to secure first-hand opinions as to the condition of country life from farmers, ministers, school teachers, editors and others, who are near the problem, and not to collect scientific statistical data. It was very gratifying to the members of the commission to find that the larger part of the replies were apparently made in good faith, with a great deal of care, and with every evidence that the persons had given considerable thought and attention to the answering of the questions. It was never expected that these replies would produce strictly scientific information, or that the results could be tabulated as statistics. In fact, the questions are so framed as to ask for the opinions of persons who might not be accustomed to answering scientific blanks.

As a second means, the different members of the commission took special subjects for more particular inquiry. One, for example, took the whole question of education in the open country, another the organization of the church, another the question of land tenure and another the subject of public health and household questions.

The commission also held hearings in some thirty places in the different parts of the United States in order that the commission might explain its work directly to the people, and that the people might say to it freely whatever they had in their minds in respect to the conditions of country life. These meetings were held under the auspices of chambers of commerce, boards of trade, state colleges of agriculture and the like. The members of the audiences were encouraged to speak of the condition of the open country in their regions, to explain the special hardships or disadvantages and also the natural advantages of the neighborhoods.

Aside from these lines of inquiry, the members of the commission have themselves been interested for many years in these conditions, some of them having studied these special

problems for a good number of years. The whole inquiry has constituted a kind of exploration or reconnaissance of the whole field, and the report of the commission sets forth what are the main deficiencies in country life, and suggests some of the most useful lines of inquiry and action that may be undertaken to correct these shortcomings. The report is in no sense final. It is a budget of suggestions. Within the time at its disposal the commission could not go deeply into any of the great problems underlying the welfare of the open country. Its report emphasizes the necessity of a very thorough and long-continued inquiry under competent auspices. I think it is not too much to say, however, that the commission has pointed out the main deficiencies in country life, and has suggested what steps should be taken to meet the problems.

THE DEFICIENCIES.
There are deficiencies in country

life. This is not saying that they are greater or less than deficiencies in city life. The commission has made no comparison between city and country. It was appointed for the purpose of finding out what is the status of country life, and it has confined itself to its own field. It has not assumed that country life conditions are either good or bad, but has reported the results of its inquiries fairly and in no spirit of criticism. It is, of course, assumable that the present state of civilization either in city or country is not what it is capable of being, and that reconstructive economic and social forces are everywhere needed in order to direct and hasten the evolution of human society.

The commission feels that there are certain disabilities in country life which it is the business of government to understand, even though government may not be able of itself directly by any fiat or legislation at once to

correct the difficulties. Certain handicaps can be removed and certain inequalities can be evened up by means of congressional or state action, but the larger part of the evolution of country life must, of course, be brought about by the men who are themselves living on the land, so that the larger work of the commission really is to set before the people some of the main things that need to be done if country life is to develop in such a way as to represent the best American ideals. It should be a great thing for the open country that the President of the United States has called attention in the appointment of a special commission and the writing of a special message to the need of better rural schools, better country churches, to completer organization, and to many other things that are fundamental to the development of a satisfying rural civilization. While none of these things, nor any of the recommendations made by the commission, are absolutely new as to subject matter, I consider that it is nevertheless worth while that attention has been challenged to these subjects in this new public way.

The particular recommendations that the commission makes are relatively few. They feel that certain inherent difficulties exist in the countryman's position which it is the business of government to correct. They feel that in the making of legislation, sufficient attention has not been given to the safeguarding of the farmer's interests, as perhaps in tariff legislation and in the making of reciprocity regulations whereby the American farmer may find a better foreign market for his grain, meats and live stock. It is not only important that the farmer be able to find a good market for these products, but that he be able to feed his grain in such a way that he may maintain the fertility of his land.

The general problem of the lessening fertility of the soil of American farms is a fundamental one, and even at the present time it is a burning question in the best parts of the middle states and the prairies. The maintenance of fertility is not by any means merely a question of the purchasing of fertilizers which may be shipped from another part of the world and applied to these lands, but rather such a reconstruction of the farm-scheme as will cause the farm normally to grow richer rather than poorer. Everywhere in its hearings the commission heard statements concerning the lessening fertility of the land. Perhaps some of the most useful statements were made in New England where the reconstructive period of agriculture is now well under way. The first era of agriculture is to mine out the available food and then to move one; but after a time we get down to bed rock and then we must begin to develop a self-sustaining agriculture. Europe has reached that point long ago and that is the reason why the Europeans have developed in some respects a better agricultural practice than we have in this country. The agricultural production of the interior and western parts of the United States is phenomenal because of the great new areas involved and the large base on which the business organization is conducted; but as compared with European agriculture or with the



MAKING A RECORD.

potential power of an acre of land, our American agriculture is not yet highly developed.

The most dire results follow the depletion of soil fertility. The more enterprising people are likely to move to new areas. These areas are after a time taken up. Then the farmer is forced to develop a better system of husbandry or else he is driven into poverty and degradation. There are many places in which the latter result has come about, greatly to our disadvantage. Many unfortunate or incompetent persons are likely to be forced off to the fringes of the good agricultural regions and there they merely sustain themselves by dint of hard work and penurious saving. No country can develop first-class and stable rural institutions until the farms tend to grow better year by year. It is an old American notion that every farm boy has the right to new land in order that he may start free of handicap and of tradition, but he cannot longer secure new land under new titles. However, every young man going back on the old farm has the opportunity, if he knows how to avail himself of it, so to reorganize the agriculture as to begin a new type of farming. I think it is fair to say that the intelligent farm boy can secure the essential advantages of a new piece of land if only he goes at the old place with the new intelligence of the time.

All that the Commission on Country Life can do in respect to the fertility of the soil is to call attention to the subject and to set people to thinking on the ways and means of correcting the difficulties. The soil is our greatest natural material resource. It is greater than forests, coal and iron. Gold and silver and all the precious stones do not compare with it. All national prosperity depends on the productive power of the land. We must challenge our people so to redirect their agricultural enterprises that the fertility of the land shall be conserved, and that we owe this effort not only to ourselves but to posterity. We are facing a grave national danger.

It is now generally accepted that good roads are essential to the development of the open country. The commission has a like conviction and strongly urges that this subject should receive most careful attention. Two general suggestions may be made as to the relation of the federal government to good roads: the government may directly appropriate money to aid the states in the building of highways; or it may organize a commission or staff of engineers and other experts who may aid the states on occasion and who may contribute toward the development of a national plan. The commission recommends the creation of such a highway engineering corps, whose services would be at the call of the states. What it is wise for the

government to do in the future in the furtherance of good roads may well be left in abeyance for the time being.

The commission considers that the forest resources of the United States are of the very greatest importance to the farmer as well as to others. The government is now safeguarding the forests on government land, but similar principles need to be applied to all forest areas even though it may not be done directly by governmental agencies. It is specially important that the forest be conserved in the eastern states as well as in the western. The abandonment of lands in parts of the east, of which we have heard so much, is a part of the general natural and undirected movement toward the reforestation of our remoter areas. As a rule, these farms are in process of returning to nature or of becoming forested. Very much could be gained if this reforestation could be carefully directed by competent authorities. Much of the land which is in a low state of agricultural productiveness could well be purchased by the state, county or town, and be placed in forests. Communal forests have been successful in parts of Europe for many years, and there is every reason why similar enterprises should be set on foot in this country under proper conditions of regulation and control.

The subject of forest preservation is intimately associated with the conservation of streams. The streams must be saved as a source of power for the benefit of all the people, as drainage lines, areas for the production of food fish, sources of irrigation, and as means of transportation. The commission strongly urges a thorough study of the stream resources of the United States to the end that some measure of control in the interest of the people may be developed.

I wish to pause for a moment to call your attention to the fact that we are not utilizing our water areas as sources of food supply. It is probable that an acre of good water will produce more food than an acre of good land. We are now stocking our streams and lakes with fish, but largely from the sportsman's point of view. We shall come to a time when we shall breed domestic varieties of fish food as we now breed varieties of cattle, swine and sheep, and we shall stock our streams in the same spirit in which we stock our pastures. You are aware that we have now passed the time when we look on sheep, cattle and pigs from the sportsman's point of view. We must protect our streams from pollution just as carefully as we protect our fields; and whenever new reservoirs are created for the impounding of natural waters, as is now proposed in the Adirondack region, we should at the same time consider the utilization of those reser-

voirs for the production of human food. Other peoples are ahead of us in developing food varieties of fish. We must study the whole question of fish forage as carefully as we study the fertility of the land; and all the means of breeding, feeding, control and utilization of aquatic life must be investigated in the interest of a good water agriculture.

The commission feels that the farmer is under considerable handicap in respect to the methods of handling his produce when it is sent to market. While the commission has no desire to condemn the middleman system, it nevertheless recognizes the fact that there are many abuses in it and that the farmer is practically powerless to help himself. The commission recommends a thorough study of the whole middleman system by competent government authority. This subject must in time be regulated by some kind of a public service commission or agency.

Woman's work on the farm is a subject that received particular attention by the commission inasmuch as the President called special attention to it when the commission was appointed. In many parts of the country the woman's part in the farm work is the one which needs most to be alleviated. She is the one who may be least considered in the setting up of labor-saving devices, and her work is the last to be aided by the modern inventions and suggestions of science. It is perfectly true that in many parts of the country and in thousands of farm homes the woman's work is quite all that it should be, with the home industries well organized, good gardens, with sanitary arrangements, and with a feeling of cooperation between all members of the family; but oftener the woman's part in farm life is likely to be unattractive and out of touch with the current movements of the time. Of course, the woman's work cannot be regulated by legislation, whether of state or nation. The commission, however, can call the public attention to some of the needs. It can also challenge the men to give as much attention to that phase of farm life as they do to the productivity of their fields and advise them that their home needs modern mechanical appliances and machines; and it can also advise the women that they may aid themselves by organizing clubs and societies of various kinds that will take them out of the routine. It can also give special attention to the part that the rural school should play in redirecting the farm home. The first duty of any school is to teach persons how to live, although this is usually the last thing that they attempt to teach. If the schools were so redirected as to teach persons how to live, they would exercise a tremendous influence on the processes in home life. Every child when he leaves school,

even though he does not complete the grades, should have some useful knowledge as to how and when to eat, what are the physical evils of intemperance, the lack of fresh air, and what it means to have a smoothly working and well-developed body. It is to the interest of society that every farm home should be so organized that society can have the benefit of the woman's advice and influence in the affairs of the communities. This can be done when the household work is as completely reorganized as the farm work is on some of the best farms.



JAMES R. GARVER.
Proud he is a Farmer.

Household labor will be respectable when it is founded on intelligence and when our knowledge of cooking, sanitation, and other questions that are associated with the home is put into systematic and attractive form.

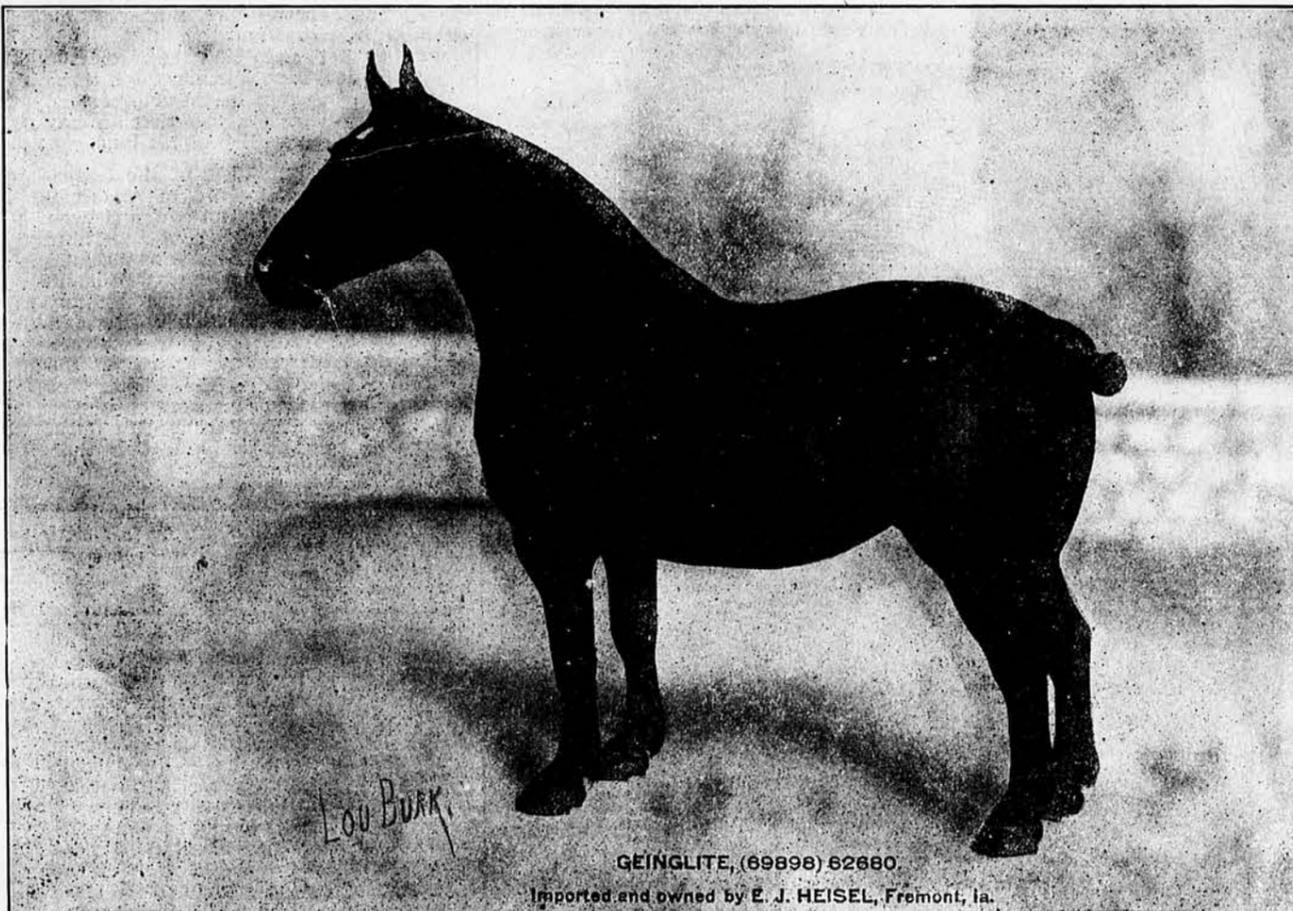
The whole question of farm labor was also studied by the commission, and it discussed the relation of immigration to some of the farm problems, although this discussion on immigration does not appear in its printed report. Subjects of intemperance in rural communities, health in the open country, speculative holding of land, restraint of trade, and other economic and social problems were studied, and have been briefly discussed in its short report.

REMEDIES.

We may now consider briefly some of the ways in which the deficiencies of country life may be corrected. The result must be secured from a general arousing of the people.

The commission recommends that a nationalized system of extension work be undertaken in connection with the agricultural colleges. The recommendation that such extension work be placed with these colleges is not because the commission considers that these colleges are the only institutions capable of doing such work, but that they constitute the only national series of educational institutions. The agricultural colleges were founded on the Land-Grant Act of 1862. A second endowment was made by Congress in 1890. In 1887 the experiment stations were established by Congress in connection with these colleges. Subsequent appropriations have been made for college work and for experiment station work. This chain of institutions represents the national enterprise in education, and it is naturally through them that the extension work should proceed. Moreover, by their very constitution they are the agencies that ought to be fitted to conduct extension work for the people. The special reason for their establishment was to educate the people by means of agriculture and the mechanic arts. These colleges have now developed two phases, the regular academic or teaching phase, and the research or experiment phase. We now need to

(continued on page 11.)



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College Boy on the Farm

CHARLES MOREAN HARGER

Just what it means for a farmer boy to go to college and get definite results out of it is being shown in the work of the newer generation on western farms. The result of training and of broader ideas is seen in the methods of today as they take the place of those of the early settlers who were hampered by the need of experiment and trial before they learned what was best to do and how to do it.

Not every boy seeks an education with the idea of being a farmer when it is over and when one does the outcome is interesting. Such an ambition has animated one young man of this community and it has worked out in practical results. His experience is a good example of what education means on the farm.

of fresh water constantly and it requires but the starting of the engine to set all the machinery in motion. "These are things that any farmer can have," explained the young manager. "It makes the handling of stock easy. It is especially easy and convenient for me, for I am a dairy farmer remember."

To carry out this, the most important part of his ideas, required another innovation most interesting of all.

The big barn was divided into long rows of stalls for the cows. Each animal has a swinging iron neck holder that gives it ample liberty yet keeps it in place.

In front of each row is an iron

longer then. It is not profitable to use the milking machines with less than forty cows because of the expense of installation. Something like \$500 is invested in this apparatus. But it helps solve the hired man problem. Few men like to milk. In the foreign countries and in some parts of this country where dairying by hand has been the custom for a long series of years it is easy to get milkers. The western hired man balks at two or three hours milking daily. This makes it difficult to secure help on the farm if attention is given to dairying. With these machines it is different. Any hired man will manage the machinery and likes it for he is relieved from the drudgery of the actual work himself. There will be easier work managing this farm than ever before and I expect to make more money out of it, too."

This is the first milking machinery this county has possessed and the process is interesting. Compared with the old-fashioned way of struggling with flies and cows' tails in the hot summer days it looks like play. The turn of a lever and the milk is gently taken from the udders and streams into the pails faster than the best milker can accomplish the task.

Along with the change in the farm's methods have gone changes in the division of the crop-raising plans. Instead of producing grain for selling the farm will now produce feed for the cattle and hogs. Two hundred head of swine are being cared for and the income from these is not to be despised. "We are going to have plenty of tame grass pasture for all our cattle," said Mr. Garver. "It pays to have this and by the proper management it is not difficult to secure it. We have now 55 acres of pasture that has been used for six year sand is yet good. It will be increased until there are 80 or 100 acres. A mixture of bromus inermis and alfalfa makes the best pasture and this is also good for the soil. Rotation of crops is what the Kansas soil needs as much as anything else."

It is rather unusual to find a farmer discussing the relative values of food products scientifically but it is what one should expect from a young man who has two degrees from a college. When he talks of his future it is with the same broad showing of ability and study.

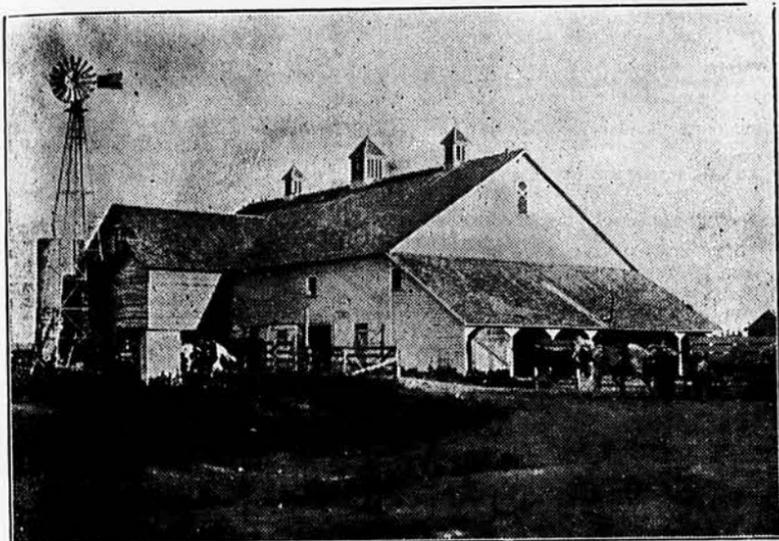
"I have a few theories that I want to demonstrate," he put it. "One is that of feeds and feeding, to get the greatest results from the material used. Then there is economy of production both in the field and at the barn. Balanced nutrition which will bring my cows through with the greatest possible production is a part of it and economic breeding for the points desired is important. These four things are my ambition and I am working toward that end."

Such is the ambition of the younger generation of farmers in the west and at the rate the agricultural schools are turning out these well-equipped graduates we ought to have an exceptionally strong force of managers on the western farms in the next few years. They will get from the land more than did their fathers and the crop-raising and stock raising will be on a more scientific scale with better profits.

Hundreds of western farms, especially in central and eastern Kansas are being turned over to the second generation because the fathers are ready to take a rest. It is either that or the tenant system which most farmers do not want. It is the solution of the help problem to get machinery that will do the bulk of the work and to place the management in young hands that will get out of the land all that it can produce with the least labor.

One farmer told of his decision to move to town and added: "I am able to take it easy and it is either go to town and let the boys have a chance at the farm or see them go somewhere else. I like the first plan better and am going to try it. If the boys cannot do better than I have I shall be disappointed because they have the advantage of experience that I had to learn by hard knocks. If they go to college it is all the more satisfactory."

