

KANSAS FARMER

For the improvement



of the Farm and Home

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DEMOCRACY IN EDUCATION

Aim to Promote Best Americanism and Pure Ideals of Democracy

From Inaugural Address of W. M. Jardine
President Kansas Agricultural College

THE Kansas Agricultural College, it must be constantly remembered, is not simply an educational institution instructing a relatively small body of selected men and women on a campus at Manhattan. It is also a great and responsible instrumentality for enlarging the agricultural and industrial life of the state. In the natural course of development, each of the state institutions of higher learning has come to fill a particular need. Each is essential to the upbuilding of the state. Each must be free to develop its own clear-cut field, and in that field its stress should be laid.

In the realm of the college proper, it shall be the aim of our teaching in the future, as in the past, to give training of the highest professional type in the fundamental sciences and liberalizing subjects, as well as thorough training in the several technical curricula. Emphasis will be placed also on the practical viewpoint. We want our students to know the problems that are to be solved and to be able to meet men and women of the workaday world on a common ground of understanding. In a larger way the aim of our teaching and training will be to produce not only the practical agriculturist, engineer, and housekeeper, but also young men and women trained for leadership, young men and women who have been led, through a study of the social relations combined with professional and practical training, to have a larger vision of the duty of college-trained men and women as leaders in community development.

Short Course Instruction

The institution will also continue to make adequate provision for those desiring practical training briefer than that given in the regular curricula. Those whose opportunities for preparation have been limited will find in the Kansas Agricultural College, courses designed to meet their needs. The short courses now offered to the busy farm boy, to the girl who can be spared for but a few months from the home, and to the shop man who can attend school only for a few months during the slack time of his occupation, will be increased and expanded. It will be many years before the practical working out of the provisions of the Smith-Hughes Act will eliminate the need of such training on the part of agricultural and mechanical colleges. The scarcity of trained workmen which the needs of the war brought so vividly to the minds of the American people, demands that state institutions endeavor to prepare that portion of the state's citizenship as they never attempted to prepare them before.

Research Work Important

The work of the agricultural experiment station must be maintained on the same high plane as in the past. The results of experiment station research and investigation, together with assembled facts as worked out by practical farmers, form the basis and foundation of all college teaching in agriculture and all agricultural extension work.

Agricultural research progresses quietly. Its operations carry little popular appeal, nor is premature publicity to be desired. Agricultural research and investigation, however, are dependent upon public support. It is the respon-

sibility of those who are the guardians of agricultural science and those who have cause to appreciate its fundamental value, to see that the latest comer among the organized sciences is not curtailed or hampered for lack of funds.

Engineering research is a field of scientific investigation which is destined to grow and to play a large part in the improvement of agricultural and industrial life. No adequate financial support, either from state or from federal funds, has as yet been forthcoming for this work. Valuable work is being done with the means and the force available and this will be continued and increased to the greatest extent possible. Engineering experiment stations should be created through proper congressional action, and federal funds added to state funds for the furtherance of engineering research. With federal recognition and adequate financial support, engineering investigations will quickly demonstrate their economic value.

New Virility in Education

There are many signs of a new virility in education. In England parliament has passed an education bill which is a distinct forward step in providing

a greater degree of education for the youth of that country. England, inclined in the past to be ultraconservative in her educational policy and to cling to the formal type of academic training, has made wonderful strides in educational reform since 1914. Many English authorities, however, are still awake to the extent of the reforms which are needed in the English system of education. The British Labor Party approaches more nearly to a proper comprehension of the duty of the government in education. It has inserted in its platform a plank which reads: "The conference holds that the most important of all the measures of social reconstruction must be a genuine nationalization of education, which shall get rid of all class distinctions and privileges, and bring effectively within the reach, not only of every boy and girl, but also of every adult citizen, all the training, physical, mental and moral, literary, technical, and artistic, of which he is capable." The Labor party points out that while appreciating the advances indicated by the proposals of the present minister of education, it cannot be satisfied with a system which con-

A DEMOCRATIC WORLD EDUCATION

DEMOCRACY in education was the keynote of the inaugural address of W. M. Jardine, of the Kansas Agricultural College, delivered at the installation ceremonies during Farm and Home week. He maintained that the adoption of democratic ideals in world education would help to make war impossible.

Training for citizenship upon a broader platform is a need which must be met in this country. Education, to be thoroughly democratic, must be practical, and available to all. A proper balance between industrial and liberal education must be maintained by such institutions as the Kansas Agricultural College.

The Agricultural College of Kansas must provide training of the highest type in the sciences underlying agriculture and the mechanical industries. It has a definite responsibility for leadership in working out the problems now pressing upon us.

To be democratic, education must reach all people of all nations. A world curriculum may be impossible, but we can have world-wide ideals toward which education in all countries may strive.

In the problems of reconstruction the Agricultural College must and will take a leading part, as it so ably and efficiently did in furthering the war program. These are a few of the salient points made by Doctor. Jardine in outlining his program for the great institution of which he has been made the head. In conclusion he said:

"Upon us, servants of the new era in world politics and in world education, has the mantle of the ancient leaders fallen. They laid the foundation upon which we must build the superstructure. By the touch of that mantle in our hands—be they quickened with justice and zeal—the waters of error, of injustice, of prejudice, will be swept aside, and education for democracy will cross over into its own."

W. M. Jardine, who was formally installed February 4, is the seventh president of the Kansas institution, succeeding Dr. H. J. Waters, who resigned in 1917.

demns the great bulk of the children to merely elementary schooling... which, notwithstanding what is yet done by way of scholarships for exceptional geniuses, still reserves the endowed secondary schools and even more the universities, for the most part, for the sons and daughters of a small privileged class, while contemplating nothing better than eight weeks a year continuation schooling up to the age of eighteen for 90 per cent of the youth of the nation.

In the United States popular education has always been far more advanced than in England. The founders of the American colonies were keenly interested in national education and believed that only a well-informed and well-educated nation could be happy, prosperous and free. The fathers of the republic made ample provision from the outset for general elementary education and for education in the professions. No provision was made for industrial education, however, because at that period industry was centered largely in the home. That part of the industrial knowledge and practice which could not be transmitted personally from parents to children could be supplemented satisfactorily through the apprenticeship system in vogue.

Beginnings of Practical Education

To meet the growing need for practical education there was enacted the Land Grant Act of 1862 which laid the foundation of a national program in vocational education, an innovation which was considered by many to be more or less dangerous, but which has demonstrated the practicability of learning by doing. The more than ten thousand men and women who constitute the professors, instructors, extension workers, and experiment station investigators of the land grant institutions today, and the more than 130,000 students enrolled therein, testify to the wisdom of the act and the breadth of vision and public spirit of those who made it an actuality. The land grant institutions have experienced an incredibly rapid development in number of students, in faculty, in yearly income and value of demonstration farms, and in the value of all property. Their growth, while rapid, has, however, been through the natural means of experimentation and study, and the mapping of the course in new fields has not been without error. The land grant institutions with their inseparable coadjutors, the experiment stations, now occupy a position of far-reaching power and influence in connection with the most vital interests of the states in which they are located.

But this is no time for self-complacency on the part of land grant institutions. Their establishment was a long step forward in universal, useful education, but it did not remedy all the defects of the existing educational system. The free high schools which came to fill the gap between the elementary schools and the universities have in many cases fallen victim to false ideas of culture and must radically change their curricula if they are to become servants of modern life. Moreover, they have been located in towns and cities

(Continued on Page Five)



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Concrete for Permanence

Stock Show Brings Improvement

By F. S. KIRK

IT IS a hard matter to determine the direct financial benefits of a live stock show. This is especially true in a community where a number of farmers have been breeding registered animals for an indefinite period, before the show was held.

The developments in live stock production following the holding of the show at Enid, Oklahoma, are more plainly set forth than any other for the reason that they had a commencing place. The Cherokee Strip was opened to settlement September 16, 1893. For ten years the farmers were growing agricultural crops and were not growing enough live stock for their own use. At the end of ten years, with this kind of farming, the assessors' report of Garfield County showed a total of 13,868 horses. They were ordinary broncos in quality. Their assessed valuation was \$14.15 per head. The number of cattle was 14,059. Some of them were of the Texas Longhorn variety and others belonged to the Arkansas scrub resembling a degenerated Jersey, and their assessed valuation was \$9.09 per head. There was not a registered stallion owned in the county, neither was there a breeder of registered draft horses owned in the state of Oklahoma except by the A. & M. College at Stillwater. The first show was held at Enid in 1903, just ten years after the opening. During the next ten years the assessed valuation of horses increased from \$196,000 to \$1,003,000, or more than five times the value when the first show was held. This increase in value resulted from the use of pure-bred stallions which greatly improved the quality of the horses grown. The same condition prevailed regarding the cattle, the quality and number of each being more than doubled. During the past five years the farmers living in the Enid trade territory have sold more than two million dollars worth of horses and cattle annually.