Many of the country schools of Kansas are putting a course in elementary agriculture into their course of study. It may not do much of itself but it will dignify the farmer's life and make of the next generation of farmers men who study books and go at their work with intelligence. This is much needed and ought to have a material effect on the prosperity of the west. Great as it now is it should be yet better as the years go on. The teaching of agriculture and the methods of stock handling will give a class of farmers who will not do things by guesswork and who will know no such thing as failure in the management of their fields and herds.



The College Boy's Barn.

"I always wanted to be a farmer a dairy farmer," was the way James R. Garver, son of C. M. Garver put it as he stood at the door of the big barn on his father's farm three miles east of town. "That was why I went to college and I spent my time trying to learn how to be the best farmer possible."

It was difficult to realize that this frank-faced young Kansan, clad in blue overalls and dark shirt with a wide hat shading his bronzed face could write "B. S., M. S." after his name and that he had spent five years out of the twenty-four of his life in college halls. Before that he graduated from the Abilene high school so was well prepared for his chosen work.

"I went to the State Agricultural College four years with no other idea than farming," he went on. "Then took my post-graduate work in the Agricultural College of Wisconsin. Last February my father, who has been raising high grade cattle and hogs, turned the farm over to me and I began putting my own ideas into practice."

He is master of a half section of fine bottom land equipped with buildings and conveniences usually found on a modern farmer's place. But it was not up to his idea and the changes he has made and the new ideas he has put into practice are a good exhibit of what may be expected in western farming in the future.

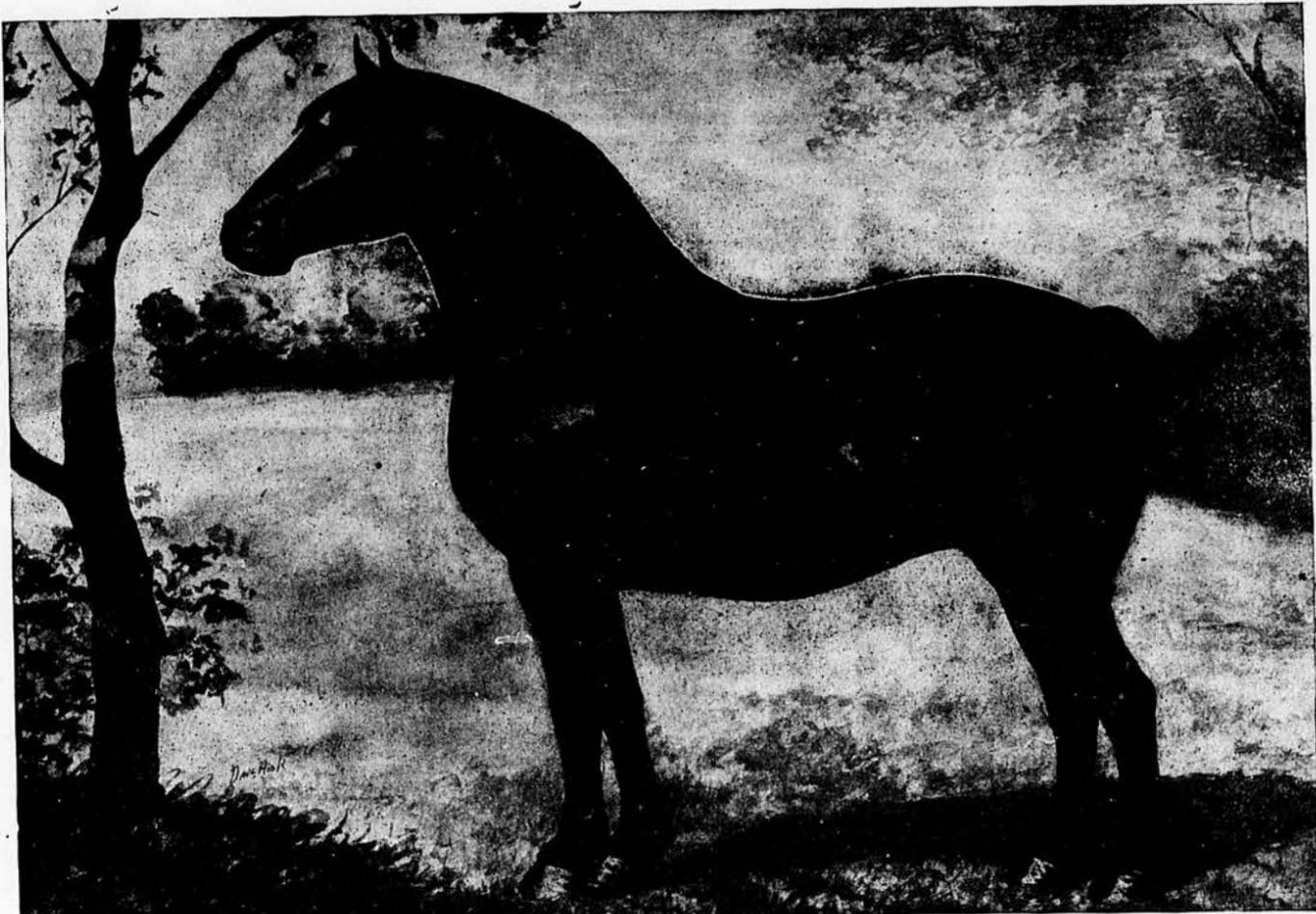
He began with the barn. A wind mill had furnished the pumping power but winds were uncertain. He built an engine house and installed a four-horse power gasoline engine. From this he ran shafting and belts until the work room looks like a section of a factory, as indeed it is in a large sense.

He learned that grain is better feed when ground and a feed-grinder was put in. Then an elevator that would carry the grain to storage rooms above where if necessary 12,000 bushels can be cared for was added. "I do not propose to sell grain except on foot; it is more profitable that way," said he.

Pipes were laid carrying water to all parts of the farm yard and to the house where the conveniences of a city water system are enjoyed as tanks give the cattle and hogs plenty

pipe air tight leading to a vacuum tank in the power room where are indicators telling of the air pressure. The engine pumps the air out of the tank and so out of the pipes leaving a suction that is used to operate milking machines of which eight are installed. These are of the ordinary type used in the Agricultural Colleges and can be operated by a boy.

"It takes us about an hour to do the milking of thirty cows," explained the young manager. "We shall have forty cows soon and it will take no



Matilda, 50415. First prize Kansas State Fair, 1908 and 1909. Sired by Casino. Sire and dam were both first prize winners at World's Fair, St. Louis, 1904. J. C. Robison, Towanda, Kan.



KANSAS FARMER

EDITORIAL



A good horse sells for from \$175 to \$300; a common plug, for from \$50 to \$75. It costs nearly as much to raise the plug as the more valuable animal. Can there be any reasonable excuse for raising plugs?

The Kansas Agricultural College is one institution against which the charge of extravagance cannot be justly laid. It is economically, yet efficiently managed. Its great importance to the state is just beginning to be realized. In an agricultural state, agriculture is one of the most important studies. The things taught at the Agricultural College are full of human interest. The problems investigated are live problems, which directly affect the great body of the people of the state. It is an institution which should be, liberally endowed and patronized.

There is only so much land in this country. It is not an elastic substance and cannot be increased. On the other hand population is increasing rapidly, and land seekers are getting more numerous every year. This will certainly mean higher prices for farm land and smaller farms. Thus far there has been an abundance of land and farmers have been inclined to waste it, but the time is coming when every available foot will be carefully farmed as it is in England, France and Germany. We can produce several times as much from the acreage now planted if we could and had to.

Much is being said, just now, about a downward revision of the tariff taxes. Any reduction in taxes will always be popular with those who pay them. The most strenuous advocates of downward tariff revision are not always equally active for a reduction of state and county taxes. Those who spend taxes are, as a rule, less solicitous for their reduction than those who do not have that pleasure. The tax-payer has many plausible excuses for adding to the burdens of the tax-payer. He sees many things which, in his opinion, need regulation, and which, for a consideration, he is willing and anxious to regulate. The more or less patient tax-payer pays the bills—bills which he finds increasing every year.

The price of corn and wheat is so high that the temptation to sell them off the farm is great, but it must be remembered, that with every bushel of corn, and every bushel of wheat, goes a certain amount of nitrogen, phosphorus and potash, which must, in some way, be restored if the fertility of the soil is to be maintained unimpaired. A farm does not necessarily wear out with use. Although it produces abundant crops, it may improve from year to year. It is abuse, and not use, which impairs its value. The most successful farmer is he who raises the best crops, and at the same time increases the productiveness of his land. Like the prudent banker, he earns and takes a good dividend, and adds a handsome surplus to his capital account. And how can this be done without too great expense, it may be asked? Easily and profitably, by a proper rotation of crops; by studying the character of the soil, learning its deficiencies, if any, and supplying what is needed to establish a proper balance, by swatting the weeds, in season and out of season; by draining the wet places, and sweetening the sour ones; by feeding on the land a goodly part of what is grown on it, and getting the manure spread ash soon as it is produced. In short, by studying this most interesting problem from every point of view, and profiting by one's own experience, as well as by the teachings and experience of others. There is no more interesting study.

GET YOUR COUNTY ON LIST.

The "school house educational campaign" inaugurated by the agricultural extension department of the Kansas State Agricultural College, is attracting favorable attention. The plan of diffusing information is a good one. It is strange that any Kansas county should delay an arrangement for such a campaign. Several counties have grasped the opportunity, others are hesitating. It is remarkable that

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there should be any hesitancy at all. If any Kansas farmer who reads these lines knows that his county is not listed for one of these campaigns he should write his county superintendent of schools and suggest that he arise from his slumbers, get busy and arrange to give the country boys and girls of his county a chance to hear good speakers on agricultural topics.

All that is asked of a county is to furnish the means of transportation of the speaker from one school house to another. The county superintendent is the man to arrange for the speaker getting around. That should be easy. Any farmer in a school district if asked will drive a speaker to the adjoining district school house. A call in any district will reveal a dozen volunteers to do this part of the work. The extension department, J. H. Miller, secretary, will provide the speaker from his force of institute workers. The speaker will hold four meetings a day in as many school houses while in the evening whenever possible a stop will be made at a town and a fifth meeting held there.

The farmers and their families should attend en masse this meeting at their school house. They cannot afford to miss the opportunity of such advantages. This is agricultural education brought to their very doors. If these meetings should not be well attended, the college authorities, the state officials, and the representatives in the state legislature have a right to say that the people do not want education along agricultural lines. This movement deserves the heartiest of support.

This particular plan of taking the college to those who can not come to it seems to have originated with President Waters. It was first tried by him in Missouri in a small way. Its success in this state will be watched with great interest.

Among the first counties to take up the offer are Anderson, Marion and Ottawa. Assistant Hinman, the dairy specialist of the extension department, will be sent to Anderson county. Assistant G. C. Wheeler, a recognized authority in animal husbandry, will go to Marion to deliver a series of lectures in the school houses on subjects pertaining to live stock. Miss Frances Brown, the extension department's lecturer and demonstrator in domestic science, will fill the dates in Ottawa county.

WILSON'S ADVICE TO BOYS.

In a recent address, Secretary Wilson of the United States Department of Agriculture remarks in a plea for agricultural education. In the course of his address he said that today the boy is leaving the farm and going into the crowded walks of city life where there is so much competition. He said that because of this influx of the country boys to the city and the farm is being deserted, and consequently prices on foodstuffs are going up. He said the desertions have become a national menace.

"The time is fast coming," he said, "when the common people won't be able to eat meat, and poor people can not even have pie plant. Why it this? Because we have not instructed our boys in scientific methods of agriculture by which they make a success on the farm. As a result they are leaving for the factory and the railway shop where they can make more money, therefore agriculture the most important occupation in the world, is being neglected."

He then made a plea for industrial education, and declared that the state normal schools, especially for the southern states, should take up the work with greater zeal in the effort to restore the American farm to its proper position in the minds of the coming generation.

"I am a country fellow," continued the Secretary, "pure and simple. I never went to town in my life except to do something. For eleven years I have been here in this beautiful city working for the American farmer. We have philanthropists in this country, but did you ever hear of a philanthropist giving money to educate somebody along agricultural lines? But in fairness to them I want to say that recently some in New York have been doing something for the work in the southland."

FARMER MUST KEEP TO FRONT.

The farmer like men in other lines of activity must keep abreast of the times. To help in this the agricultural press talks every week to many millions of farmers and carries to them the experience of the most progressive and successful men in agriculture. The bulletins of the National Department of Agriculture, and those of the state agricultural colleges and experiment stations go regularly to about a million farmers, presenting the best and most scientific thought and methods of agriculture. In the past dozen years these influences have had a most marked effect on methods of soil culture and production. Now, it must be apparent that something must soon happen to the class of farmers who do not read these publications. They must of necessity fall behind in their work and in the end fall utterly in the struggle for success. In farming, as in everything else, the successful outcome is with those who keep abreast of the times in their methods of work. As an instance of the views held by some writers on the subject, the *Outing Magazine* says:

"What will the effect be in a generation or two? It is disappointing to have to record that the old-time farmers are remaining practically untouched by the new movement; but the new generation and the new west are quickly adopting scientific methods. One of the richest men in the west today is putting his daughter through the full four-year agricultural course, that she may be able to manage the estate that will fall into her hands; and a foremost physician of Chicago, who has just bought a 75,000-

acre farm in New Mexico, is having his boy take not only the four-year university course, but a two years' post graduate course as well."

What will happen to the old-time farmer, who refuses to take up the new methods will be just what has already befallen the old-time mechanic who refused to adopt scientific machinery.

BACK TO THE LAND.

An exchange says a movement is on foot in the eastern states to not only strengthen the position of the Jewish farmers of the East, but to add to their number by recruits from the cities. What the movement may amount to cannot be foretold, but it is quite certain that if colonies of Jewish farmers are created they will set an example to all farmers regarding business methods of marketing. The proverbial commercial instinct of the Jews will move them to take advantage of every opportunity to save to the uttermost the value of the work of their hands and products of their fields. Incidentally, the earliest Jews were farmers; they were driven from that vocation during the Middle Age, being forbidden to own land in many countries, and that compelled them to become a race of tradesmen. The Jews will make a success of farming. In our judgment they can furnish object lessons of value to farmers of all nationalities. Their business instinct will demonstrate itself more forcibly even in agriculture than behind the counter.

This editor was not long since in an eastern city which was almost entirely supplied by garden truck grown by Italians. Our informant said the Italian was the king of truck farmers. He possessed the industry, the economy, the ingenuity to grow good crops where the native truck farmer had failed and so successful had been the Italians that the majority of American truckers had been forced out of business.

These two circumstances may indicate a tendency toward an increasing farming population and the American farmer of future generations must progress in his methods or farmers of other nationalities will finish in the lead.

DO WE TAKE TOO MANY PAPERS?

Our representatives are often greeted with the statement: "I am taking too many papers now. I don't have time to read all of them." Of course one does not read all there is in every paper he takes. Probably no one reads all there is in any one paper. We don't buy a dictionary or an encyclopedia because we expect to read them through. We do have occasion to refer to them often, and the need of them is not questioned.

As a matter of fact we do not believe one farmer in fifty actually takes more papers than he should. In the territory in which *KANSAS FARMER* circulates there are not published more good farm papers than can profitably be used by every farmer.

We do not believe that a farmer in Kansas, Missouri or Oklahoma needs to take papers published in some eastern state. There is much good information of a general character in these papers, but for good, practical help his needs will be much better served by papers published in the territory in which he lives.

KANSAS FARMER is owned, controlled and edited by men who have lived practically all their lives in Kansas and the southwest. They know conditions here as they are. They own farms of their own in this section, and are up against the same problems as their brother farmers in the southwest.

Every issue of *KANSAS FARMER* contains something that will be of some help to every reader, no matter how many papers he takes.

There are fifty-two issues in a year. It is hard for a reader to realize the cost of gathering together the fund of information made accessible to him in fifty-two numbers of a publication like *KANSAS FARMER*. We wonder ourselves sometimes how it is done. And do you ever stop to think that one idea secured during the year might pay you more than 100 per cent on your investment of one dollar in a year's subscription?

RURAL TELEPHONES.

Good roads, rural free delivery and the rural telephone as benefits to the farmer, can hardly in equity be compared as they are not in competition with each other. Good roads have always been a benefit. Rural free delivery from its start in 1897 has been a great help to the farmers and in eleven years according to the report of the auditor for the post office, has grown to a total of 40,000 carriers. But the rural telephone starting since that time is already outstripping both of these in the number of farmers it is reaching and the ways in which it is benefitting them.

The rural free delivery carrier's route rarely exceeds 24 miles in length and serves on an average about 70 farms. A rural telephone will operate as far as 40 miles with as many as 30 or 40 telephones on the line. Of course in the well settled states the farmers have both but in the vast sections of open country, it is obvious that it will be some time before rural free delivery can reach as many farms as the rural telephone.

The low first cost of the rural telephone puts it within the reach of all. On lines over 12 miles long the cost is but \$6.87 per mile; same arrangement about the poles. In either case, the cost of his telephone set complete is \$13. The above figures represent standard "ground" one wire construction and long distance telephones. It is a simple matter to build the line and no operator is required. The annual maintenance expense is not over 75 cents, the renewal of the dry batteries in the farmer's telephone. In addition the farmer can run the line to a neighboring town and there connect with the town exchange and long distance service to the rest of the country.

The rural telephone in sickness or emergency enables the farmer to summon immediate aid. It enables him to learn the latest market prices and so get more money for his products. It removes the isolation of country life; it improves the conditions surrounding the farmer's wife. During the day and evening it is used a great deal for social intercourse, everybody being able to "get in" on the line at the same time if they desire.

In many sections of the United States where rural telephone lines exist, it is customary to furnish weather bureau reports over them each morning. For instance at 9 o'clock in the morning the telephone company in town will give three long rings over each rural line entering its exchange and those who desire may, on taking the receiver off the hook, hear the operator read the weather bureau report. The companies often also give out at the same time the prevailing market quotations.

The rural telephone certainly is the farmer's greatest servant. In using it to do errands, it saves him time. In dry seasons, he may be promptly notified of the approach of prairie or forest fires, of not infrequent occurrence if his farm adjoins a railroad, or in case of fire in his own home he can summon aid without leaving the farm himself. It is hard to say in what way it helps him the most on the various things mentioned above. Wherever he is, ask him if he would be willing to do without it and his answer is "No!"

In the vast sections of open country away from schools, churches and other conditions improving country life, the rural telephone is fast reaching out and removing one of the greatest disadvantages of living in the country; namely, that one must travel a considerable distance to reach a market or talk with a neighbor.

How to Judge a Range.

The first thing you should realize in buying a kitchen range is that it is easier to buy a poor range than a good one. Unless you know where and how to look for range value, you are quite liable to get one cheap in price, but which, by its great waste of fuel, will in the end, prove to be the most expensive range you possibly could have purchased. The booklet sent out free by the Arcadian Malleable Range Company, of Milwaukee, Wis., will be of great interest and value to every one who intends to buy a range, because this booklet, without fear or prejudice, betrays all the secrets of range making and clearly shows the points you should carefully consider in selecting a range. A careful reading of this interesting booklet, undoubtedly will help you avoid ranges that are expensive fuel hogs which also are always hard to keep clean, and unsatisfactory bakers. The Arcadian Malleable Non-breakable range made by this company, received highest commendation from range authorities at the Seattle Exposition. The booklet is sent free to anyone on request to any reader of Kansas Farmer and it will save money for you if you are going to buy a

Cooperation in Country Life

Arguing for cooperation is very much like preaching true religion; forty-nine people agree with the theory where one seeks to put it into practice.

To say that cooperation is the radical cure for the worst ills of country life is much like saying that unselfishness is the certain cure for scores of social troubles.

A vast majority will agree with both statements; a mighty small minority will put either cooperation or unselfishness into practice.

It is true that the general, intelligent adoption of cooperation by country producers would end one-half their present economic troubles; just as it is true that the general, intelligent adoption of the Golden Rule by all city residents would reduce by half the present cost of the police force.

Country people live in enforced isolation; there's no use disputing whether this isolation is a good thing or a bad thing, in itself; it is an unchangeable fact, in either case. Country life is what it is, in this respect, because the country is what it is.

It is a law of nature that you can't have neighbors' houses and a cornfield at the same place and the same time. If you live in the country and raise corn or hay or potatoes, or Jerseys or razor-back hogs you've got to have room for 'em, and your neighbors must likewise have room for theirs. You must move apart and keep apart, or your corn and the other fellow's Jerseys will get mixed up in a mess.

The result of this purely physical necessity for individual management of separate places is that country people become, as a rule, so excessively individualistic as to grow almost incapable of looking outside their own "line fences."