At the time the first show was held there were eleven breeders in Garfield County growing registered Hereford cattle and nine growing Shorthorns. At this show the premium money was all donated by the business men of Enid and an equal amount put on Herefords and Shorthorns. At the second show held in 1904 the American Shorthorn Record Association donated \$500 in premiums. The Hereford Association refused to give anything. At the third show the Shorthorn Association increased the donation to \$1,000 and the Hereford Association again refused to give anything. At the fourth show the Hereford Association donated \$500 and continued to donate until 1912. However, the Hereford breeders did not contribute to the sales except in a very small way and the Record Association did not give the sales its moral support, with the result that the Shorthorn show and the Shorthorn sales were much larger and better than the Hereford. The American Percheron Society also donated to the Enid show, while the Belgian, Shire and other draft record associations did not. The result of their actions is now shown by the records. There are now more breeders of registered Shorthorns living in Garfield County than any other county west of the Mississippi River. There are seventy-seven counties in Oklahoma. One-eighth of all the Shorthorn breeders in Oklahoma live in Garfield County and more than one-half of all the Shorthorn breeders in Oklahoma live within seventy-five miles of Enid. H. C. Lookabaugh, the largest Shorthorn breeder in Oklahoma, and hundreds of others were started on their way to prosperity at the Enid Stock Show. One-half of all the registered Percheron horses in Oklahoma are owned within fifty miles of the county seat of Garfield County. On the other hand, there is not a breeder of Belgian, Shire, or any other draft breed except Percheron living in Garfield County and the Shorthorn breeders have increased from nine to 147, while the Hereford breeders have de-

creased from eleven to five. There are two breeders of Aberdeen Angus and none of Galloways in Garfield County. It is true the Hereford breeders did make a few creditable exhibits at Enid, but they furnished very few cattle for the sale and did not give the sales their moral support. The Shorthorn cattle sold at the Enid stock show were bought by farmers in every part of Oklahoma with the result that Oklahoma now ranks as one of the leading Shorthorn states, and Garfield County has sixty-seven more Shorthorn breeders than there are Hereford breeders in the entire state of Oklahoma. The records show that the same conditions and the same results were obtained in the swine department. The Enid show only provided for two breeds, the Poland China and Duroc Jersey. During the lifetime of the Enid show, approximately one thousand head of each breed were sold at auction, with the result that no other breed of hogs is now grown in that section of Oklahoma. The results as above referred to plainly show who receives the benefits of the stock show. It is the breed represented and the breeders who attend, exhibit their best animals, and consign to the sales. The show stimulates an interest and the sales encourage the farmers to buy and thus they become breeders of the breed on exhibition and for sale at the stock show.

This article is not written for the purpose of boosting one breed and knocking another. It is a plain statement of facts, written in the hope that it will encourage the breeders to get behind their favorite breed.

The Kansas National Live Stock Exposition and Horse Show at Wichita, February 24 to March 1, will be by far the largest live stock show ever held in Kansas. Every breeder should be there and help boost his breed and every farmer should attend and learn the lesson that it teaches.

Tractor Incidents

Many stories of tractor incidents are told by students taking the tractor short course at the University of Nebraska. One man, having had his tractor seven years, decided the magneto needed cleaning. He soaked it in gasoline, and then turned it to see if it would spark. It did, and set the gasoline on fire and burned the magneto up. Another man heard a fearful noise as the drive wheel turned over. Instead of stopping the tractor he kept it going to see if the noise occurred again. A lug had come loose and the second time around swung out and stripped off one of the control levers and the fender. Positively, a machine should not be run a foot after something has gone wrong. Repair men say that more than 50 per cent of their work comes from improper lubrication.

When Gas Engine Balks

Engine trouble is usually due to the operator's ignorance of some of the details essential to proficient operation. In Farmers' Bulletin No. 1013, "Practical Hints on Running the Gas Engine," Arnold P. Yerkes, the author, calls attention to some of the common causes of engine trouble, to suggest a method of locating quickly the seat of the trouble when an engine fails to run as it should, and to offer a sort of reminder in the form of a condensed trouble chart, which may frequently be of assistance even to experienced engine operators.