They are so accustomed to working alone where they must needs work alone, that they simply can't or won't work together where doing so would mean lessened expenses, increased income, higher prosperity.

Talk to them of the marvellous Rochdale system in England; tell them of its hundreds of cooperative stores, of its thousands of members' houses, of its two-and-a-half million members, of its annual trade of \$500,000,000 and its annual profits of \$60,000,000, they will admire and envy, but few are moved to imitate.

"That sort of thing may do with store keeping in England but it won't work with rural production in America," they say.

Now, it is not true that cooperation won't work with rural production. Denmark is the most cooperative country in Europe if not in the world. The Danes almost all belong to one cooperative society of another. In the last twenty years those of them engaged in producing eggs, butter, and bacon have raised their exports of these rural products from eighteen

millions to eight millions, of which sixty-two millions are raised and marketed through, by and because of cooperation.

Nor is it any more true that it won't work in America. It will work here. The proof is in the fact that it has worked and is now working in scores of places, and with widely differing rural industries.

Assistant Secretary Hays of the Department of Agriculture is absolutely right when he calls cooperation the true Americanism.

It is the spirit and motive of democracy carried into industrial life as we long ago carried it into political life. It is, indeed, a test of our capacity for real democracy, i. e., for real management by the people and for the people.

There is the California Fruit Growers' Exchange, one shining example of cooperation in the marketing of fruits. It sells over \$11,000,000 worth of fruit per annum, over half the citrus fruits of the state, at an expense for marketing of but one-half the cost per box of fifteen years ago to unorganized producers. Four thousand fruit-growers in eighty associations have, in less than a score of years, changed a precarious experiment into a prosperous industry through cooperation.

Public spirit among Minnesota dairymen, aided by wise state legislation, has resulted in the erection through that commonwealth of several hundred cooperative dairies. The result has been to improve the products and increase the profits of Minnesota dairying. At the same time the permanent value of farm lands has been raised, and a great step taken toward lifting the standards of country living.

Nor is it necessary that cooperation should be state-wide and in figures of millions. In one little Ohio town thirty apple growers have for years cooperated in packing and marketing their fruit. They have succeeded so well in this line that now they carry the idea into the purchase of their supplies so that, as reported by an observer, "even lime-sulfur mixture and compressed air for spraying it are now furnished to individual users from cooperative plants."

In another little town in wheat growing Kansas a cooperative grain elevator has worked so successfully as to have largely increased the profits of even outsiders, non-members, who have been enabled to secure better prices and prompt payment through the existence of the elevator, even when selling to agents of the "trusts."

Down on the "Eastern Shore" of Maryland a single grange has secured, by cooperation, the establishment of a public sprayer. It is in charge of an expert from the state experiment station, who does the work better and cheaper than any individual can do it, and who also saves the cost of the forty or fifty separate plants which would be required if each member worked independently.

Says Gifford Pinchot: "The cooperative spirit is the master spirit of this age, and the farmer has been the last to feel its influence and respond." When the country dweller "decides that he will himself put an end to his own isolation and work with his fellows for all the great objects of united interest common to each neighbor-

hood, then the beginning of great things will have arrived."

The amount of money that is yearly wasted on farms and country estates through lack of cooperation is something incomputably immense. Each producer must have, or thinks he must, all the tools and machinery needed for all his work. He uses them a fraction of the time and pays interest and the cost of depreciation the rest of the time.

I know a farm where six horses are kept the year round, because that number are needed for about two months each season. For the rest of the twelve months four of them stand idle, "eating their heads off" and devouring the owner's profits. He has two mowing machines, two horse-rakes, a tedder, a hay-loader, all of which he uses about four weeks of the fifty-two. For the other forty-eight they are packed under a shed to rust and rot. He has a reaper and binder which he uses about two weeks, and supports in idleness the other fifty. And so on and so on.

A score of his neighbors are, in just the same way, stocked with teams and tools only occasionally needed, because they insist upon being "independent." They are all throwing good money into the scrap-heap every year, because they can't or won't see the possibility and the wisdom of cooperation.

Take the matter of stock breeding. It is hardly overstating the disgraceful truth to say that half the cows of the country fail to pay for their keep and care. They don't return as much in milk or butter as they cost in food and labor.

Most farmers raise their own cows, or let them come up, rather, in a hit-or-miss way. Their young stock are the offspring of such cows as they have and any old "scrub" bull which has come to maturity because some neighbor was too busy to veal it when it was a four-weeks' calf.

About five years ago twenty farmers in one Minnesota township, mostly Danes and Swedes who knew what cooperation had done for their old homes, joined in a community-owned bull. They simply bred up the stock they had, and the results have been marked, not only in the increased earnings of their herds but in the improvement in quality, which is so evident that buyers of young stock are being attracted there and prices are constantly rising under the influence of increasing demand.

In these and a thousand other ways, rural cooperation is possible right here in America. I know of one little farming town in New England where about a score of country families have for three years been buying many of their domestic supplies in common, thus securing them at wholesale prices. The result, after all expenses are paid, is a saving of about 15 or 18 per cent on the total outgo.

Of course, in this as in all functions where men work together for a large common good, there must be concessions in minor details. When twenty men start to walk abreast, not all can have the middle of the road all the time. When they set out for a lofty summit they must expect to climb some hills and go around some cliffs. When they are looking at a dollar six months hence, they mustn't allow the sight of a cent close to their eyes to hide the bigger and more distant coin.

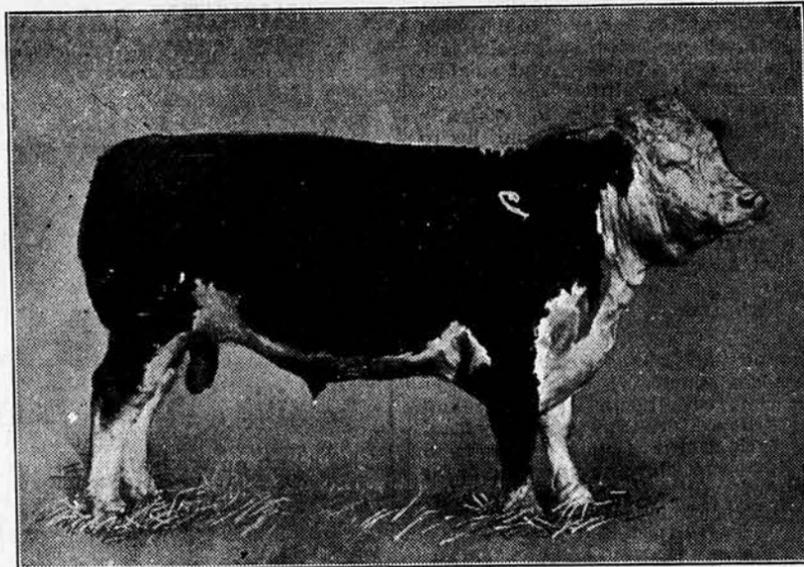
Successful cooperation calls for a higher type of manhood than individualism, just as successful democracy demands a higher type in the mass than oligarchy or despotism.

Horses and mules and some men can be ruled by others; it takes men with intelligence and foresight and self-denial and high aspirations to rule themselves. This is no more true of business administration than it is of government.

If we country-folk are fit to govern ourselves in matters of taxation and public expenditure and highways and postoffices and police and war, we are capable of governing our industrial economics, also.

Just at present, we need to have that phase of the question kept prominently before us; to have our laggard steps hastened by constant prodding, and our sleeping interest aroused by a persistent "dinging away."

Fifty years hence a country of tried and triumphant cooperation will look back with wonder and some contempt at our dulness in failing to grasp the opportunities which stand at our doors begging us vainly to take them in.—A. P. Hitchcock in Country Life in America.



Repeater 289598, champion Hereford bull at the American Royal. Owned by O. Harris, Harris, Mo.

LIVE STOCK



Take Good Care of Corn Fodder.
 Nearly 40 per cent of the corn crop is in the leaves and stems, and nearly all kinds of live stock like corn fodder. Pay as much attention to the quality of corn fodder as you do to the quality of hay, and you will have nutritive and palatable feed that will fully take the place of hay and other roughage which will sell at a good price.

Fodder to be good must be handled right; it must be cut while it is at its best. Cut while the leaves are green, and put it up in good shocks. Shredded fodder makes easy feeding with minimum waste, and whatever refuse there may be is left in good condition for the manure heap. But cut up a few hundred shocks, whether you shred or not, and then save it in good condition. Fodder left standing in the shock in the field until snow comes is on a par with bleached hay. Haul in the fodder this fall. Stack it well, near the feeding yards. A good farmer tells this editor that one acre of good, bright corn fodder will go as far as two acres of timothy hay, and he can readily sell his hay at \$14 a ton.

Lip and Leg Disease.

Many western farmers will this year feed a few sheep. The Missouri state veterinarian cautions such buyers to use particular care in purchasing stock shipped from eastern states. Be careful to avoid purchasing any sheep which show sores about the mouth or on the legs. Several loads of sore-mouthed sheep have already been shipped into this state under the impression that such sores were quite common among western sheep and would not do any harm. In some cases these sores have turned out to be the beginning of an outbreak of lip and leg disease, and the owner of the flock has invariably taken a heavy loss. Under present conditions, farmers are advised to avoid all sheep which show any kinds of sores about the mouth and legs.

Lip and leg disease is a money loser proper. It is difficult, if not impossible, to cure, and may be communicated to other animals. The veterinary force of this state is now entirely inadequate to do the work now on hand. It will be impossible, in the case of an outbreak of lip and leg disease, to devote much time to its control. Farmers of the state are urgently solicited to be extremely careful in buying stock sheep and thereby assist in preventing the introduction of this dreadful disease of sheep into this state.

Hogs After Steers.

The hog is used in his economical role when he follows a bunch of steers in the feeding lot. The hog is the savings bank on the farm; he gleans in the grain fields for the wastage in harvesting, also in the orchards for the fallen fruit, and no other animal can fill his place in the services of this character.

A farmer in Sangamon county, Ill., as reported in the Swineherd, fed his steers 60-cent corn with following results: He sold 42 steers averaging 1,425 pounds at \$6.80 per cwt., at home, bringing in \$96.90 per head. The latter estimates that the pig following these cattle made 75 pounds of pork per steer at 6 3/4 cents, \$5.06. Total returns per steer, \$101.96. These steers were bought at about 4 cents when they averaged close to 1,000 pounds, making their cost, with commission, etc., \$45 per head. Each animal ate 66 bushels of 60-cent corn, \$39.60, and the roughage of 60-cent corn, timothy and clover is estimated at \$5 per head, a total cost of \$89.60. Margin of profit, \$12.36 per steer. Allowing something for under estimate of cost there must be \$10 per head, or a total of \$420 return for the care of the bunch of cattle. Perhaps the manure alone, a very essential part of their improved farming system, is worth the labor, and this \$420 is profit.

Aims and Problems of Breeding.

Every man who considers himself a breeder has certain standards that he is striving to attain. Sometimes men have false standards or a wrong conception of the true object of breeding. Warfield in writing upon the subject of cattle breeding had this to say in reference to developing the best animals:

"In the first place it should be clearly understood that the great aim of breeding is to produce animals; secondly, animals of as high practical value for the actual uses of man's consumption as possible; thirdly, that where a standard of excellence has already been attained by earlier breeders and improvers, this standard should be carefully maintained; and fourthly, that whenever and wherever it may be possible, this standard should be advanced and the breed improved. These propositions, in a negative way, may be said to be: first, everything tending to impair the constitution, and particularly the procreative organs, is to be avoided; secondly, the cattle are not to be bred for pedigree or to other purely artificial standards; thirdly, that neglect of the useful qualities already obtained in the cattle is ethically wrong, and to permit such qualities to be atrophied or decreased by non-use is condemnable; and fourthly, that a man who breeds valuable varieties of stock should never forget that they are a trust committed to his charge and that a neglect of any opportunity to improve on them is to prove false to a high trust."

Fatted Calf Brings Prize Home.

The "fatted calf" has been brought home, but with honor and glory and not for slaughter. For years the Kansas Agricultural College has been breeding and developing the finest types of cattle and recently the choicest specimens of this stock have been shown in the great shows of the middle west. Their breeding has been for the purpose of proving and developing certain principles that will advance the live stock interests of the state. The people who go to stock

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E. B. GUILD MUSIC CO., Topeka, Kansas.

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FOR SALE 50 CHOICE BUFF ORPINGTON COCKERELS. These birds are extra good; all from my prize winning pens. We guarantee every one to be first class. Prices reasonable. **WHITE BROS., Buffalo, Kan.**

shows and fairs should see models, not only of machinery, but of live stock and grains.

The fat steers belonging to the Kansas State Agricultural College were exhibited at the Interstate Fair at St. Joseph, Mo., and carried off more honors and more money than all of the other herds on exhibition. At this show the Kansas cattle met full herds from the agricultural colleges of Missouri and Nebraska, and herds from ten or a dozen of the best individual breeders of America. Every steer won in every ring except one steer in one ring.

The Kansas college Shorthorn calf, "Benefactor," was made grand champion steer of the show and won the handsome silver cup offered by Swift & Co. The champion in the Angus class with the Kansas college steer, "King Ellsworth," undefeated in his class in all shows last year, including the American Royal at Kansas City and the International at Chicago. The champion in the Shorthorn class was awarded to the Kansas calf, "Benefactor." There were awarded to the Kansas college cattle: The grand champion of the show, two breed championships, five firsts, three seconds and two third prizes.

When the judges had finally ranked all the steers in the show for the grand championship, the Kansas Agricultural College bred Shorthorn calf, "Benefactor," stood first; the Kansas Angus yearling, "Symboleer," who was champion calf over all breeds at the International last year, was second; the Kansas college 2-year-old Angus was third, and the Kansas college yearling Angus steer, "King Ellsworth," stood fourth. Then followed the entries from the other colleges and from a dozen breeders of the country.

Nearly all of these cattle were bred at the college, and all have been fed and cared for by students and employees of the college, under Prof. Kinzer's direction.

PURE SEEDS AND KANSAS VITALITY.

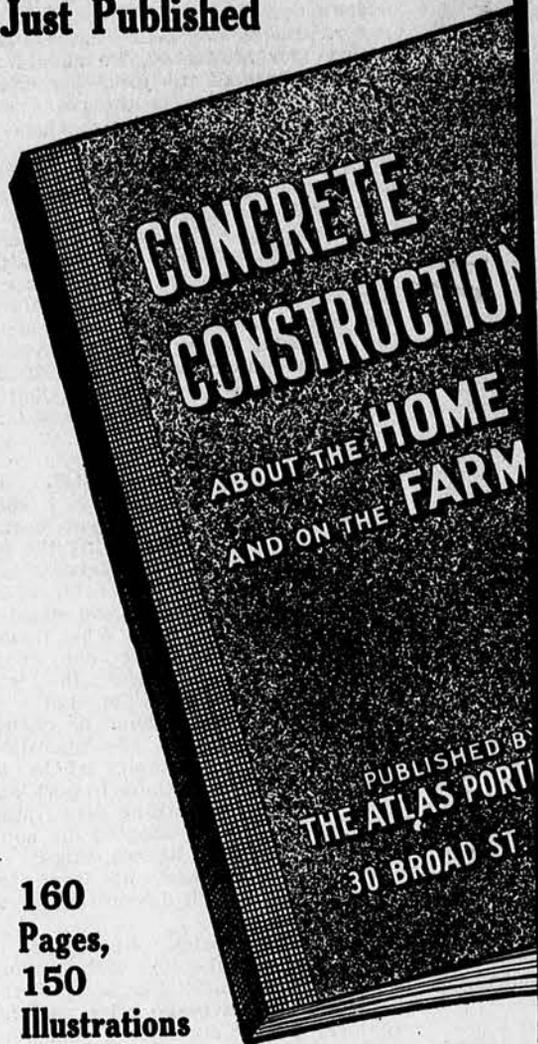
Every spring sorghum seed is in demand at good prices. An occasional farmer is growing seed for market and is realizing more money per acre from it than the ordinary seed crop will pay. As a rule the sorghum seed sold has low germinating power. This is because the seed has not been harvested at the right time and for this carelessness the buyer must suffer disappointment and loss in not getting a good stand and the seller takes a lower price than need be because he cannot guarantee the vitality of the seed.

Ordinarily sorghum seed stands in the shock during the winter exposed to wet and freezing weather and here it is ruined. If the seed is harvested and thrashed in the fall it is placed in a bin where it heats. Heating injures the germinating qualities. So unless it is taken care of properly when harvested early it might as well remain all winter exposed to the elements.

This editor once knew a farmer who bought a small quantity of seed of an early maturing dwarf variety of sorghum and it was so superior to the mixed and coarse variety previously grown that his neighbors insisted upon buying his seed. The first year this man cut off the heads and hung them in his barn and the following spring beat off the seed with a flail. This gave him a good start of seed. The next year the stalks were stopped at maturity and the heads wintered in a corn crib from which they were thrashed in the spring and the seed sold at \$3 per bushel. The crop made 40 bushels per acre. This money looked so good to the farmer that following years the sorghum seed crop was one of his mainstays. He sold his seed at a premium over other seeds and 40 pounds of his was an abundance to sow per acre while seed harvested in the ordinary way 80 to 100 pounds were sown. It pays to take care of the sorghum seed.

It will pay the farmer, who has the disposition and will exercise the care required, to sow and plant only the best varieties of his various crops, and make a business of selling seeds to his neighbors. This applies to corn, wheat, oats, rye, millet, sorghum or Kafir corn. These grains for seed will sell for more money than for feed and the extra selling price per bushel will well pay for getting a start of good seed and keeping it clean and pure. This editor knows farmers who are making a business of producing good seeds and they claim it pays.

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Ten young wage-earners opened and made a success of the famous citrus groves at Lemon Cove, Tulare County, California. Each bought ten acres of land and developed it as fast as he could save money to buy trees. Five years later they had quit their jobs. They were earning from \$250 to \$400 an acre from their orchards. To-day their income is double these figures.

Any man who will work earnestly and intelligently can do as well in the prolific

This valley is over 250 miles long by 100 miles wide. A fertile empire, level as a floor, rimmed with snow-capped mountains rich in minerals and merchantable timber.

There are 10,000,000 acres here that easily can be irrigated. Every acre should be worth from \$500 to \$1,000 when development is complete.

The soil will grow, successfully, all crops of the temperate and semi-tropic zones—grain, vegetables, figs, apples, oranges, pears, lemons, peaches, alfalfa.

It is a famous wheat country; but the big ranches are passing. The watchword of the future is Intensive farming—Big Money Crops.

Water for irrigation is exhaustless. It comes to the land through rivers and streams, or economically may be pumped from the water sheet that underlies the entire basin.

I know the valley intimately. I have studied it for years. I have seen crops planted, harvested and sold to the enrichment of men who came here with little, and to-day have much, all made from the land. Any man who will do his best must succeed.

You still can buy undeveloped acres for \$50 each, and you can make it worth what you will. Soil, water and climate are there ready for your cooperation.

Ten or twenty acres is enough for a start. I have collected much authoritative information that has been condensed and published in a profusely illustrated book-folder of 72 pages. I will send you a copy of this folder on request, and will also mail you our journal, "The Earth," six months free.

I am paid a salary by the Santa Fe to help settle up the country along its lines. The Santa Fe has no land for sale. I will, however, be glad to refer you to responsible parties who have; or, if you prefer, you may correspond direct with secretary, Board of Trade, at Bakersfield and Visalia, Cal., or secretary, Chamber of Commerce, at Fresno, Modesto, Stockton, Madera and Merced, Cal. I will quote you, on request, the low price ticket fares and freight rates on household goods, etc., offered by the Santa Fe.

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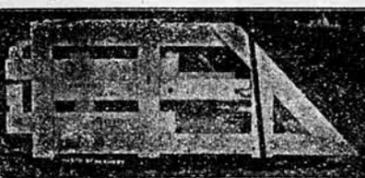
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The Rural Outlook.

(continued from page 2.)

add a third great phase of effort, without which no college of agriculture can really serve its constituency. This effort is extension work, by which I mean teaching the people directly in their homes and on their farms with lectures, demonstrations on the land, reading classes, correspondence courses, and with local agents established here and there to act as leaders and who should be to the agricultural forces of the region what the teacher is to the educational forces and the pastor to the religious forces of the community. We must continue to search for new truth and we must greatly enlarge our means of teaching the persons who now come to the college of agriculture; but all the farming people in any state are properly the students of a state college of agriculture, and it is the business of the state, represented in the college, to see that all these persons are enrolled in the educational program. The people on the farms must be informed of the new knowledge, instructed in the means of organizing it into a system, and be inspired by well qualified teachers and leaders. I do not mean to say that all persons on the farms need this kind of work, but there are so many that do need it that it has become a great public question as to the means of spreading such an educational work.