Stop, think—then follow a definite system to locate the trouble, advises the bulletin. It gives directions for testing the ignition system, fuel system and compression, also points on starting and operation, and gives suggestions which will aid in starting the engine in cold weather. Particular emphasis is laid on the importance of a thorough knowledge of the gas engine. A copy may be secured, as long as the supply lasts, by applying to the United States Department of Agriculture, Washington, D. C.

The Crying Need

The complaints we hear from Berlin that the artists who have painted some of the horrors for which the kaiser's army and navy are responsible, have treated Germany unfairly, bring to mind the story of the very homely man who complained that a photograph of him

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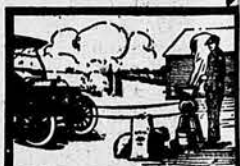
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KANSAS LIVE STOCK ASSOCIATION

At Hutchinson February 20, 21 and 22 the Kansas Live Stock Association held its annual meeting. This is an organization of the live stock men of the state which has proved its right to exist by the work it has done and is continually doing to protect the interests of live stock producers. Among the speakers on the first day's program are President W. M. Jardine of the Agricultural College, Thomas Wilson of the Wilson Packing Company, and Francis Heney, attorney for the Federal Trade Commission. Last year Mr. Wilson was on the program, but sent someone to represent him at the meeting. The big packers seem to have changed their attitude and are now using every effort possible to get the public ear and to explain or attempt to explain various charges being made. We anticipate that there will be nothing dull about a program in which Mr. Heney of the Federal Trade Commissions follows Thomas Wilson, one of the "Big Five" packers. On Friday, February 21, A. L. Stockwell, secretary of the Kansas State Fair Association; W. E. Benson, Wichita, president of the Ranchman's Trust Company, and Capt. Dan D. Casement, who recently returned from France, will speak. Also W. B. Tagg, Omaha, Nebraska, president of the National Live Stock Exchange; H. A. Wallace, one of the editors of Wallace's Farmer; Ed Cox, president of the Kansas City Live Stock Exchange, and C. E. Yancey of Missouri, the representatives of the National Division of the Food Administration. On Saturday W. R. Stubbs, a former president of the Kansas Live Stock Association, will preside, and the speakers will be H. G. Stuart, ex-governor of Virginia and member of the Advisory Committee of the Food Administration, and Governor Allen. Reports of committees, election of officers and other business will be transacted following Governor Allen's address. The Kansas Live Stock Association now has a membership of approximately 100,000, and is gaining in numbers and influence. J. H. Mercer has been the secretary for several years, and has taken a very prominent part in defending the rights of stockmen under war conditions.

FARM AND HOME WEEK

In spite of the influenza and shortage of labor, the attendance at Farm and Home Week was up to that of a year ago, almost seven hundred being registered and a considerable number came in to attend the various association meetings and did not register. The short course in bee keeping was very popular and great interest was taken in the rural engineering program. The State Dairy Association meeting was probably one of the best held in a number of years. The discussion on the value of the prepotent bull in dairy breeding by Prof. C. H. Eckles well rounded the dairymen in attendance for the money and effort expended in getting to the meeting. Professor Eckles is easily one of the leading authorities of the country on heredity in milk production. The Kansas Crop Improvement Association put on a good program. Prof. W. Grimes' presentation of the figures on the cost of wheat production in a number of Kansas counties involved results obtained on 202 farms and was listened to with a great deal of interest. Those present were convinced that not an item of expense was being overlooked. C. C. Birmingham told of the valuable cooperative work being done all over the state, and Superintendent Weeks of the State Experiment Station argued most enthusiastically for a greater appreciation of the sorghums in the farming practices of the West.

Talk to your county agent about your farm problems. He will be glad to give you any assistance possible, and place you in touch with those who can help you over your difficulties.

APPROPRIATIONS FOR AGRICULTURAL COLLEGE

IT TAKES a lot of money to run our educational institutions. The Board of Administration has submitted a budget for the biennium of 1919-1921 of \$5,688,776 for the State University, the Agricultural College and the three normal schools. The increase over the previous biennium for the different institutions ranges from 18.3 per cent for the Pittsburg Normal to 73.2 per cent for the University. The increase for the Agricultural College is 28.8 per cent.