Another program suggested by the commission is the organization of a national plan or scheme of stock taking. That is to say, a detailed survey must be made of the agricultural and country life resources of all rural communities, giving us information in regard to the soils and their capabilities, the water supplies and forests, the churches and schools, the organizations, the markets, the agricultural experience of the communities, the corollary industries that have developed, and the whole local status. It is impossible to develop a scientifically and economically sound rural civilization until we have the exact local facts on which to build it. Soil surveys and other inquiries are now being conducted from a number of institutions; but even at the best they are wholly inadequate to meet the demands for geographical knowledge. The commission considers a nationalized system of surveys, being worked out in each state through the state institutions but on a national plan, to be an essential part of any fundamental development of our rural civilization.

The commission recommends that a general campaign for rural progress be set forth. This, of course, is easier said than done, but it is easily within the possibilities. There are great numbers of organizations, agencies, institutions and movements that have for their chief object the bettering of rural conditions. The commission would not eliminate any of these or disturb their autonomy; but it would federate and coordinate them so that one would understand what the other is doing and that altogether they would present a combined and systematic effort to develop the civilization of the open country. The discussion of these questions should now become a part of the program of all rural societies. There should be state conventions for the purpose of organizing and federating all these scattered interests; and the state conventions should be federated by means of some central national agency. It may now be said that the agitation for the conservation of our natural resources has taken such form as really to constitute a campaign; in a similar way the discussion of one or two years ought so to consolidate the country life interests as to constitute a real campaign in this field.

If these three types of agencies are set well in motion it will mean, of course, that the rural school, the rural church and other agencies and institutions will be touched vitally, and that leadership in the open country will be developed.

It is specially important that the rural school be redirected. We must outgrow the nation that there are certain subjects which are capable of training men's minds while other subjects do not have this power. All subjects ought to be capable of training young minds if only they are well systematized and well taught. The subjects with which a person lives should be put in such form that they can be made the means of educating him at the same time that they give him information for his use and inspiration for his life work. This is specially im-

portant now that we are trying to educate all persons. Formerly we educated those who were literary minded, classical minded, law minded, and the like, but we must educate those who also are machine minded, business minded, and farm minded. In the rural districts, the school should have very close articulation with the affairs of the community; as these affairs are agricultural, it necessarily follows that such a school will have a decided agricultural set or flavor. It is not sufficient merely to introduce a course in "agriculture." The arithmetic should be so taught that local problems will be considered. The same may be said of the geography, for it is a true educational process that the child should be interested in his own environment before he is taken to regions on the other side of the globe. Arithmetic and geography and other customary subjects could be so redirected and taught as in a few years to develop a new point of view in a community as to its agricultural affairs. In other words, the solution of the difficulty, so far as the school is concerned, is not merely formally to introduce other subjects, but so to reconstruct and redirect the whole theory and practice of teaching as to make agriculture in a rural school as much a part of the whole school work as oxygen is a part of the air.

The country church is too exclusively concerned with giving religious instruction to its own particular communicants. The rural church is an institution. It should have a social responsibility toward its community. This responsibility should extend to all persons, church and unchurched alike. In parts of the northeastern states there are undoubtedly too many churches. We must come to a federation of church effort. By this I do not mean that churches of different denominations will necessarily combine in an undenominational church; what I have in mind is that in a rural community which can support only one church, there must be such an understanding between the different churches that all but one of them will withdraw, and that this one must bear the responsibility of the entire church work of the community. In the neighboring community another church may assume this responsibility. We have heard much about the necessity of developing a social center in the country. The probability is that no one institution will monopolize the development of such centers. In some localities the school may constitute the social center; in others it may be the library; in others it may be the grange or other organization; in others it may be the church. In many prosperous and thrifty communities the probability is that there will be more than one social center. My point just now is that the church should consider itself to be one of these agencies. The recent county work of the Y. M. C. A. organization is no doubt destined to work a great change in our point of view on religious social work.

The work, then, of the Commission on Country Life is briefly to indicate a few of the most important deficiencies and disabilities under which the countryman works, to show that there are certain enactments that Congress can make to advantage, and in general to call the attention of the entire people to the whole subject and challenge them to the need of giving as much thought to country life subjects as has been given to urban subjects. The fundamental problem is social. While it is true that the agricultural condition is in general better than it ever was before from the economic side, the commission nevertheless feels that there is great lack of social cohesion such as would make for a type of country life that will permanently satisfy men and women of the highest training. We stand for the forward look; for the men and women who see; and we advise the setting of such forces in motion as will develop a country civilization worthy of the best American ideals.

Your hens ought to be through their molt by this time, and commencing to lay. Your early hatched pullets should also be getting ready to lay. If neither hens nor pullets are laying, you should endeavor to stimulate their laying propensities by feeding them all the nutritious egg-laying food they will eat. It is very important that the fows should commence to lay before very cold weather sets in, for the chances are that if they do not commence to lay this fall, that they will not lay till

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Leather used in ordinary shoes is staked, or stretched. Ours isn't, for ours aren't ordinary shoes. Our Buffalo Calf tannage is a development of the recently perfected Elk Tannage process. It gives life, strength, pliability and softness to the leather.

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Buys the Best

spring. Prices for eggs this winter are going to be high and you ought to be able to make some money if you can get your hens and pullets to laying.

Paralysis.

Will you please tell me what is the trouble with my chickens? The trouble commences in one foot and the toes draw under the foot. In a few days the knee becomes weak and the chickens are helpless. The other foot and leg are soon affected the same way. I have lost several chickens from this trouble.—Mrs. A. Thestrup, Williamsburg, Kan.

Ans.—This disease is probably paralysis, induced by the fowls running on wet ground or roosting in damp quarters. The remedy is to provide dry houses for them.

Every day that is born into the world comes like a burst of music, and rings itself all the day through! And thou shalt make of it a dance, a dirge, or a life march as thou wilt.—Thomas Carlyle.

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HOME CIRCLE



The Colors of October.
The months all chose their colors;
December, green and red;
"That I may twine my holly
All round the world," she said.
Cried January softly,
"Pure white just like the snow,"
February was so little,
She chose the same, you know.

Dear laughing maid, October,
"There's nothing left," she said,
I'll borrow all your colors,
Your blue, your gold, your red.
She caught May's blue and flung it
Above her in the sky,
With snowy white of winter
She painted clouds so high.

She dashed warm gold and crimsons
On leaves of tender green,
She touched the hills with purple—
The rarest ever seen;
She put rich brown and yellows
On ripe nuts in the wood—
And all the months together,
Sang softly, "It is good."—Indian Leader.

Farmers' Institutes for Women.

An important problem in education in the United States is that of reaching country women with information suited to their needs. Although to a great extent the mental, moral and physical welfare of the family depend upon the home keeper, yet her opportunities in the country districts for qualifying herself for fulfilling these duties are chiefly such as she can create for herself. Although a large amount of domestic science instruction for women is being given, it is for the most part confined to resident students in educational institutions in towns and cities. Comparatively little is being done in this direction in the rural schools, and almost nothing in the way of peripatetic instruction for country women by the state at large.

NEED OF MORE EXTENDED KNOWLEDGE OF DOMESTIC DUTIES.

While knowledge of domestic duties is probably as extended and general among country housewives as is knowledge of field operations by their husbands, yet in both cases there is great respecting the principles upon which successful practice in the home and in the field are based, and while both classes would be greatly aided by additional instruction in their respective duties, the importance of such instruction to the housewife is far greater than a corresponding amount of information to the worker in the field. Ignorance of operations in the field is felt chiefly through impairment of the quality or reduction in the amount and value of the crop. Ignorance in the home is a much more serious matter, in that through food improperly prepared and sanitary conditions neglected the life of the worker is often endangered and not infrequently destroyed. A poorly nourished body, whether of man or animal, is inefficient no matter how well bred or how well equipped for service it may be in other respects. Good food well prepared and proper hygienic care maintain health and add to the working power not only of the well and strong, but by these means the weak and helpless also are enabled to gain strength and become efficient aids in family support.

THE FIELD OF WOMEN'S WORK.

The selection and cooking of food are, however, only two items in the duties of the country women. If knowledge of these were all that the housewife required, the question of supplying this information would be comparatively simple. There are other problems, such as those connected with the rearing and education of children, the clothing of the family, the providing of home conditions that are sanitary, the social, intellectual, and æsthetic improvements of the housewife herself.

The ideal home is a social and cooperative society in which all of its members unite their efforts for the common good. This ideal is realized most nearly in the country home, where even the smallest child has opportunity to be and generally is a contributor to the family support. It has come to be a recognized fact that boys and girls, healthy, industrious, frugal, capable, intelligent, self-supporting, cheerful, and patriotic, abound in country homes, and that the prevalence there of these high qualities is largely due to the family life, which re-

quires each individual from his earliest years to bear this proportionate share in providing for the maintenance of the home. By bringing within the reach of country people educational advantages suited to their needs, rural life becomes more attractive, country homes are multiplied, and the valuable qualities which these homes develop become the possession of a correspondingly larger number of the citizenship of the state.

RELATION OF WOMEN TO RURAL SCHOOLS.

The relation that women sustain to the rural schools as teachers of the youth of the country is most important, and furnishes a potent reason why they should have special training for rural-school work. They are by great majority the instructors not only in the rural schools, but in the town and city schools as well, and the future nation consequently will depend very largely for its efficiency upon the manner in which these teachers perform their work.

The reports of the Bureau of Education for the last three decades show that the tendency is toward lessening the percentage of men teachers and increasing the proportion of women teachers in the public schools of the United States. In the year 1870-71 the percentage of men teachers in the public schools was 41. Since then the proportion has steadily diminished until 1906-7 the percentage of men teachers had fallen to 22.3. In three decades, therefore, the proportion of women teachers has risen from 69 per cent to 77.7 per cent. The effect of this upon the future industrial efficiency of millions of school children in the United States is well worth considering by those who are interested in rural betterment, especially when it is remembered that 35 per cent of these children live in country homes and are consequently cut off from the superior advantages that the town and city schools afford. The fact, too, that household economy must ultimately be taught to girls in the rural schools, as it now is in many of the town and city schools, makes it doubly important that country teachers shall have opportunity to fit themselves for giving this instruction.

EDUCATION ADAPTED TO WOMEN.

As yet no comprehensive system has been put in operation by which the state shall be responsible for supplying educational facilities especially designed for reaching country women at their homes. While the farmers' institute has done something in this respect, yet until quite recently its efforts have been chiefly in the direction of assisting men, leaving the women to depend upon themselves, or at most to gather what they can from the teaching which the men receive. It manifestly is not meeting country needs when the education furnished is adapted to the needs of the male population only, for that assumes that the problems of country living all lie outside of the walls of the house in which the family dwells. Instruction helpful and adapted to the needs of country women should be provided as well, in order that their influence, whether exerted in school or church, the social circle, or in domestic life, shall be most beneficial to the family and the state.

THE MAGNITUDE OF THE WORK.

According to the census there were in all 37,244,145 women and girls in this country in 1900. About 35 per cent of these, or over 13 millions, lived in the rural districts. To reach this great multitude with even limited educational facilities for the study of domestic science and household art will require a radical change in the methods heretofore pursued.

But the introduction of the study of domestic science and household art into the rural schools, the high schools, and the normal schools is only a part of the work that will be required. Winter schools for adult women will have to be organized; movable schools in large number will have to be sent out; suitable demonstration schemes will need to be devised; expert advisers to visit country women will have to be employed; and publications adapted to the capaci-

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ty and needs of rural housewives will have to be introduced into their homes.

It will take many years to perfect a system that will properly meet the educational requirements of women who live in the country districts, but that it is possible to establish such a system is shown by what has been accomplished in this direction by some of the more progressive nations in foreign lands. Austria, Belgium, Sweden, Norway, Denmark, Switzerland, France, and the German States have for many years been engaged in conducting schools of domestic science and home economics especially adapted to country people, and also courses of study in these subjects for students in fixed institutions in towns and cities. Although conditions abroad differ from those prevailing in the United States, yet the general methods that have been found serviceable in foreign countries can no doubt be so modified as to be equally valuable here.—U. S. Dept. Agri. Cir. 85.

Ironing Out the Wrinkles.

"Ah, Sarah, do let me! I'll be ever so careful; just let me iron that nightcap of grannie's please Sarah."

"No, Miss Dollie, indeed I won't; whatever would your grannie say if

she found her nightcap scorched"

"But I wouldn't scorch it one bit, Sarah; just let me try." And Dollie's blue eyes looked pleadingly up to Sarah's firm face bent over the ironing-table as she drew out the tucks in one of Dollie's pinafores.

"No, Miss Dollie; don't ask me again, like a good child. The mistress wouldn't be pleased at all if I let you use this heavy iron, like enough burning yourself, and for certain sure doing some mischief to the clothes. And where would I be—even if I let you—waiting on you, while all those things waited on me to iron them out?" And Sarah gave a quick nod to the pile of white clothes neatly stored at one end of the long table.

Dollie looked at them, too, and sighed impatiently, while a frown gathered her brows together, chasing the pleading smile from eyes and lips. She rubbed her finger discontentedly up and down the edge of the table while she watched with sullen eyes the iron pass swiftly to and fro in Sarah's steady hand, transforming the rumpled mass of white into a smooth, clear, muslin pinafore.

"I think it must be lovely to iron things!" she said, presently, in a forlorn kind of voice.

"There's a deal of ironing you might

FASHIONS



No. 8340—A Very Pleasing Shirtwaist for Misses' or Small Women.
In striped or plaid silk or woolen, satin or voile, lawn or dimity, this model may be effectively developed. Its simple lines are graceful and pleasing. The broad plaits give breadth to the shoulders. The design is closed under the centre back plaits. A bow tie of batiste or embroidery will finish the collar prettily. The pattern is cut in 3 sizes, 14, 16, 18 years. It requires 2 1/2 yds. or 27 inch material for the 16 year size.

No. 8436—A Dainty Dressing Sacque.
No garment in the woman's wardrobe can approach the dressing sacque in convenience, utility and comfort. A broad collar extending out over the shoulder gives a distinctive air to this one. The back is gathered into the figure and the fullness in front may be confined by a belt or not, just as the wearer decides. Made of French flannel, outing, or for warm weather. China silk, dimity, or lawn trimmed as illustrated, it would make a charming and comfortable addition to the wardrobe. The medium size will require 3 1/2 yards of 36 inch material. The pattern is cut in 6 sizes: 32, 34, 36, 38, 40 and 42 inches bust measure.

No. 8363—A Simple School Frock.
Brown panama was used to make this neat little model. It may be trimmed with plaid in silk or woolen, or with braid or gimp. The fullness of the waist is laid in tucks; the skirt is gathered. The sleeve is a simple bishop style, finished with a band cuff. The pattern is cut in 4 sizes: 8, 9, 10 and 12 years. It requires 3 1/2 yards of 30 inch material for the 10 year size.



8436



8363

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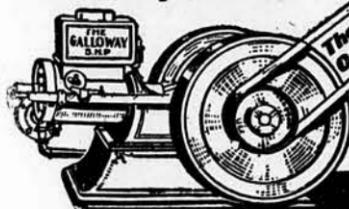
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be doing if you chose, I'm thinking, Miss Dollie," she said, with a side glance at Dollie's discontented face. "If you could see the ugly puckers and wrinkles you've got now all over your face, making you look as cross as cross, I think you'd be glad to iron them away; and you might do it in a minute if you liked—as a little girl should who has got a happy home to be thankful for—if you just used the iron of a thankful heart, instead of being a silly little girl making yourself ugly and disagreeable because you can't get everything you want."

"Oh, Sarah, I didn't mean to look ugly!" and Dollie's face crimsoned with shame.

"Well, that's right; and see what a little rub it took to take the wrinkles out of your face! A pity, since you'd like to iron, you wouldn't try to keep your own face nice and smooth. When you feel those ugly wrinkles coming on it, if I was you, I'd just smooth them away at once with the iron of thankfulness for all the good things you have got to enjoy. If you were a little girl with an unhappy home, or if you were sick like many another little girl, there would be some excuse for you; but you've got a right to look always pleasant when you've got so much to be thankful for. It's only a foolish body that would be ready to make a show of their face for no good reason at all."

"I'll try and iron them out next time, Sarah." Dollie's face was smiling now.

"Well, don't forget, now; it's easy work meaning to do a thing, but it's easy work forgetting to do it. Keep the iron of thankfulness always ready in hand, to smooth out the wrinkles of discontent, and your face will always be as smooth and pleasant to look at as your grannie's cap is now that it's iron."—Selected.

"Setting" Colors in Wash Goods.

Alum in the rinsing water will keep green from fading. Linen suits and shirtwaists should be washed in hay water (made by pouring boiling water over hay), and they will keep their color for a long time. One ounce of sugar of lead dissolved in a pailful of water will set almost any color, and is especially good for blue prints. Soak the goods for two or three hours and let dry in the shade before washing with soap and water. Do not try to boil the tinted or figured goods, and do not use washing soda or strong soaps when washing them. If they are much soiled a handful of salt thrown into the water will set the colors. Use warm or nearly cold water in which to soak these things. It is much better than hot water, and the dirt loosens quite as readily. Use ox-gall for setting the color in black, purple and heliotrope.—Exchange.

RECIPES.

Two Autumn Salads.

1. Mix one cup of celery cubes with half a cup of small, thin slices of sour apple and half a cup of cold boiled ham cut in very thin slices and then in pieces the size of a postage stamp. Mix with mayonnaise, serve on a bed of lettuce and garnish with sweet red pepper cut in shreds with the scissors, and halves of peeled yellow egg tomatoes.

2. Make an unsweetened jelly, using water in which a cucumber has been boiled and add sufficiently vinegar or lemon juice to make it quite tart. Put this in a ring mold, a little at a time and place in the jelly small thin slices of boiled beets and French carrots cut in fancy shapes and marinated in spiced vinegar for a few moments. When ready to serve unmold the jelly and fill it with a mayonnaise of sweetbreds.

Cranberry Bavarian Cream.

Stew one quart of cranberries; while hot rub through sieve; measure half a pint and add to it one-half cup of granulated sugar. Have a quarter of a box of gelatin soaked in a quarter of a cup of water one hour; set the bowl over steam to dissolve the gelatin, then add the cranberries. Turn it into an earthenware bowl, set in a pan of ice water and beat until it is perfectly cold and begins to thicken, then add half a cup of rich milk and beat again, and at last add half a cup of whipped cream. Beat it thoroughly and turn into a mold and set on the ice to congeal. Serve with whipped cream and a few chopped almonds added.

Cranberry Pie.

Nearly everybody cooks cranberries before making them into a pie, but we like this recipe much better: Chop fine one cup of cranberries, add a cup of sugar and the yolks of three eggs;

stir together and bake with only one crust. When the pie is done, spread over the top the beaten whites of the eggs, flavored with one teaspoon of lemon and one tablespoon of sugar. Set in the oven for a very few minutes, until the frosting is of a delicate color.

Apple and Nut Salad.

Peel several sour apples, cut into bits and chop in the chopping bowl. To these add less the quantity of English walnuts chopped, then add the same amount of celery, half a teaspoonful of mustard; break the yolks of two eggs and stir in one direction until the eggs are cooked by the mustard; beat in drop by drop as much olive oil as it will take, and then vinegar in the same way. Pepper and salt to suit the taste.

If We Knew.

Could we but draw back the curtains
That surrounds each other's lives,
See the naked heart and spirit,
Know what spur the action gives—
Often we would find it better,
Purer than we judge we would;
We would love each other better,
If we only understood.

Could we judge all deeds by motives,
See the good and bad within,
Often we would love the sinner
All the while we loathed the sin.
Could we know the powers working
To o'er throw integrity,
We would judge each other's errors
With more patient charity.

If we knew the cares and trials,
Knew the efforts all in vain,
And the bitter disappointment—
Understood the loss and gain—
Would the grim, external roughness
Seem, I wonder, just the same?
Would we help where now we hinder?
Would we pity where we blame?

Ah! we judge each other harshly,
Knowing not life's hidden force;
Knowing not the fount of action
Is less turbid at its source;
Seeing not amid the evils
All the golden grains of good;
Oh, we'd love each other better
If we only understood. —Selected.

Hero-Worship.

Allen has a strong admiration for soldiers. He seldom misses a military parade and his childish fancy has so idealized the boys in blue that he considers them little short of perfection.

Not long ago his mother took him to see an elderly friend of hers, a sweet-faced, silver-haired lady who is the widow of a veteran of the civil war. Before arriving at the house Mrs. Parker told Allen this bit of her friend's history, and consequently the boy accorded this beautiful woman the most reverent attention.