The state tax of 1918 was figured on a total valuation of \$3,418,798,222, the levy of 1.17 mills on the dollar raising almost four million dollars. Of this amount a little over one-sixth was used in the support of our Agricultural College. These state expenses in the aggregate seem large, but the man with a valuation of ten thousand dollars paid a total of only \$11.70 in state taxes, and of this only about two dollars went to the support of his agricultural college. This is but a small amount of the total tax paid, as anyone can figure for himself by studying his tax receipt. I am narrowing these figures down to the Agricultural College because that is the state educational institution touching most closely the life and activities of the farmers of Kansas for whom KANSAS FARMER is edited.

An analysis of the budget figures for the next biennium for which this legislature must provide shows that an increase of 25 per cent is included in the salary item for the Agricultural College. The justification for this increase is largely in the increased cost of living and the fact that during the past two-year period, according to the first biennial report of the State Board of Administration, 104 persons left the Agricultural College to accept more remunerative positions elsewhere. The numbers leaving the other institutions of the state are also given in this same report. As a member of the Advisory Council of the Alumni Association of the Agricultural College, it has been my duty, with the other members of this committee, to watch closely the development of this institution and to study its needs in some detail. It was with considerable interest that this committee learned how fully this increase in salaries could be justified. A considerable number of the faculty members of this institution keep itemized household accounts and President Jardine has thus been able to assemble these figures covering a number of years back and in connection with other figures on the costs of the necessities of life show that the purchasing power of a dollar has been practically cut in two during the past two years. It takes men and women of the highest type both in training and character to make an educational institution. Such men and women cannot be held if they must face a constant struggle to stretch their salaries sufficiently to meet the present cost of living. The increase in salaries is conservative, based on the figures presented. I have no means of knowing anything about the justification for the various increases included in the budgets of our other educational institutions. In the salary item, some of these range as high as 120 to 130 per cent. It is up to the members of the legislature, and particularly the Ways and Means Committee of the House and Senate, to study the figures, being sure that just claims for increases are given careful consideration. Not one of our state educational institutions should be cramped and dwarfed in its effort to serve the state.

It is not an easy matter to figure just what these educational institutions are worth in dollars and cents. In the case of the Agricultural College I feel certain a cash balance should be struck which would show that the institution has paid many times over all it has cost, and when this has been done there will still be that large intangible return which cannot be brought to a dollars and cents basis. An illustration comes to my mind of the money way of figuring. A week ago I sat at a banquet given by the members of a county farm bureau, these organizations being one of the agencies through which the Agricultural College is able to serve the various sections of the state. In conversation with some of the officers of the bureau it developed that they had figured actual cash returns, obtained through the activities of the organization furthered by the county agent as its executive, amounting to 1,500 per cent on the total cost of running the bureau the past year.

No buildings were constructed at the Agricultural College during the last biennial period. The present budget calls for \$125,000 to be used in the construction of a new physics building and a wing to the engineering building. Of this amount \$50,000 was appropriated by the last legislature and not used. This building program is, if anything, too conservative. Over 2,400 students are now enrolled. Class rooms and laboratories, particularly in the engineering section, are overcrowded. In this mechanical age we must recognize the vital relationship between agricultural development and mechanical progress.

From personal investigation I can state that the Agricultural College has submitted a budget in which not a dollar is included where eighty cents might do the work. I am bringing these things to the attention of KANSAS FARMER readers because you have a part to play in seeing that this institution, which in a peculiar sense is your institution, receives at the hands of the legislature the conservative increases in salary and maintenance requirements set forth in the budget submitted and the money for the new buildings so much needed to take care of the expanding instructional work. On a \$10,000 valuation you paid about \$2 to the support of the Agricultural College last year. The increases are so small as compared with the returns that I feel sure you will approve every item of the Agricultural College budget and, what is more, express your approval by letting your representatives in both houses, and particularly the Ways and Means Committee, know how you stand on this honestly prepared budget for the support of your agricultural college for the next two years.

G. C. Wheeler

WOOL MARKETING INVESTIGATION

A very general complaint was made by sheep men in attendance at the annual meeting of the Kansas Sheep Breeders' and Wool Growers' Association of dishonesty on the part of the accredited firms to which they shipped their wool. All the specific charges made in the meeting were against one Kansas City firm, and practically all the complaints were that the weights reported back showed impossible shrinkages. A 600-pound shipment of wool from Louisville, Kentucky, for example, fell short 130 pounds. Men were present with affidavits which they had gathered from wool growers who had suffered losses of this kind. An investigation of this firm was demanded through the War Industries Board or the Bureau of Markets, the investigation not necessarily to be limited to one firm. A motion was also passed appointing A. L. Stockwell of Larned as a representative of the Kansas Association in presenting the evidence available in support of the charges made.