In discussion a certain current subject of literary interest the two ladies had a mild difference of opinion, and Allen's regard for brass buttons would not long permit him to listen in silence. "Mama," he asked in gently reproachful tones after he had fidgeted a moment in his chair, "don't you think a soldier's wife ought to know?"

Couldn't Expect It.

One day Helen had been very naughty and her mother said, "Helen, if you are naughty you can't go to heaven." "Well," said Helen, "I can't expect to go everywhere. I went to Uncle Tom's Cabin once and the circus twice."

A Good Fisherman.

Farmer—"Hi, there! Can't you see that sign, 'No fishing on these grounds?'"

Colored Fisherman—"Co'se I kin see dat sign. I'se cullid, boss, but I ain't so ignorant as ter fish on no grounds. I'm fishin' in de crick."—Driftwood.

The Other Side.

"It's no disgrace to fail if you have done your best" said the philosopher. "That may be so," replied the man who had failed. "But it's pretty tough to have to admit that the best you could do was fail."—Detroit Free Press.

Mrs. Craigmore. — "Bridget, why have you started fire in the furnace this warm day? I cannot understand you."

Bridget.—"Indeed, Missus, didn't you say I should say I should follow that soup rec'pe clear fru?"

Mrs. Craigmore.—"And what has that to do with the furnace fire?"

Bridget.—"Why sure, it says 'eat while very hot.'"

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FOR SALE—100 CHOICE GOLDEN Wyandottes; also a few pure bred Bronze Turkeys from prize winning birds; prices reasonable. Mrs. E. B. Grant, Emporia, Kansas.

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The Standard of Perfection.

A correspondent from Oklahoma writes: "Would you please publish the 'Standard' by which the different breeds of chickens were judged at the recent stock and poultry show at Kansas City. I have been reading THE KANSAS FARMER about one year, but have failed to see anything as to the standard points by which one who is not versed in chicken lore, could get an idea of the requirements of fancy stock in the chicken breeds. Let us all know a little about the essential breeding points, as I am sure

it will be conducive to better and higher grades of chickens everywhere."

Ans. The Standard of Perfection, a book of 286 pages, issued by the American Poultry Association, is the basis of all awards on standard poultry at fairs and shows. This is a copyrighted work and no one can print anything from it without infringing the copyright and becoming liable to prosecution. Many times we have wished we could print extracts from the work but cannot do it legally. The book is worth \$1.50 postpaid. All poultry fanciers should own a copy of it.

POULTRY



Poultry Notes.

If you have more chickens on hand than you have room to winter, you are making a mistake in keeping so many. Better dispose of the surplus and you can get a good price for them and give the balance a better chance to thrive.

It is a good plan to separate the weaker and late-hatched chicks from the strong, early-hatched ones. The latter are apt to over-ride the weak ones and deprive them of their share of the feed. By feeding them separately, you can be sure that the little ones have enough to eat and they ought to be fed all they will possibly eat, so as to be strong and healthy before the winter sets in.

Thanksgiving is not very far off, when the Thanksgiving turkey will be in demand. By feeding generously and judiciously several pounds can be added to the turkey's weight before the time comes to kill it. It is not so much a large turkey that is demanded as a plump, juicy one for Thanksgiving dinner. Give the turkeys all the grain they will eat morning and night and occasionally make a savory mash for them, composed of corn chop and bran moistened with skim-milk; if some fat or tallow is mixed with it, it will be all the better.

Many of the farmers who look with disdain upon anything less than a big acreage of field crops or large herds and flocks might make more net profit from poultry than they are making from greater things. There are some farmers whose net profits from poultry run up into the hundreds of dollars per year, yet their chickens do not take any big place in their farm operations. Those who prepare for the production of eggs in winter, just as the progressive dairyman plans for the heaviest butter production when prices are highest, are making money. This winter eggs are going to be higher in price than they have been for years.

There is Money in Chickens.

For years and years writers on poultry matters have insisted that there was big money in the chicken business and few there were who doubted the statement; the trouble was how to get the money out of the business. Mr. Ernest Kellerstrass of Kansas City has solved the latter part of the problem and thereby proved the first statement.

While at Kansas City recently, the writer visited the celebrated Kellerstrass Poultry Farm and was greatly surprised at its extent and efficiency. As is well known Mr. Kellerstrass makes a specialty of breeding Crystal White Orpingtons, and their popularity is world-wide. His volume of business the past season was thirty-three thousand dollars. He had to return sixteen hundred dollars sent for eggs that he could not supply. He sold 1,024 eggs for hatching for which he received \$2,048, or two dollars an egg, straight. Not two dollars a setting, but two dollars for each individual egg. This 1,024 eggs were about a fourth of the product of thirty hens. The amount sold made the average of each hen \$68 for the season. We talk about a hen making a profit of \$1 a year as a fair return, but here are hens making \$68 each out of a fourth of their eggs, leaving three-fourths for her owner for hatching purposes. This is not the mere say-so of Mr. Kellerstrass for he proved the statement to our full satisfaction. Some time ago he sent a statement of these facts to a poultry editor, telling him he probably would hardly believe him, but he sent the names of those who purchased the eggs and told the editor to write to them. The editor took him at his word and wrote to the men who had purchased eggs at \$2 each and received replies from most of them, who extolled Mr. Kellerstrass' methods of doing business and gave their percentages of hatches and said they were very much pleased with their investments. Copies of these

replies we read. Mr. Kellerstrass has two prices for his eggs, \$10 and \$30 per setting of 15. How many of the former he sold we didn't ask, but from the large volume of his business, the sales must have run into the thousands of dollars. All poultry readers have heard of the famous \$10,000 hen, Peggy. We saw her in all her beauty, and she was every inch a queen. Some may ask wherein consists her value of ten thousand dollars. Well, when five of her chicks sell for \$7,500 as purchased by Madame Paderewska, it can readily be seen that she is worthy of her price. Mr. Kellerstrass sells male birds as high as one thousand dollars each and extra high scoring ones for still greater prices. He refused \$1,500 for the first prize cockerel at Madison Square Garden, New York.

The place where these high-toned birds are raised is an ideal one for raising chickens, a 140-acre farm on the outskirts of Kansas City. The houses and yards are in an orchard of 40 acres on rolling ground, high and dry, with plenty of range and plenty of shade. They have their own waterworks system and run their own electric light plant. The poultry houses, incubator and brooder rooms, feed-preparing rooms are all up to date and have the most approved facilities for doing the work efficiently. In addition to his colony houses, which he has all over the orchard, and his large poultry houses, Mr. Kellerstrass is now building three new poultry houses; one 400 feet long and the other two 200 feet long by 18 feet wide. This will make 90 breeding pens 9x18 feet. They are of the open front-style with drop curtains, also a drop curtain in front of the roosts for very cold nights. Each pen is electrically lighted, so that fowls may be fed early and late if weather is dark and cloudy. In each poultry house is a large passageway the entire length of the building for the purposes of feeding the fowls and cleaning the pens handily. He has several tenant houses for his help on the farm besides a palatial home for himself and family.

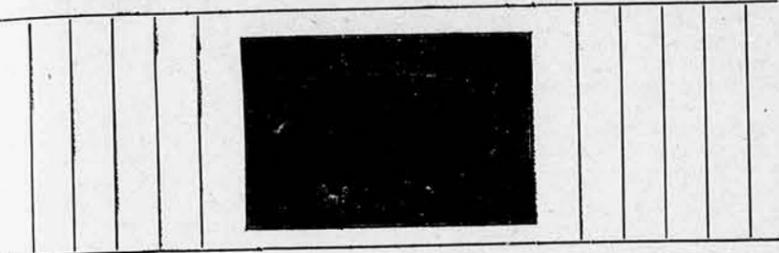
Although a millionaire, there is no ostentation about Mr. Kellerstrass, either in dress or manner, being an unassuming, well-bred gentleman. Outside of a couple of crystal white diamonds on his finger and one in his shirt stud, there is nothing to indicate the man of wealth. There is no sentiment about this poultry business with him: "I am in it for the money that is in it and the minute it ceases to pay I'll drop it," was the remark he made to us.

His motto is, "Every patron a satisfied customer," and from the countless number of laudatory testimonials he has on hand, we judge that he lives up to his motto. That he is the most successful poultryman in the United States is without doubt, and that he has attained this position in a few years speaks well for his business capacity and acumen. He probably pursues the same methods in his poultry enterprise that he did in the business wherein he amassed his millions. One thing that pleased us immeasurably was the way he trains his children to work and be self-supporting. His son, Rob, a young man of about twenty summers, was working in jumpers and overalls like the hired men. His daughter, Grace, a young lady in her teens, keeps his books and attends to the correspondence. How much he pays them we don't know, but each of them has an automobile of their own, bought with money earned in the chicken business. "I could have bought them an auto myself," remarked Mr. Kellerstrass, "but I knew they would appreciate their machines more and take better care of them if they earned them themselves," and we agreed with him that it was the better way. Mr. Kellerstrass keeps two fine automobiles for the use of himself and family, in one of which he quickly transferred us to town from the beautiful home of the Crystal White Orpingtons.

THE BREEDING THAT HAS MADE POLAND CHINAS FAMOUS

Predominates in Our Sale to be Held at Farm near Tampa and Marion, Kansas,

Friday, November 5, 1909



60 head in all, 25 boars and 35 females, 5 of which are tried sows. Sons and daughters of such noted sires as Meddler, Torpedo, Regulator, Star Pointer, Tornado, Crisis and Master Meddler. No better blood known to the breed, and individuals of great merit. Among the special attractions are Anetta 2d, Lall's Corrector 4th, and a pair of great spring boars by Regulator, one outstanding spring boar by Torpedo and out of a Corrector 2d dam. These are the tops of our big spring crop and have been fed and handled as breeding stock should, not fattened but fed on alfalfa, shorts and a light corn ration. We are in the business permanently and intend to stay by our customers. We honestly think we have what will make you money but won't fall out with you if you don't buy. The only thing you can do to hurt our feelings is to not attend the sale. We need and want your presence no difference whether you buy or not. Write for catalog.

Our farm is six miles southeast of Tampa and twelve miles north of Marion. Stop at Tampa hotel. Free ride to farm. Lefe Burger, Auctioneer. Jesse Johnson will be here for Kansas Farmer. Send bids to him.

THE MORTONS, - Tampa, Kansas

BIG TYPE POLAND CHINA AUCTION SALE

Wednesday, Nov. 10, '09

At Farm 5 miles from Severance and 1 mile from

BENDENA, KANSAS

A Select draft from a strictly big heavy boned herd.

1 yearling boar, 2 fall boars, 17 spring boars, 16 spring gilts, 4 fall gilts and 2 yearling sows, the two sows bred for early farrow. The offering was sired by Union Leader, W. R.'s Quality, Expansion, Caut. Hutch, Prince Hadley, Sunflower King and Messe's Mastiff.

All noted big strains represented. A pair of last fall boars by Expansion are attractions, among the dams of the offering are sows by Grand Look, Blain's Wonder, Designer, Expansion, Orphan Boy, etc.

Catalogs mailed upon request. Trains met at Severance and Bendena, Kan.

W. R. WEBB,
Bendena, Kansas.

Frank Zaun, Auctioneer.
Send sealed bids to Jesse or J. W. Johnson in my care.

C. S. NEVIUS' POLAND CHINA SALE

AT

CHILES, KAN., NOV. 8, '09

5 tried sows by Designer, Major Look and McDarst.
10 spring gilts by Designer, Major Look and Columbia Expansion.

BOARS.

2 yearling boars, one by Good Metal, one by McDarst, 5 fall boars by Designer, 18 spring boars by Designer, Major Look and Expansion.

Come or send bids to O. W. Devine, representing Kansas Farmer.
Auctioneer—R. L. Harriman.

Main line Mo. Pac. Ry.

C. S. NEVIUS, CHILES, KAN.

POLAND CHINA SALE

OF

J. W. PELPHREY & SON

CHANUTE, KANSAS.

WEDNESDAY, NOVEMBER 3

50 HEAD 50
Consisting of 35 Spring Gilts, 10 Spring Boars, and 5 Fall Yearling Sows

The five yearling sows, four spring gilts and two spring boars are by Grand Perfection, and Erie Expansion by Mammoth Ex and out of Orange Look. Both the medium and large type Poland Chinas are represented in this offering. They are the kind for farmers and breeders as well. Write for catalog today and arrange to come to my sale. We will treat you right. If you cannot attend the sale send bids to O. W. Devine representing Kansas Farmer.

Auctioneers: James Sparks, Herbert Johnson.

J. W. PELPHREY & SON,

CHANUTE, KANSAS.

SALE OF

Hereford Cattle and Duroc Hogs

Fall River, Kan., November 11

15 high class Hereford cattle mostly cows and heifers.
40 Duroc Jersey registered hogs—10 tried sows, 20 spring gilts, 10 spring boars, carrying the blood lines of Ohio Chief, Col. Kant Be Beat, Hanley, Hanley Lad by old Hanley, very desirable for breeders. Some sons and daughters of Kant Be Beat. Many other well bred Durocs, Tip Top Notcher, Improver 2d, Fancy Jumbo 2d and other good breeding. The Herefords are all registered and rich in Anxiety blood. Some granddaughters of March On 6th and some good daughters of Chancellor, a double standard Beau Brummel. A part of my show herd goes in this sale. Come and buy some bargains. Send bids to O. W. Devine, representing Kansas Farmer. Auctioneers, Fred Reppert, J. W. Sheets.

T. I. WOODALL,

Fall River, Kansas

CARTER'S

THIRD SALE OF HIGH CLASS DUROCS

NOVEMBER 8

AT

CABOOL, MO.

These hogs are rightly bred, are rightly fed, and absolutely healthy. 1 sow by King of Cols. (Ohio Chief dam), 1 by King of Cols. (Col. Scott. dam), 1 by C. E.'s Col., 1 y Col's Improver, 1 by Col. Scott Again, 2 by Ohio Chief, 1 by Harding's Proud Advance, 1 by Belle's Chief, 1 by W. L. A.'s Choice Goods, 1 by Model Wonder, 1 by Masterpiece Chief, 1 by Valley Chief, 1 by Kelley's Pilot Wonder, and others of similar breeding. Some are bred to Col. Carter for winter litters.

Gilts and spring boars by Muncie Chief, King of Models, The King, Col. S., Col. Carter, Model Prince, Buddy K. IV, Buddy O. II, I Am Advance, Crimson Chief, Belle's Chief, Inventor and Crimson Wonder Again. Every animal in the sale a "special." We all go from here to Sam Drybread's, Nov. 10.

Come down—everybody else is coming. Catalogs now ready.
Auctioneers—Fred Reppert, Jas. W. Sparks, W. T. Nobitt.

C. L. CARTER,

Nov. 8 - CABOOL, MO. - Nov. 8

14th PUBLIC SALE OF LAKEWOOD PERCHERONS

AT

SOUIX CITY, IOWA TUESDAY AND WEDNESDAY NOVEMBER 16 AND 17.

100 - HEAD - 100

40 Stallions and 60 Mares and Fillies

Sons and daughters of CALYPSO, the greatest sire of prize winning Percherons that ever lived. Several of the stallions are of the show yard quality, some of our State Fair winners included. Fifty high class young mares bred to the great CALYPSO and CARTILAGE, an International and State Fair winner, weighing 2,200.

It should not be forgotten that LAKEWOOD FARM has produced more prize winning Percherons than any other breeding establishment in the world.

If you need a stallion to head your stud, or want a pair of show mares, do not miss this sale. Catalogs on application.

H. G. McMILLAN & SONS PROPS.

ROCK RAPIDS, IOWA.

What Young Swiss has Done on Twenty Acres in Nebraska.

KANSAS FARMER recently printed the results obtained on a ten acre farm conducted by the Warden of Missouri Penitentiary. The article was the first of a series intended to show what has and can be done in the cultivation of small tracts of land. Several readers have written that the Missouri Warden's farm yielded large returns because of convenience to city market for garden truck at good prices. Truck farming pays as shown by the article. There is room for hundreds of truck farms. Dozens of western cities are each season shipping in garden truck to supply the demand and still the supply is not sufficient. If there is an opportunity for a truck farm in your locality get into the business of truck farming. Lost opportunities don't count for a thing. Get busy, grasp the opportunity to make good on a small tract of land.

The "small farming" article this week tells the story of the success of a young Swiss farmer on 20 acres of rough Nebraska land. Who dare say he has not achieved success—happiness, contentment, pleasant, good living, vacations in Colorado and Europe, money ahead, and time to read, study and think. How many have done better on much larger farms? The United States Department of Agriculture has thought so much of the accomplishments of the young Swiss as to devote a part of farmers bulletin Number 325 to him of which this article is a part.—Editor.

Mr. Martin, a young Swiss farmer, who as a result of three years' renting in northeastern Kansas had secured a team, a little farm machinery, and \$275 in money, became dissatisfied. He had been raised on a 6-acre farm, had studied agriculture in the public schools, and knew something of intensive methods. He believed he could do better on a small place of his own than on a large rented farm. In Pawnee county he found 20 acres of unimproved rough land mostly covered with brush and small trees. Good land was worth \$50 to \$70 per acre, but no one seemed to want this piece. He purchased it for \$12.50 per acre, paying \$100 down and giving a note for \$150 at 7 per cent interest for three years. There remained \$175 with which to make improvements and start his work. Realizing that it would take several years to subdue most of his own land, he leased an adjoining piece of about 4 acres for five years. This was also unbroken and needed considerable clearing.

While grubbing, plowing and planting, the owner was studying the markets and his soil to see what he could produce for which there was a home demand. Potatoes, onions, small fruits, pears, and peaches were chosen for the main crops, with corn for any land not otherwise occupied. A small field of nearly 2 acres of alluvial soil is kept for annual crops. The slopes are rocky in places and the soil is a residual clay loam, having been formed mostly by the weathering of the limestone which underlies it. About 8 acres of this are set to orchards, about 1 acre in alfalfa, 1 in timothy and clover, 3 in pasture (half of which is timbered), and a little in annual crops. One hill is poor soil, largely formed by glacial deposits, and contains some boulders, locally called "nigger heads." About 2 acres of this is in wild grass, which is used for hay, as is also about half an acre of stony land around the quarry. There is still a little land

ever secured was 100 bushels an acre and the largest over 700 bushels an acre. The onion patches grow corn and melons, which are planted in the rows between the onions. Part of the orchard is set with small fruit and part is planted with potatoes and truck.

In dry spells all the water the windmill will pump is used for irrigation, and it is here that intensive cropping reaches its height. There is also a small irregular spring which flows into a reservoir and at times furnishes considerable water. The water from the well flows directly to the ditch as pumped. A little manure is scattered in the ditches to prevent washing.

The accompanying diagram shows the rows of crops in two of the spaces between rows of pear trees. The pears have been set six years and the limbs touch in the rows, yet nearly all the other plants were doing well when the writer visited the farm late in June. The trees are 10 feet apart in the rows and the rows 12 feet apart.

MANURE.

On account of the soil being new, not so much manure has been required as will be needed in the future. All that is made on the farm is used and all that is wanted can be obtained two miles distant. All cornstalks and coarse waste are used to prevent washing or to mulch trees or berries that can not be cultivated. About two loads of wood ashes are secured annually and used on strawberries and pear trees.

FRUIT.

The orchards contain 900 pear, 200 cherry, about 800 peach, and a few apple trees; 200 plums were set, but have been grubbed out because they were not profitable.

Pears have paid the best. Many varieties have been tried. Some varieties are not readily self-fertilized, especially the Kiefer, so it was necessary to find varieties that flowered at the same time, as well as those that were hardy and prolific. The best success has been attained by planting

- * * * Pear trees with beets between.
- Tomatoes.
- Cabbage.
- Cabbage.
- Sweet potatoes, kohi-rabi close beside.
- Sweet potatoes, beets close beside.
- * * * Pear trees with beans between.
- * * * Pear trees with raspberries between.
- Beans.
- Potatoes.
- Potatoes.
- Celery.
- Pear trees with raspberries between.

that has not been put to use.

METHODS AND PRACTICES.

The intensive methods practised are of particular interest. The land is kept busy from spring till fall. At the last cultivation of the potatoes corn is planted between the rows. A full crop of potatoes is secured and a fair crop of corn also. As many as 75 bushels of corn to the acre have been grown in this way. The corn usually has to be hoed once, but the potato vines nearly cover the ground, so not much working of the corn is required. After the potatoes ripen the corn keeps the weeds down. By the time the corn needs the ground the potatoes are ripe, and the corn is in the shock before it is time to dig the potatoes. Squashes are sometimes planted the same way. Usually parts of the potato patches are sown with millet or sorghum just before the last cultivation. This makes a good crop of feed and does not hurt the potatoes. The smallest yield of potatoes

Dwarf Duchess and Standard Kiefer alternately. Standard Flemish Beauty has also done well.

Of the small fruits strawberries have given the best returns, but a good many raspberries and blackberries have been grown, and some gooseberries and currants.

SEED CORN.

The production of corn for seed and for exhibition has been undertaken as a side issue and is proving very successful. Mr. Martin won a gold medal on corn at the St. Louis Exposition. At other fairs many premiums have been awarded his products. He finds ready sale for seed corn at good prices. When corn is grown without any other crop cultivation is continued until the ears are well matured. Contrary to the practice of most breeders, Mr. Martin plants the best ear in a patch by itself, and the best ear from the crop is selected and planted in the same manner. The prizes he has won do not

make a bad showing for his practice. EXHIBITS OF FARM MACHINERY. The last few years considerable attention has been given to growing a large variety of products for exhibition purposes. Last year \$243.25 in cash prizes was secured. At the Portland Exposition three gold and two silver medals were won.

SPRAYS. Mr. Martin is an enthusiastic advocate of dust sprays and uses sal Bordeaux mixture frequently on orchards and truck. Arsenical poisons are used as insecticides. His plants and trees have a very healthy appearance and the pear orchard is probably the best in the state, but it must be remembered that the trees are still young.

LABOR. No labor is ever hired. The owner, with the help of his wife, does it all, and besides has earned considerable money every year, except the last, by helping his neighbors. He has more work now than he can well do at home and may soon have to hire help.

MISCELLANEOUS. No butter, eggs or poultry have ever been sold. Only a few chickens are kept for family use, and these, on account of the crops they might destroy, are closely confined during the growing season. Only one cow is

kept. When there is a surplus of rough feed, calves are bought, fed through the winter, and sold in the spring. Some hogs are now kept to make use of unsalable products.

STOCK. 1 team of mules. 1 cow. 1 1-year-old driving colt. 1 sow. A few chickens.

MACHINERY. 1 wagon. 1 mower. 1 hayrake. 1 cultivator, 4-shovel, 2-horse. 1 cultivator, 5-shovel, 1-horse. 1 harrow, 2-section. 1 walking lister. 1 walking plow. 1 hand cultivator. 1 garden drill. 1 hand sprayer.

INCOME AND EXPENSES. The following shows the receipts for produce sold from the farm for the past ten years. Exact accounts of everything have been kept. To this should be added about \$100 received for rock quarried on the farm by the owner's labor. The profit on the calves which have been wintered should also be added, but the amount is unknown:

1897.	
3 acres potatoes, 678 bushels at 50 cents.....	\$339.00
8 acres corn, 220 bushels at 32 cents.....	70.40
One-half acre vegetables.....	72.00
Received for helping neighbors.....	58.00
Total.....	530.40

1898.	
5 acres potatoes 930 bushels at 45 cents to \$1.....	\$418.50
12 acres corn 170 bushels.....	53.20
Strawberries and vegetables.....	126.30
Received for helping neighbors.....	103.00
Total.....	701.00

1899.	
7 acres potatoes, 1,085 bushels at 35 cents.....	\$379.75
12 acres corn, 230 bushels at 30 cents.....	69.00
One-half acre small fruit and vegetables.....	136.40
Received for helping neighbors.....	46.20
Total.....	631.35

1900.	
10 acres potatoes, 1,260 bushels at 40 cents.....	\$504.00
12 acres corn, 220 bushels at 32 cents.....	70.40
One-half acre vegetables.....	82.60
One-half acre small fruit, 126 crates at \$1.60.....	201.60
Received for helping neighbors.....	36.40
Total.....	895.00

If too many acres appear to be accounted for, it must be remembered that much of the land raised two crops.

1901.	
5 acres potatoes, 710 bushels at \$1 to \$2.....	\$810.00
8 acres corn (none sold).....	69.50
Small fruit and vegetables.....	28.00
Received for helping neighbors.....	28.00
Total.....	907.50

This was a very dry season and the thorough cultivation practiced told well on the potato crop.

1902.	
5 acres potatoes, 1,600 bushels at 25 cents.....	\$400.00
10 acres corn, 230 bushels at 35 cents.....	98.00
Small fruit.....	325.40
Received for helping neighbors.....	42.00
Total.....	865.40

1903.	
Potatoes, at 80 cents to \$1.50.....	\$412.00
Received for work at college.....	175.00
Total.....	587.00

In 1903 half the land was rented and the owner spent three months away from home starting a farm for a college. This made the receipts for the year very low.

1904.	
5 acres potatoes, 8 acres corn, etc.:	
Potatoes, 750 bushels at 75 cents.....	\$562.50
Corn, 210 bushels at 40 cents.....	84.00
Small fruit and vegetables.....	146.50
Received for helping neighbors.....	56.25
Total.....	849.25

1905.	
Potatoes, 892 bushels at 60 cents.....	\$535.20
Corn, 168 bushels at 40 cents.....	67.20
Seed corn, 46 bushels at \$1.50.....	69.00
Small fruit and vegetables.....	126.50
Received for helping neighbors.....	76.80
Total.....	874.70

1906.	
4 acres potatoes, 8 acres corn, etc.:	
Potatoes, 350 bushels at 55 cents.....	\$192.50
Corn, 120 bushels at 36 cents.....	43.20
Pears, 286 bushels at \$1.20.....	343.20
Seed corn, 38 bushels at \$1.75.....	66.50
Premiums.....	243.25
Hogs.....	142.50
Total.....	1,031.15

The results accomplished, as shown in the foregoing statements, have not been obtained by catering to fancy city trade. The nearest market of

any consequence and the one where most of the produce has been sold is a town of 2,500 inhabitants 7 miles distant.

THE ENID STOCK AND POULTRY SHOW

ENID, OKLAHOMA

DECEMBER, 11-18, 1900.

We offer larger cash premiums than any show or fair in America held under like conditions, and more than was ever offered in Kansas or Oklahoma under any conditions.

Free Admittance to Exhibitors Free Entries, Free Stalls and Pens

It is possible for one Percheron stallion to win \$170 in cash and 2 gold medals; one Percheron mare \$120 in cash and 2 gold medals; one stallion and 4 mares \$715 in cash, 5 gold medals and 2 silver loving cups. One bull \$175 in cash, one cow \$140 in cash; one bull and 4 females \$635 in cash. One boar \$35 in cash, one sow \$35 in cash; one boar and 3 sows \$130 in cash. PREMIUM LIST MAILED FREE ON REQUEST. EVERYBODY INVITED TO EXHIBIT.

Improved Breeders Sale

- | | |
|--|-------------------------------------|
| 100 Poland China hogs Dec. 13. | 100 Duroc Jersey hogs, Dec. 14. |
| 100 Hereford, Galloway and Aberdeen Angus cattle, Dec. 15. | 100 Shorthorn cattle, Dec. 16. |
| 100 Standard and Saddle horses, Dec. 17. | 25 Coach horses and jacks, Dec. 17. |
| 100 Percheron horses, Dec. 18. | 25 Shires and Belgians, Dec. 18. |

We will sell the best hogs, cattle and horses ever offered at auction to the breeders of Oklahoma and surrounding state.

Percheron horses consigned by J. C. Robison, Dodson Bros., Walker Bros., D. W. Thomas & Co., Holland Stock Farm, B. S. Harper, W. C. Baum, Taggart Bros., and P. A. Pontow.

Consignments solicited. Send in your entries now. Show and sale held in the largest Concrete Stock Pavilion in the world. Stalls for 1,000 head of stock; seats for 5,000 people. Arena large enough to exhibit 300 head of stock at one time.

Straight speedway 700 feet long and 40 feet wide. All under one roof. Show and sale takes place rain or shine.

F. S. KIRK, Mgr. ENID, OKLA.

HIGH CLASS DUROC JERSEY SALE

50 HEAD 50

At Elk City, Kansas, November 10

Consisting of 10 choice tried brood sows, 15 yearling fall gilts, 15 spring gilts, 10 spring boars.

The sows are of the following breeding: One by Red Wonder, one by Inventor, two granddaughters of Ohio Chief, tracing on both sire and dam to old Protection, one by W. L. A.'s Choice Goods, one by Paul Wonder 2d out of the show sow, Cinderella, one by Brighton Wonder out of an Ohio Chief dam. The fall yearling gilts are four by Hanley Lad out of an Ohio Chief dam, 3 by G. C.'s Col. out of a Red Raven dam, two by Hanley Lad out of a Proud Advance dam. Eight are by Beat Me If You Can by Kant Be Beat, out of Ohio Chief dam. Ten head of the spring gilts are by Bell's Chief out of Inventor. Red Wonder and Red Raven dams, one by Proud Chief out of a Buddy K. 4th dam. Two granddaughters of Improver 2d.

The boars are sired by Inventor, Col. Carter and Bell's Chief out of sows by Red Wonder, Red Raven, King Wonder, Inventor, and other good breeding. Send for catalog and come to my sale. This will be the best lot I have ever sold. Don't miss a grand opportunity to get some good breeding and good individuals. Send bids to O. W. Devine representing the Kansas Farmer in my care.

SAMUEL DRYBREAD

ELK CITY, - - KANSAS

Auctioneers—Col. Fred Reppert, Col. J. W. Sheets, Col. J. D. Snyder, Col. J. C. Jones.

Bids sent to any of the above in my care will be honorably handled.

In 1899 the mortgage of \$150 was paid; in 1902 a barn was built at a cost of \$100; in 1903 a well, a windmill, etc., were built costing \$100, and an addition to the house, costing \$200, was made. The fencing used cost about \$50.

The home is now comfortably furnished and practically all has been paid for in ten years. The other expenses of the farm have been very light, except for nursery stock, which has probably cost \$800. The house is a neat little four-room cottage. The barn has a stone basement, 16 feet by

20 feet, for stock and an upper story for grain and hay.

The neighbors used to laugh at the young foreigner and nick-named him "Hazelbrush," but now they say, "He is making more money on 20 acres than we do on 160." He does not want any more land, but wants to farm what he has better. In speaking of the size of farms he once said: "People of moderate means should not farm too much land. A man can start on 20 acres; 40 acres will do; 80 is enough; 160 an abundance; 320 a misfortune; and 640 a calamity."

FARM INQUIRIES



ANSWERED BY
Prof. A.M. Ten Eyck

Grass on "Slough."

I have a farm of 80 acres which is situated on the top of a hill, or high elevation. On this farm is a large "slough" in which water stands until it kills all crops planted in it, but it is dry part of the time. The soil is what is known here as gumbo, or hardpan. The crops I plant on it are cane, corn and Kafir corn. I have sowed it to alfalfa, but it is all dead. Can I get any kind of crop to grow on it? If so what? If not, what kind of trees would grow and grow rapidly? This farm is in Osborne county.—C. P. Mauck, Waldo, Kan.

In my judgment the "slough" to which you refer will doubtless be better adapted for growing grass than any other crop. Since it is poorly drained and appears to be quite wet, at least a part of the year, I would recommend the sowing of Red Top and Alsike clover. The Red Top is the best wet land grass and Alsike clover will stand a great deal of moisture and winter freezing. Sow about 10 to 12 pounds of Red Top with 6 pounds of Alsike clover per acre. Perhaps this land is alkaline and will not grow any crops. The gumbo condition may be in part corrected by deep plowing and the application of barnyard manure. Also I would advise draining the "slough" if this is possible. Doubtless if this piece of land could be drained it would make excellent alfalfa land.

Soils.

I am deeply interested in improving soil and would like to know all I can learn on this subject. Will you send me such literature as treats on this subject? Do you think mixing phosphate with stable manure would increase its value? Where may the phosphate be obtained? What is nitrate of soda, and where may it be obtained? Could you suggest some way to find out just what our soil here needs? Would tile draining loosen the hardpan?—H. W. Sutton, Weir, Kan.

We have no regular publication on soils. We have some literature relating to the subjects of soils and fertilizers and culture methods. I am mailing you circulars 2, 3 and 5 on manures, fertilizers and crop rotation as related to maintaining soil fertility; also circular 13 on dry land farming, circular 9 on wheat culture and pamphlet on farm management. I am also mailing experiment station circular No. 2 on seed-bed preparation for wheat.

Mixing of phosphate with manure has given good results in some experiments in states farther east. It is possible also that much of the soil in Cherokee county may be lacking in phosphates; more likely such land is lacking in lime. You will find the addresses of a number of fertilizer companies in circulars 2 and 3.

Nitrate of soda is a chemical substance containing the element sodium and the element nitrogen. The nitrogen is the plant food element. This same nitrogen may be supplied to the plant by growing cow-peas, clover or alfalfa. In my judgment your soil needs humus and nitrogen more than anything else; also the growing of deep rooting crops as clover, grasses and alfalfa will tend to loosen the hardpan. Experiments are now being carried on, by the Dupont Powder Company, in your county at Baxter Springs on the farm of Ex-Governor Crawford, in blasting to loosen the hardpan subsoil. This experiment station will cooperate in this experiment. You should watch for the results. I am sending circular letter giving some further information regarding soil treatment in southeastern Kansas.

Sorghum Syrup.

I would like information as to how many gallons of sorghum a ton of cane will make, and what would be a fair

average of tons to an acre. Can you enlighten us as to where we could get the best machinery to start a sorghum mill? There is a lot of land east of here that will raise hardly anything else and the farmers are anxious to put a plant in and make sorghum. We are offered 60 cents per gallon for all we can make.—J. W. Roberts, Wichita, Kan.

Quoting from Farmers' Bulletin No. 135, page 14: "A mill should give sixty per cent of the weight of the cane in juice; that is 1,200 pounds of juice from 2,000 pounds of cane . . . with as good extraction of juice as is got from sugar cane or sugar beets, a ton of sorghum cane of average quality yields 20 gallons of syrup." The subject of the bulletin referred to above is "Sorghum Syrup Manufacture." The bulletin was prepared by A. A. Denton, of Medicine Lodge, Kan. You may secure a copy by writing to Hon. James Wilson, Secretary of Agriculture, Washington, D. C. A good yield of stripped sorghum cane per acre in this state is four to five tons, the yield depending upon the soil, the location, and the variety of cane.

I know very little about the manufacture of sorghum syrup. For further information on the subject I refer you to other bulletins, as follows: Bulletin No. 88, of the South Carolina Station, Clemson College, S. C.; Bulletin No. 68 of the Texas Experiment Station, College Station, Tex.; Bulletin No. 133, also other bulletins, of the Alabama Experiment Station, Auburn, Ala.

Amber Cane.

Last spring I planted some Amber cane seed broadcast for hay. I harvested the first crop in August. It is standing now in cocks on the ground and is dry and apparently well cured and I want to stack it. Parties here tell me it will heat and spoil. Have you experimented along this line and if so what have you learned about it?

There is a good second growth of cane on the land now and neighbors have told me that it will poison stock. Is there any truth in that theory? Can I cut this second growth for hay and feed it so it will not injure milk cows?—H. F. Moseman, Holton, Kan.

We have practiced stacking cane fodder after it is well cured, with good success. Stack in narrow stacks or use a little dry straw between layers of cane.

There is some danger that the second growth cane may be poisonous. Stock have been killed eating the green cane. When this cane is cut, however, and cured for hay the poisonous principle disappears, therefore, you may safely use the second growth of cane for dry fodder.

Rye As a Fertilizer.

What value has rye as a fertilizer when seeded at this time of year and turned under in the spring after it has started to grow a few inches or in time to plant other crops?—Paul B. Johnson, Leavenworth, Kan.

For several years we have carried on an experiment by sowing rye in corn early in the summer or later in the fall, usually in August. This rye was plowed under in the spring and the plot planted again with corn. Comparing the corn after corn without the intermediate catch crop of rye the yields are as follows:

Corn after corn, average for three crops 1904, '05 and '06, 54.55 bushels per acre.

Corn after catch crop of rye in corn, average for three crops, 60.74 bushels per acre.

Thus it appears that in this experiment the planting and plowing under of a crop of winter rye has given an average increase in yield of corn of 6.2 bushels per acre.

I may add that rye is very commonly used as a green manuring crop and it is perhaps superior to other small grains. Usually I would prefer to use cow-peas as a catch crop in corn, planting the cow-peas after the last cultivation and plowing them under late in the fall before heavy frost.



CLOSING OUT HEREFORD SALE

At Holton, Kan., Saturday, Nov. 6.

35 head, 8 excellent bulls including the herd bull, Gay Donald 262472, 27 females, 18 of which are safe in calf to Gay Donald, a great son of Beau Donald 7th. The offering is by such bulls as Spectator, son of Earl of Shadeland, Madison by Columbus, most of them rich in the blood of the greatest sires. Foundation stock coming from the greatest herds, the blood of Anx-mentioning this paper. Stop at city hotel.

lety 4th and Lord Wilton. Sale at farm adjoining town. Write for catalog,

Emil Hoffmeyer,

Holton, Kan.

Geo. Bellows, Auctioneer.

Something New!

AUTOMATIC EGG BEATER



Is Operated
With only
One Hand
No Wheels
No Crank
No Cogs
Is Practically
Automatic
Can Operate In
Any Dish or
Bowl
Guaranteed
to Give
Satisfaction
By Short Up and
Down Stroke of
the Handle
Simple
Sanitary
Durable
Built to
Last Long
A Wonderful
Labor Saver
Cut One-Fourth
Size



The accompanying cuts only give you a faint idea of this wonderful spiral spring egg beater, cream whip and mayonnaise mixer, the latest and most useful kitchen utensil invented.

How to Get this Egg Beater Free.

Send us the names of five of your friends for a ten weeks' trial subscription to KANSAS FARMER at 10c each (50 cents in all) and we will send you one of these egg beaters for your trouble.

That is all there is to it! You can get the subscriptions in a few moments if you will only try. If you wish to make a present to some of your friends what could you get for 10 cents that would equal a 10 weeks' subscription to KANSAS FARMER. Address,

CIRCULATION DEPT. KANSAS FARMER,

Topeka,

Kansas.

Census of Farms Next Spring.

Forty-five thousand enumerators out of the estimated grand total of 65,000 will be engaged in gathering the required information concerning agriculture when the work of taking the government census begins next spring. Director Durand proposes making every effort to secure progressive farmers and crop reporters for these places. Powers and the advisory board of special agents composed of professors of economics and farm experts who have been assisting in the formulation of the schedule of inquiries concerning farm operations and equipment. It is believed that the selection of this class of men, already familiar with statistical methods of securing data and reporting it in comprehensive form, will add greatly to the efficiency of the census and to the scientific value of the information obtained.

The agricultural schedule which is to be placed in the hands of these enumerators is nearing completion by the census bureau. An effort will be made to secure the accurate statement of the total number of acres of land in the farms of the country, by states and counties; also the improved area, number, and size of farms. On account of the growing importance of tenancy in many parts of the country, considerable information will be secured as to whether farms are operated by owners, tenants or hired man-

agers. Information about the value of farm buildings, and other permanent improvements; and of the farm equipment, both machinery, implements and live stock, will be secured.

An important part of the schedule will be that enabling a study of the crops and crop-products of 1909. The enumerators will ask about areas, quantities produced, and value of crops, in the case of all the principal crops grown in all parts of the United States. This inquiry covers grains and seeds, hay and forage crops; and all important special crops such as fruits, nuts and vegetables, cotton, tobacco, rice, hemp, potatoes, broomcorn, etc. By-products, like straw for tow and twine; and such manufactured products as wines, cider and vinegar, dried fruits, sugar syrup, etc., will not be overlooked by the questions in the schedule.

The inquiries concerning live stock and their stock products, also include cattle, work animals, sheep and goats, swine, poultry and bees. The facts as to the number and value of live stock at the time of the enumeration are to be secured in some detail, taking into consideration ages, sex and use of animals. Furthermore, data will be secured relating to the number and value of each species of animals raised, purchased, and sold; and the quantity and value of animal products, such as milk, cream, butter and cheese, wool, eggs, honey and wax.

Readers Market Place

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3 CENTS A WORD

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

HELP WANTED.

WANTED—ECONOMICAL AND PARTICULAR people to take advantage of our prices and service. Western Printing Co., Ptg. Dept. of Kansas Farmer, Topeka, Kan.

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

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

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

CATTLE.

SEE US BEFORE PLACING YOUR stock catalog printing. Western Printing Co., Ptg. Dept. of Kansas Farmer, Topeka, Kan.

FOR SALE—HOLSTEIN FRIESIAN bulls and heifers. Write your wants, or come and make your choice. J. P. Mast, Seranton, Kan.

FOR SALE—ONE REGISTERED HOLSTEIN bull, 18 mo. old and 1 bull calf, good animals, good breeding. King Stock Farm, Cullison, Kansas.

FOR SALE—THOROUGH BRED JERSEY bull. Raymond stock, good condition, 3 years old. Price \$50. Chas. M. Schultheis, Council Grove, Kan.

FOR SALE—FULL BLOOD RED Polled bull, eleven months old. Duroc Jersey hogs, 70 head to select from; priced right. I. W. Poulton, Medora, Kansas. Reference, Citizens Bank of Hutchinson; Bank of Inman, Inman, Kansas.

HORSES AND MULES.

SHEPHERD PONIES—WRITE OR COME and see us; we are sure to please you. Low prices for 30 days only. Clark Bros., Auburn, Neb.

SHEPHERD PONIES FOR SALE—BOTH spotted and plain colors. Write for price list. C. R. Clemmons, Waldo, Kansas.

FOR SALE—ONE REGISTERED BLACK Percheron stallion, 5 years old, weight 2,000 pounds. Fine individual and sure breeder. Can show two seasons' colts. One 6-year-old black registered Jack, sound and right, will weigh 1,100 pounds. Two road stallions, two Shetland ponies, studs, black, nicely broke to ride. Up-to-date, Poland Chinas, both sexes, for sale. Can meet parties at Raymond, Kan. J. P. and M. H. Malone, Chase, Kan.

SWINE.

POLAND CHINAS, SHORTHORNS AND B. P. Rocks—Yearling boars, sows and gilts open or bred, also fall pigs. B. P. Rock eggs \$3 per 100. A. M. Jordan, Alma, Kan.

POULTRY.

WINNING BUFF LEGHORN COCKERELS. One dollar each. Paul Cress, Abilene, Kansas.

QUALITY ROSE COMB REDS, COCKERELS or pullets, \$1.00 up. Mrs. M. Rees, Emporia, Kansas.

SINGLE COMB BUFF ORPINGTON cockerels for sale. \$1.25 each; five for \$5.00. Sam'l H. Davidson, Eudora, Kan.

FOR SALE—LAYING PULLETS, FINE Buff Orpingtons. Mrs. Lucy Tinker, R. 1, Box 88, Oklahoma City, Okla.

SINGLE COMB R. I. REDS—CHOICE lot early spring hatch cockerels, \$1 each. Eggs in season. Mrs. P. B. Fellet, Eudora, Kan.

LETTER HEADS AND ENVELOPES—Descriptive of your business. Best prices. Send for samples. Western Printing Co., Ptg. Dept. of Kansas Farmer, Topeka, Kan.

FOR SALE—WHITE PLYMOUTH ROCKS from same matings as those winning 1st, 2nd, 3rd, pul., 3rd hen at American Royal, Kansas City, 1909 in four entries. Frank Knopf, 309 West 4th St., Holton, Kan., formerly Smith & Knopf.

FOR SALE—18 DIFFERENT VARIETIES of thoroughbred poultry, cocks and cockerels, 3 kinds of ducks, geese, turkeys, guineas, bantams, dogs, white rabbits, all kinds of fancy pigeons. Write for free circular. D. L. Bruen, Platte Center, Neb.

100 SUPERIOR BUFF PLYMOUTH Rock cockerels surplus stock and well bred, at \$3 each or 2 for \$5 while they last. Order direct from this ad. C. R. Baker, Abilene, Kan.

CHESTNUT'S ROUP CURE GUARANTEED formula for roup. This remedy is certain both as preventative or cure. Price \$1.00. Also formula for Chestnut's poultry food. As good as the best. Price for the two formulas \$1.50. H. W. Chestnut, Centralia, Kansas, breeder of White Faced Black Spanish chickens.

PATENTS.

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

DOGS.

SCOTCH COLLIE PUPPIES FROM trained parents. Pedigreed. W. H. Hardman, Frankfort, Kan.

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

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

COLLIES OF ALL AGES FOR SALE—They are stock drivers, pets and home protectors, 260 head sold last year. Write for illustrated circular and prices. Would like to buy a few ferrets. Address Harvey's Dog Farm, Clay Center, Neb.

SEEDS AND PLANTS.

FOR SALE—ALFALFA TIMOTHY, BLUE grass and other grass seeds, seed buckwheat, turnip seed and other seeds for fall planting. Send for prices. The Barteldes Seed Co., Lawrence, Kan.

WANTED—NEW CROP MEADOW FESCUE or English blue grass, clover, timothy and other grass seeds. Please write us when you have any to offer. The Barteldes Seed Co., Lawrence, Kan.

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WE CAN SELL YOUR PROPERTY, send description. Northwestern Business Agency, Minneapolis, Minn.

NOTICE THE OTHER BARGAINS IN Real Estate offered under Bargains in Farms and Ranches in this Paper.

FREE INFORMATION ABOUT OKLAHOMA. Homer H. Wilson. Here since 1893. Enid, Okla.

CHOICE FARM IN THE FAMOUS Osage Valley, near Medford, the county seat. For particulars write to P. W. Enns, Newton, Kan.

CHOICE KANSAS FARMS AND ranches. Bargains in Pottawatomie and Wabunsee counties. Write Umscheld & Uhlrich, Wamego, Kan.

\$11.00 PER ACRE BUYS 1920 A. IN Comanche county, Kansas. A stock farm, running water; timber; 500 to 1000 acres farm land. J. R. Huff, Olympia, Kansas.

BUSINESS CARDS 500 FOR \$1.50—Prompt service. Send for samples and estimates. Western Printing Co., Ptg. Dept. of Kansas Farmer, Topeka, Kan.

PANHANDLE LANDS—WE SELL Moore country lands. None better. No sand. New railroad. Any sized tracts improved or unimproved. Terms to suit. G. A. Vawter, Dalhart, Texas.

FIVE FARMS AND MY RESIDENCE property will be sold at your own price Nov. 10. Easy terms. Purchaser's railroad fare paid. For particulars address, Eli Good, Banker, Marion, Kan.

CENTRAL MISSOURI FARMS—FOR farms that will prove profitable as homes and investments, write for new list; farms described and priced; very productive grain, stock and grass farms. Hamilton Realty Co., Fulton, Mo.

A 30 DAY BARGAIN—42 ACRES, ADJOINS Baldwin, the home of Baker University. 400 bearing apple trees, balance good farm land. \$4,200, if sold in the next 30 days. Write Wm. M. Holliday, Baldwin, Kansas.

SELL YOUR PROPERTY FOR CASH IN less than 90 days; properties and business of all kinds sold quickly in all parts of the world; send description today, we can save you time and money. The Real Estate Salesman, K. Funke Bldg., Lincoln, Neb.

FARM FOR SALE—S. W. 1/4 SECTION 1, 5 1/2 miles N. W. of Medford, the county seat of Grant County, 1 1/2 miles east of Clyde on Santa Fe. Will sell cheap if taken soon. The rental, third of crop, amounting to over \$500 to the landlord. For particulars write to P. W. Enns, Newton, Kan.

160 ACRES SECOND BOTTOM LAND; 120 acres in cultivation, all fenced and cross fenced, splendid improvements, consisting of an 8-room dwelling, large barn, granaries and all other necessary buildings. Abundance of living water in creek and wells; slightly rolling, 1 mile of town and station. Dark limestone soil. Price \$7,500. Albin & Bottorff, Mound Valley, Kansas.

FOR SALE—FINE FARM, CONTAINING 244 acres of land, 100 acres, under cultivation, balance in wood, improved with right new dwelling and barns, on main county road, within 1 1/2 miles of steamboat wharf, 2 1/2 miles of railroad, 1 mile from cannery, school and church. Price \$5,000, half cash, and a great bargain. For further information write Matthews & Company, Real Estate Dealers, Cambridge, Maryland.

LAWYERS.

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

Some Grasses for Hog and Pasture

Two Letters Answered by A. M. TenEyck

Grass Combinations for Pasture.
Will you please give me the number of pounds of redbud, Alsike clover and red clover to show per acre, as a combination? Also amount of timothy or blue-grass to sow with this kind of combination. I have a piece of land which I wish to use as pasture that it sometimes overflowed. Would like to know whether this is the best grass combination to use and also best time to sow.

F. C. Newman, Emporia, Kan.

Sow about ten pounds of clean red top wit hsix pounds of Alsike clover or eight pounds of red clover seed per acre. If timothy and English blue-grass are included sow the following amounts: ten pounds of English blue-grass, six pounds of timothy, six pounds of red top and four pounds of Alsike clover per acre. The combination last named will make an excellent pasture. Should you desire to continue the pasture permanently, include a few pounds of Kentucky blue-grass and a pound of white clover with the grasses named above. The grasses may be sown this fall in a well prepared seedbed about the first of September, but the clover should be sown in the spring. If the grasses are sown this fall sow the clover very early in the spring, the last of February of the first of March, depending on the freezing and thawing and early spring rains to cover the seed; or the grasses and clover may be sown at the same time early next spring as soon as the soil is in condition to cultivate. Perhaps the preferable plan it to sow early in the spring on clean land, without a nurse crop. It will be necessary to clip the weeds once or twice during the early part of the season, but care should be taken to raise the sickle bar so as not to cut off the young grass and clover, when the plants are young and tender, since close cutting is apt to destroy the young plants. When the clover and grass has reached the heading stage, then the crop may be cut close to the ground without danger of destroying the plants. The objection to sowing clover in the fall is that the clover is apt to winter-kill.

Tame Grasses for Hay.

I am thinking of sowing six acres for hay. Have tried English blue-grass. It is a failure for hay. I have seen some reports of bermuda grass. Some say it will not grow from seed, that it has to be started from sod, and I do not know whether to get sod. Some say timothy will do no good here; others say it will. What is the experience of the station on grasses for hay, and when is the best time to sow, spring of fall?—Marcus M. Chapin, jr., Halstead, Kan.

English blue-grass makes very good hay if cut early, before it blooms, or about the time it begins to bloom. It is not so productive with us as timothy, bromus inermis or orchard grass. In fact, as an average for the last six years at this station timothy has out-yielded all other grasses in the production of hay, averaging over two tons of hay per acre per year. This was on upland soil, but in rather a favored location. I would not advise to grow timothy in Harvey county except on well favored land, preferably on bottom land which is well watered. I doubt also whether English blue-grass will succeed well except on the more fertile, well watered lands.

The bermuda grass will probably not prove hardy in your section of the state. It is not hardy at this station, winter-killing southern counties of the state it is more or less hardy. This is a southern grass, and does well in Oklahoma and Texas. It is usually started by planting the roots in rows or furrows across the field, laying the furrows eight or ten feet apart. I cannot refer you directly to farmers who can supply the sod or roots, although doubtless the regular seed firms will be able to secure the Bermuda grass roots for you.

The common grasses named may be sown either early in the spring or early in the fall. Usually in this section of the state, especially if the land is foul and the fall favorable, we would prefer fall seeding. Alfalfa may also be sown early in the fall, but clover should be sown early in the spring, and it is advisable to seed clover with grasses for meadow.

Poultry at the Fairs.

As I return from my rounds of judging poultry at the various fairs, the thought uppermost in my mind is why do not poultrymen make more use of their opportunity to advertise their stock?

Passing through the poultry exhibit at any fair, one may see coop after coop of chickens without their owner's name or address, and will hear people ask each other as to their ownership.

Much business might be accomplished by placing neat cards on each coop stating the variety and owner's name and address.

In fact every show secretary or superintendent should insist on the name of the variety being on each coop for the benefit of visitors.

Take for instance the State Wide Fair at Topeka. One exhibitor had a car load of odd varieties such as we seldom see at our western shows. The coops were not labeled and some contained a mixture of two or three varieties. It would have puzzled an expert to go along and name them all let alone an ordinary visitor.

The exhibit would have been more entertaining and instructive had the varieties been separated and the coops labeled with the name of the variety.

Poultry breeders should remember

MISCELLANEOUS.

HAVE YOU PROPERTIES FOR SALE or exchange. Let me know. H. L. Reverend, 510 N. Y. Life, Kansas City, Mo.

PURE HONEY, TWO CANS 120 POUNDS, \$8.50; single can \$4.50. F. O. B. cars W. P. Morley, Los Animas, Colo.

RAZORS—BEST IN MARKET FOR \$2; also razors sharpened good as new for 30c. Send orders to Fred Reichert, 3340 North Roby Street, Chicago, Ill.

HONEY—CHOICE EXTRACTED \$10 per case of 2 60-lb. cans. Broken comb or chunk honey in 60-lb. tin cans \$6 per can. A. S. Parson, Rocky Ford, Colo.

BOOKKEEPING TAUGHT BY MAIL—Practical, popular and modern methods, careful markings and criticisms. Low rate. Martin E. Hoff, Hanley Falls, Minn.

WE SELL THE FUMIGATING MACHINE. Kills rats, gophers, prairie dogs, ants, weevil, mites, etc. Recommended by government. Agents wanted. Foltz Rodent Exterminator Co., El Reno, Okla.

that they may have the best stock in the state but if no one but themselves know it they will sell very little stock or eggs.

The poultry shows and fairs are for the purpose of bringing out the best and comparing one breeders work with another, thereby being helpful and instructive to all.

Cold Storage of Apples.

By far the largest of the apples grown in Iowa are of the fall varieties. These do not keep well in ordinary storage. As a result the market is glutted during the fall, while when winter comes apples must be shipped in at high prices. For several years the Horticultural Section of the Iowa Experiment Station has been experimenting with different methods of handling apples in cold storage. These experiments have shown that fall apples when handled properly can be kept all winter in cold storage. The cost of cold storage is not very high, and by this means the season for home apples may be extended until well along toward spring. The results of the experiments along this line, together with full direction for handling apples in cold storage, are given in Bulletin No. 108 of the Iowa Experiment Station. Copies may be obtained by addressing Prof. C. F. Curtiss, Director, Ames, Iowa.

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On Farm Telephones

Buy everything needed for farm line or rural companies direct at bed rock prices. Over 12 years in business. Our goods used everywhere. Not in the trust. Write today for our big FREE book. It gives complete instructions for construction work, and tells you how to operate your telephone line successfully. Central Telephone & Electric Co., Desk 24, St. Louis, Mo. or Dallas, Texas.

STRAYED OR STOLEN FROM INGALLS, Kansas, Sunday night, Oct. 3, one pair dark brown mare mules, weight about 900 or 1,000 lbs. Larger mule had gray hairs in head, smaller one dim B on left shoulder. Reward for return or information to Sam E. McAdams, Ingalls, Kan.

RAILWAY MAIL CLERKS RECEIVE \$200 to \$1,600 yearly. Let us prepare you for examination. Those enrolling for railway mail now will be prepared for city carrier and P. O. clerk FREE. Write immediately. Ozment's College, Dept. 44, St. Louis, Mo.



Remington
AUTOLOADING SHOTGUN

YOU don't have to bother to load a Remington Autoloading Gun. The recoil does all the work of ejecting the empty shell and throwing a loaded one into place. You pull and release the trigger for each of the five shots.

Pleasant to shoot because of slight kick. Absolutely safe because of the Remington Solid Breech Hammerless feature. Easy to handle and quick to point.

Try one on ducks or geese. You will agree with the sportsman who wrote "I wouldn't take a \$1000 for my Remington Autoloader if I couldn't get another." Anyone can afford one, the price is so moderate.

If your dealer can't show you one, write us for catalogue and literature.

THE REMINGTON ARMS COMPANY, Ilion, N. Y.

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FREE BOOK of CRIB PLANS

Saves \$100 to \$500 on the grain you crib. Our books tell how. Your old cribs are O.K. to use a "Little Giant" Elevator with, but write for this new big book. Sent free with our catalog. Gives complete working plans and specifications for building or remodeling most practical used cribs and graineries.

LITTLE GIANT PORTABLE GRAIN ELEVATOR

Saves its price quickly in time, labor and money. No hand work. Drive right on wagon dump or jack, throw clutch, start horse-power or your engine, and grain is distributed evenly by conveyor at any height. All automatic and quick. Unloads 50 bu. in under five minutes. Investigate. Thousands in use. Write

PORTABLE ELEVATOR MFG. CO., McChum St., Bloomington, Ill.

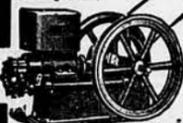
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Are known by a superior standard of construction. 25 years of service has demonstrated their worth. Does work at lowest cost and is always ready to saw, grind, pump, shell or do any farm or shop work.

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Save time, horses, work and money by using an

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Low wheels, broad tires. No living man can build a better. Book on "WheelSense" free. Electric Wheel Co. Bx 23 Quincy, Ill.



\$10.00 Sweep Food | \$14.00 Galvanized Grinder.

We manufacture all sizes and styles. It will pay you to investigate. Write for catalog and price list.

GURRIE WIND MILL CO., Seventh St., Topeka, Kansas

OVER 100 BUSHELS A DAY ITS EASY WITH A KEES No. 2 HUSKER

18 yrs. experience making corn huskers. Know how to make them to do the work and last. Men's right or left hand. Boys' right only. Ask your dealer for genuine Kees. If he can't furnish it, send \$5 for a sample. Our little booklet on Corn Huskers FREE. F. D. KEES MFG. CO. Box 416 Beatrice, Neb.

COWS vs. COWS

Weakest Spot in Farm Dairying is Poor Cow.

W. J. FRAZIER,

Dairy Husbandman, University Illinois.

After ten years study of the subject I do not hesitate to express it as my settled conviction that the weakest spot in the dairy business is the poor cow.

The actual relation of the efficiency of the individual cow to the real profits in dairy farming is a matter little realized by the people depending upon this occupation for a living. The profits on the average dairy farm today can be easily doubled.

THE COW IS THE MARKET.

A dairyman considers his market to be the place where he disposes of his milk, cream or butter, and in one sense this is true, but the place where he markets such of the products of his farm, as grain, hay and silage, is the dairy cow. The efficiency of the cow consuming these must therefore bear a vital relation to the dairyman's profits. If in a town having two grain elevators, one paid one-half cent a bushel more than the other, no farmer would be foolish enough to sell his grain to the one paying the lower price. Yet dairymen will persist in keeping cows year after year that are paying them only 25 cents a bushel for grain, while others in the same herd, or that can easily be obtained at a reasonable price, will pay fifty cents a bushel or even more for the grain they consume. The difference in price which individual cows are paying for their grain is not so apparent as the difference at the elevators, but it is none the less actual and affects the pocket-book just as surely in the end.

As an illustration of the great difference in individual cows, notice the records of some of the cows in the dairy herd at the University of Illinois.

ROSE HAD 57 WEEKS OF ADVANCED REGISTER RECORD.

Twelve pounds of butter-fat for a single week is the production required for admission to the Holstein-Friesian Advanced Register. Twenty different weeks in her third lactation period, Rose made more than twelve pounds per week. Three times in this period she made 17 3/4 pounds of butter-fat per week. For five successive weeks, six months after calving, her average was 13 pounds of butter-fat per week. In her fourth lactation period, there were 16 weeks during each of which Rose made more than 12 pounds of butter-fat; and in her fifth lactation period, 21 weeks.

Remarkable as is the performance of this grade cow, she is not heralded as standing apart in unapproachable splendor, but as a great leader of the thousands of money-making cows in our dairy herds.

In striking contrast to Rose, and the class of cows she represents, is Queen. With equally good feed and care, Queen's average production for eight years was only 4,639 pounds of milk and 158 pounds of butter-fat. Her production is but two-fifths that of Rose and she barely pays for her board.

Two cows, known as No. 1 and No. 3, were purchased from a large herd and taken to the University. They were fed and cared for in the same manner and their average production for three years was as follows: No. 1, 11,390 pounds milk and 404 pounds fat; No. 3, 3,830 pounds milk and 133 pounds fat.

Reduced to a like feed basis, the four cows produced for an entire year in the following ratios: Queen, 100; No. 3, 121; Rose, 304; No. 1, 312. The best two produced practically three times as much as the poorest two cows.

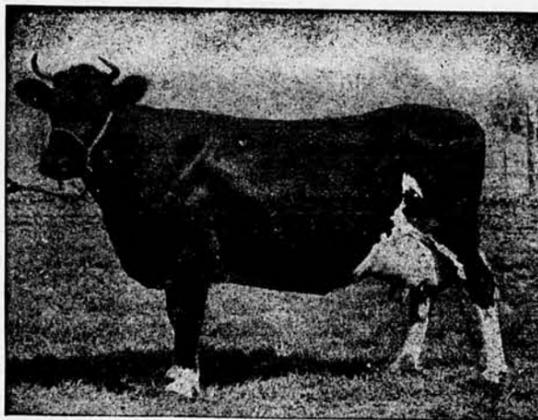
A little over a year ago, the department of dairy husbandry purchased the best and poorest cows from six different herds. These were shipped to the University and a careful record kept of all feed consumed and milk and fat produced. The record for an exact year of ten of these cows from five of the herds is given below; showing the cost of milk and fat produced by the different cows at market price for feed.

Best and Poorest Cows in Five Herds.

No. Cow	Lb. milk	Lb. fat	Cost per 100	
			lb. milk	lb. fat
83	11,794	382.4	\$.61	\$.19
84	8,157	324	\$.87	\$.21
85	9,592	406.3	.75	.18
86	3,098	119.2	1.56	.40
93	9,473	358.6	.76	.20
94	7,846	282.1	.87	.21
95	14,841	469	.56	.18
96	7,686	324.1	.80	.22
97	8,563	291	.78	.23
98	1,411	52.8	2.77	.74

The records separated by the lines are of cows from the same herd.

Compare the amounts of milk, fat, and cost of same. This shows in a striking manner the difference in earning capacity of the different cows.



ROSE.

Rose's average production for years including time dry, was 7,258 pounds milk and 360 pounds fat. Her largest year was 11,446 pounds milk and 581 pounds fat.

Butter for 12 years, 4,318.36 pounds, worth at present prices (25 cents per pound), \$1,079.59.

Skim-milk for 12 years, 72,585 pounds, worth at 15 cents per 100 pounds, \$108.88.

Total receipts for 12 years, \$1,188.47, or \$99.04 per year.

Just think what the receipts of a dairyman would be whose herd consisted of 25 cows of this kind—\$2500 per year, exclusive of calves and manure.

Rose was bought for \$50 when 4 years old. She has had only ordinary treatment, no better than she would receive on a good dairy farm. She has not been pampered or fed to pro-

The best cow of all produced over ten times as much milk as the poorest cow, and produced it at 56 cents per 100 pounds in marked contrast to the \$2.77 required by the poorest cow to produce the same amount.

Production of Rose for 12 Years, and Queen For 8 Years; Contrast in Efficiency of

Lactation period, Mo.	Cow	
	ROSE	QUEEN
*21	14,462	704
1	14,536	762
2 1/2	10,247	507
12	12,680	637
1 1/2	6,018	291
3 1/2	10,412	511
16 1/2	11,059	556
1	7,688	350
23	87,102	4,318
4	7,258	360
9		
Total 12 yr. Ave.		

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Will You Pay a Penn? For The Postal and Save \$50.00? Address Wm. Galloway, 889 Galloway Bldg., Waterloo, Iowa. I'll bring you everything postal order.



THIS DIFFERENCE GENERAL.
From the testing of over 1,000 cows in the dairy herds of Illinois, it has been proved that this great difference in cows extends to practically every herd in the state.

Included in the dairy investigations of this station, are the individual records for a full year of 554 cows in thirty-six Illinois herds. To make a large and fair comparison, take the lowest one-fourth and the highest one-fourth of all these cows—278 head or half of the entire number. The lowest 139 cows (one-fourth of all) yielded an average of 133 1/2 pounds of butter-fat during the year, and the highest 139 cows produced an average of 301 pounds butter-fat.

The Elgin price of butter the past five years averages 23 cents per pound. This has been used as the figure on which to base this calculation. The results would be the same if any other

price were used. At 23 cents per pound for butter-fat, the poor cows make an average return of \$30.77. At the low estimate of \$30 per year for feed, this would leave 77 cents per cow for the whole year's profit. But the best 139 cows make an average income of \$69.32. Allowing these better cows \$38 per year for feed (\$8 better than the poor producers) the clear profit is \$31.32 per cow. These calculations allow the skim milk, calf and manure, to pay for the labor and interest on the investment.

139 COWS MAKE \$100; ANOTHER 139, \$4,000.

The profit from the whole 139 poor cows is only \$107, but the clear money from the best 139 cows amounts to more than \$4,000. Every one of these good cows averages as much clear profit as forty-one cows of the poorer kind. Herds of these two kinds would have to be kept in the following com-



QUEEN.

Lactation period,	Mo.	Li.	milk.	Lb.,	fat.
10 1/2	1	471		126	
1					
9 1/2	1	478		156	
1					
13	3	788		134	
3					
11	5	774		194	
1 1/2					
14	5	726		196	
1 1/2					
12 1/2	6	726		200	
2 1/2					
18	6	768		219	
3					
		1 301		38	
Total 8 yr.		37	17	1,268	
Ave.		4	489	158	

*The larger figures show the length of time the cows gave milk and the smaller ones the time dry.

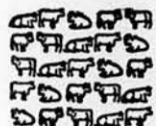
parative numbers to produce exactly the same profit for the owner.

GOOD COWS POOR COWS
1 cow equals 40 1/2 cows
15 cows equal 612 cows
25 cows equal 1021 cows

WHEN THE COWS COME HOME.

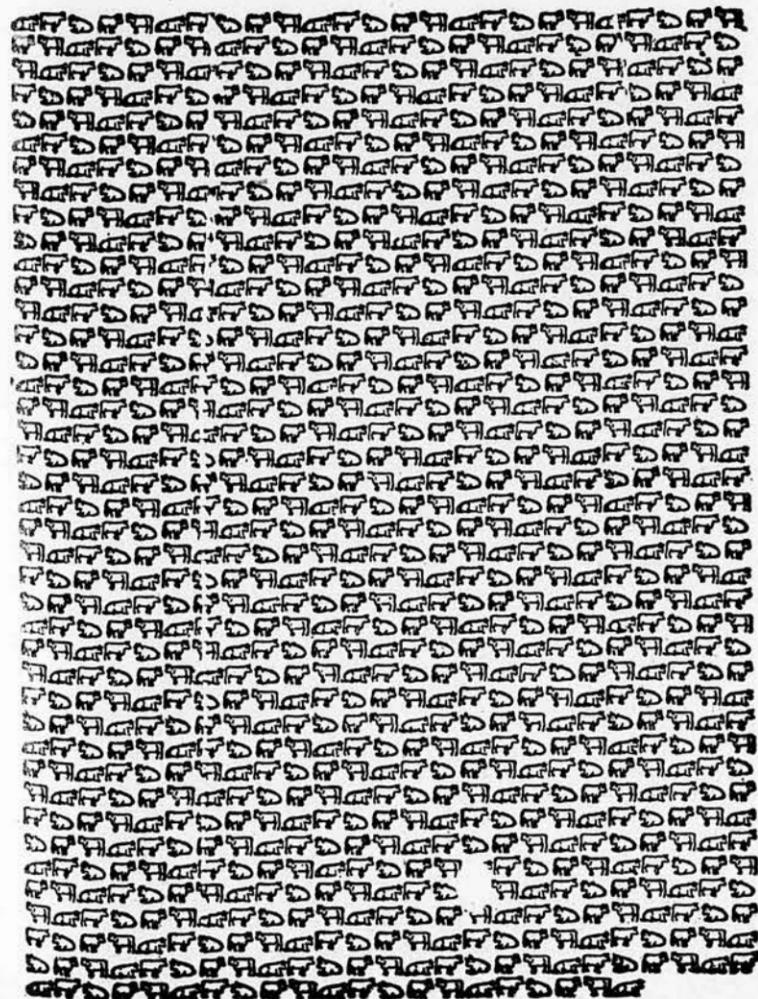
These figures sound big, but in their abstract form they are too weak to tell the full story. The accompanying pictures show the exact relative sizes of two herds made up respectively of these two kinds of cows, that would yield the same profit for the owner. The one contains twenty-five cows and the other, 1,021 cows. They are all

Twenty-five cows, each producing 301 lb. butter fat per year, return a profit of \$783.



This is the average production of 139 cows comprising the best fourth of 554 cows in 36 Illinois dairy herds. The lowest fourth (139 cows) of the same 36 herds averaged 133 1/2 lb. butter fat per year.

The picture below shows exactly how many cows of the poor kind, (1,021) it takes to return identically the same profit (\$783) as the above 25 good cows.



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offers exceptional opportunities in its development. It is a land ripe with future promise; a land where wealth untold can be taken from the fertile soil. It is a land that is being settled very rapidly, and wherein thousands of homes have been made within the last two years.

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but it is increasing in value every day. The man who buys NOW can be independent in a few years and own a debt-free home. Twenty acres of this land will produce more than fifty acres in other sections. Two, and often three, crops are raised in one season. Plowing and planting goes on practically the year around. The uniform temperature, too, is a potent factor in the productiveness. Corn, alfalfa, rice, sugar cane, cotton—almost anything can be raised. Vegetables can be placed on the market three weeks in advance of those of any other section.

WHY NOT INVESTIGATE

the possibilities of this wonderful land? Go on one of the semi-monthly excursions on the first and third Tuesdays of each month—when round trip tickets (good 25 days) are on sale at exceptionally low rates. Write me for full information about this garden spot of Texas. Do it to-day!



W. S. ST. GEORGE,
Gen. Pass. Agent M. K. & T. Ry.
ST. LOUIS, MO.



present to represent their value. In four and a half days each cow in the large herd earns one cent profit. The whole 1,021 make less profit per day than one carpenter. Thirty of them would produce the value of one acre of corn, if the ground isn't too rich and the price doesn't exceed 50 cents per bushel.

Twenty-five cows of the better kind would return the dairyman a clear profit of \$783 per year. They could be kept on an 80-acre farm; they would require a barn only 32x45 feet and a 100-ton silo, and the cows themselves at \$70 per head would cost only \$1,750, a very good little business.

But a dairyman could make just as much money (and no more) from the 1,021 cows of the other kind. However, the investment would be somewhat different, and no dairyman in his right mind, would attempt to handle this herd, yet this is just what, in effect, many Illinois dairymen are now doing with at least a portion of their herd.

The only difference from the above picture is that the worthless quarter

million cows of Illinois instead of being grouped in herds of 1,000 are scattered and mixed in many herds—some in almost every herd in the state. This enormous waste of the dairyman's investment, and time and effort has extended into almost every cow-lot in the dairy regions. Is it any more businesslike or any more profitable per cow, to keep five, ten or twenty-five such cows than to keep 1,021 of them?



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TOWANDA, KAN., NOVEMBER 9, 1909

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Registered Imported
and American Bred
STALLIONS
HERD HEADERS

40
Imported and American
Bred Registered
MARES

10
Weanling Colts Sired by
Casino

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grandest lot of Brood Mares
ever offered for sale in
America

40
Mares bred to Casino
the greatest prize win-
ning Percheron stallion
living.



DOLORES 45657
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Prize Winner's

This is the first sale held
at the Farm and will be
held in the new \$5000.00
Sale Pavilion.

The 1909 Show Herd in-
cluded in this sale.

Four miles N. W. of To-
wanda, on the Missouri
Pacific R. R.

AUCTIONEERS—
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COME!

A special train will leave Wichita at 9:30 a. m. for Towanda, and return in the evening after the sale.

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To be pure seed gathered under our direction. Examined by the U. S. Agricultural Department and found to be pure. Copy of their letter and catalog facts in illustrated booklet mailed free. Write for same.
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Knowing the Soil.
The first thing of importance that any farmer has to deal with is the knowledge of his soil. On this has hinged more success and more failure than on any other kind of knowledge connected with farming. Some soils may indeed be so rich that a about them to get good results from them, but most of our land is not of this character. Although farmers have tilled the soil since the time when the race began to develop agriculture, yet the soil is the least known thing on almost any farm. The very idea of studying the soil is one that has not yet taken deep root. Most men cannot tell what it is their soil lacks, and they go on year after year making the same blunders. In the past, the farmer was justified in not knowing the components of his soil, because science had not yet taken up the matter of soil composition. But now it is different, and it is possible for every man to become thoroughly acquainted with the soil on which he is trying to make a living. The farm papers are full of information regarding soils. The man who will read and think can know.

Use the Fanning Mill.

The fanning mill is a breeding machine. It should be used to secure not merely the largest seeds, but rather those which are most compact, heaviest, having the highest specific gravity, according to Assistant Secretary Willet M. Hays.

Some general fanning mills are adapted to grading out by weight if skillfully handled; but the machines which grade the seeds in a vertical blast of air do the grading by weight to a nicety.

While a lean seed may have its full development of albuminoid substance, as a lean bull has his full growth of muscles, and may have a germ which

is full of vigor, the full complement of fatness in the form of starch is also needed.

Where the choice is between seeds somewhat lean, but of a known good variety, and plump seeds of an unknown or poor variety, it is often wiser to choose the variety you know to have the right kind of breeding.

If the lean seeds of a good variety have high vitality, that is, will germinate well and are given good conditions, planted at the right time, in soil rich in fertility and of proper mechanical texture, so that the roots can at once get into touch with a supply of food outside that in the mother seed, the leanness of seeds short on starch is usually of less moment than the general yielding power of the variety.

In case of corn, the seed should be saved from good land, and only the choicest ears selected.

Almost any farmer can plant a hundred nursery rows of corn, one row from each choice ear, and save his seed from the best rows, and thus make improvements more rapidly and more pronounced than by simply saving the best ears from the general field.

If he does not care to do this every year, he can do it every other year, possibly with quite as good effect, simply choosing the very best seed ears from the large field the alternate years.

Under this method of breeding, a large number of nursery rows should be planted that there may be sufficient seed secured from superior rows to plant a large portion of the field the alternate year.

A hundred rows, or better, two hundred, planted from as many ears will furnish good ears from mother ears with proven breeding power.

Seeds of the small cereals should be carefully saved. Every three years a few of the choicest heads may be picked out of the standing grain, and their seed increased the second year for pure selected stock with which to plant the entire field the third year.

The trouble of hand picking and trouble from fussing with small patches of grain will be amply repaid in better crops, and often in the chance to sell choice seed grain.

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W. S., J. B., & B. DUNHAM, Wayne, Illinois.

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for my manufacturing and exporting trade. Skunk, Mink, Muskrat and other furs. Top prices. Write for special quotations.
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Kansas Farmer has made special arrangements with the manufacturers of these goods whereby we can give to every reader of Kansas Farmer one of these slickers or suits together with a full year's subscription for ONLY THREE DOLLARS.

Or, we will give one of either the slickers or suits to any one sending us three subscriptions at \$1 each, two of which must be new subscriptions.

Your own renewal and two new subscriptions will get you the coat or suit.

The Fish Brand goods are positively the best in the world. They are known and sold everywhere. This is one of the best offers we have ever been able to make our readers.



The slickers are put out in only four sizes, as follows:

No. 0, 62 inches in length; 36 inches center back, 56 inches breast.

No. 1, 61 inches in length; 35 inches center back, 54 inches breast.

No. 2, 59 inches in length; 34 inches center back, 52 inches breast.

No. 3, 57 inches in length; 33 inches center back, 50 inches breast.

If you wish a full suit instead of the slicker overcoat give us the size of coat and trousers you wear and we will send you the proper sized suit.

We don't know how long we will be able to make this remarkable offer so send your order at once in order that we may be sure to accommodate you. Address,



□ Circulation Manager, Kansas Farmer, Topeka, Kan.

FARM LOSSES

How and Where and How Prevented--Eleanor Carothers, Kingman, Kan., for Kansas Farmer.

Eternal vigilance is the price of success on the farm as elsewhere.

This subject naturally falls under three heads; losses on the land, losses in live stock and losses in the house. Being a girl, I consider the latter the most important, though either division might be discussed ad in finitum. I shall endeavor to give those that seem the greatest.

Probably the most loss in the first case results from the weed patch. Nearly every farm has corners that are not easily cultivated and are regularly neglected. Often this is low land, which if planted in small fruit, would return an enormous profit for little work. Not only is the use of this ground lost, but millions of weed seed are allowed to mature and scatter to other fields, necessitating additional work in farming them successfully. All ground should be kept free from noxious weeds and it is easier to do this if some crop is raised on it.

Next in importance comes losses on land that is actually farmed. Many a farmer plants inferior seed and consequently raises a low grade crop. First class grain can no more be raised from poorly bred seed than can first class horses, cattle and hogs be raised from poor stock. Often, too, more land is put in than can be properly tended and only half a crop is raised. Here the extra time, work and seed is lost to the individual, while there is a loss to the community in that the extra land might have been tended properly by some one who really needed more land. Then after the crop is raised it is frequently damaged. Wheat is thrashed while damp, detracting from its value, stacks are not properly topped, corn is thrown on the ground and wasted. Then again, expensive farming machinery is often exposed to the weather the year round, farmers imagining that they cannot afford the expense of sheds. But, in four or five years, they have to afford the expense of new machinery or at least, extensive repairs, as a result which costs three or four times as much as the sheds would have cost.

Now to the second class of losses, those on live stock. Cattle and hogs are sometimes not much more than kept alive for several years, while the same amount of feed that it takes to do this, if it had been given to them when young, would have resulted in far greater profit. On the other hand too much whole grain is sometimes fed. If one-half the amount were fed as chop, which could practically all be assimilated, better results would be obtained. Feeding should be at regular intervals as the digestive system secretes and pours out its fluids at stated times. While on this subject, fodder is sometimes scattered around on manure where the cattle will not eat it instead of being placed in racks, or at least on clean ground. Then not every farmer provides warm sheds for winter. There is a waste here for more food must be taken to keep up the heat of the body, and under proper conditions this food would form fat. Here again, a mongrel lot of stuff is raised where the cost of pure bred stock would be but slightly greater and the profit much more.

The third class, the house. Here education and common sense is more

needed than anywhere else on the farm. Not only the money but the health of every member of the family is at stake. It is said that the moderately placed man's money is the most injudiciously spent on the market and his food the most poorly cooked in the house. This does not necessarily mean that it doesn't taste good, but that it is bad from a scientific standpoint. According to those acquainted with conditions in both countries, the average American family wastes more than the average French family lives upon.

Four errors in economy here are the most frequent. First, the costlier kinds of food are used when the less expensive are just as nutritive. Canned fruit is bought in winter at 10 cents or 15 cents per quart that could be put up in the summer at a cost of 2 to 3 cents per quart. Take tomatoes, for example. They can usually be bought at 50 cents per bushel and one bushel will easily can twenty-four quarts. These twenty-four quarts, if bought in the winter at 10 cents per quart would cost \$2.40. True, some housekeepers lose considerable fruit from mold, etc., but this would be avoided if the cans were placed in the sun two days before used and none but sound fruit used, care being taken that the utensils coming in contact with the fruit are clean. This article does not intend to advocate the use of cheap baking-powder, vinegar, etc., which in the end causes a loss from doctor bills and ill health.

The standard food stuffs such as milk, flour, cornmeal, oatmeal, beans, potatoes and nuts (of course those who have no moral objection to meat can count it in) are the cheapest as well as the most nutritive when properly cooked.

Second: The diet is often one sided, containing too much heat producing and too little flesh producing material. The remedy lies in a varied diet. Then the remark of many housewives, that they long to spend the day with some neighbor to get a change of cooking, would not be heard. Let them give their own families a variety and frequent changes in method of preparation.

Third: Excessive quantities of food are used; part of this is eaten to the detriment of the health, part thrown away in the kitchen and part wasted in preparing for the table. W. O. Atwater, Ph. D., of the U. S. Department of Agriculture, estimates this loss as high as ten per cent in private families.

Fourth: Errors in cooking. A great deal of fuel is wasted and even when the food is badly cooked. To replace dear food badly cooked with cheap food well cooked is the problem. How many of your readers know or profit by it and that the U. S. Department of Agriculture, Washington, D. C., send out bulletins on such subjects free on application. Farmers' Bulletin No. 142, "Principles and Nutritive Values of Foods" may be obtained for a postal to the above address and if sent for, studied and applied, would save many a family much in both money and health. Too many farmers cease to strive as soon as they find they are making a livelihood, when a little extra care would place a good account to their credit in a bank.

History of the Sugar Beet.

The merits of the sugar beet were discovered gradually. For ages it was used chiefly as cattle feed. Later the leaves were used as a vegetable, and the roots were roasted as a substitute for coffee. About the middle of the eighteenth century a German chemist named Marggraf found that the roots contained a considerable proportion of sugar, but it was not till 1801 that the first beet sugar factory was built, in Silesia, with the aid of King Frederick William II.

Largest Farm in the World.

It is said that the largest farm in the world is that of Don Luis Terrazas of Chihuahua, Mexico, on which 4,000 people live. The farm has on it 1,

000,000 cattle, 1,000 horses, 700,000 calves. More than 1,000 cowboys are needed to look after his herds. He has a slaughter house of his own near Chihuahua City, at which more than 25,000 head of cattle and as many or more sheep and hogs are slaughtered every year. He owns his own refrigerator cars, in which his packed meats are shipped all over the republic, and more than half a day is required for a railway train to cross the farm.

A Safe Bet.

"Mamma," said little John, "I just made a bet."
"You naughty boy, Johnny! What made you do it?" she asked.
"I bet Billie Roberts my cap against two buttons that you'd give a penny to me to buy some apples with. You don't want me to lose my cap, do you?" He got the penny.—Pick-up.

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