It certainly is up to the Government to go to the bottom of these charges. The accredited dealers were named and producers of wool were told that all wool must eventually pass through their hands. Prices were fixed and it was naturally assumed that the rights of the producer would be protected since he had no option in the matter. It developed at the meeting that in some localities farmers sold to local dealers and were well satisfied.

All through the meetings of Farm and Home Week the idea of co-operation in marketing seemed to come to the front. At this meeting J. L. Kyle of La Cygne told of the work done by their county sheep growers' association in marketing wool and lambs. The wool was assembled and graded and four or five buyers came on the appointed day and turned in sealed bids. The first sale was in 1917, and 50 per cent of the wool of the county came into the pool. The next year more came in, in fact practically all the wool in the county was graded, sacked and weighed in the pool. The sacks were labeled and triplicate weight sheets were used. One of the sheets was mailed to the accredited firm to which the wool was consigned and a representative of the pool went to Kansas City with a duplicate and was present and checked the weight in the dealer's warehouse. There was less than fifty pounds of shrink in the whole shipment.

If you marketed wool and failed to get proper return on your shipment, send to Mr. Stockwell at Larned all the details, properly supported with affidavits. He will need the information in making the investigation asked for through the Bureau of Markets.

Ex-Archbishop General Brewster has presented a lot of "facts and figures" to prove the inadequacy of the so-called "Torrens Bill" for simplifying the matter of land titles. A prominent Grange official of the state remarked that if the friends of the bill had secured the services of this eminent attorney, he probably would have prepared a better brief for the bill than he has made out against it. One abstracter who is opposing the bill said that he could write a better law in three pages, but he has not done it. All are agreed that our present system of recording and guaranteeing titles is about as bad as it could be, but those most competent to work out a simpler plan seem little disposed to tackle the job. It has been well said that bad laws make jobs for some people, and perhaps this is an instance of that kind.

We ask God to forgive us for our evil thoughts and evil temper, but rarely, if ever, ask him to forgive us for our sadness. Joy is regarded as a happy accident of the Christian life, an ornament and a luxury rather than a duty—R. W. DALE.

Sweet Clover Gains Favor

Despised Weed Established as a
Standard Farm Crop

SWEET CLOVER has established itself as a standard farm crop in Kansas. It is gaining in favor on many farms of the corn belt where it is being successfully grown both in rotation for forage and as a catch crop to be plowed under to enrich the soil. It has proven valuable as a hay and pasture crop and is probably one of the best legumes to use as a soil improver. We would commend this crop to the consideration of farmers in Eastern Kansas particularly. The most successful time to seed is early spring. The Kansas Experiment Station at Manhattan can furnish a valuable bulletin on seeding and handling sweet clover, and just recently Farmers' Bulletin 1005 of the United States Department of Agriculture has been published. This gives details of management and the more important farm practices being successfully followed on farms where sweet clover is being grown as one of the principal crops of the rotation.

Sweet clover has largely been grown in odd fields outside of any set rotation or cropping system, says this government bulletin, but the fact that it is found growing as a weed along roadsides is not necessarily an indication that it will thrive in adjacent fields. Lime is often lacking, and this is one of the essentials to success. It is pointed out in this bulletin that inoculation is also essential to success and the best results follow the use of seed that has been scarified; that is, seed which has been treated in such a way as to scratch or crack the hard seed coat and make it easy for moisture to penetrate and hasten germination.

Probably more failures with sweet clover in the corn belt can be traced directly to lack of lime than to any other cause. In some sections a ton of finely ground limestone, or one-half that amount of hydrated lime, well worked into the soil, will be sufficient to prepare it for growing sweet clover. But in other localities more may be needed. The required bacteria is sometimes present in the soil, but unless this fact has been fully determined, failure to inoculate either the seed or the soil adds a big element of uncertainty. While it is true that much of the seed raised in some sections of the corn belt is sown locally without having the tough seed coat roughened, and that good stands are secured, generally more seed is required and the practice entails unnecessary risk. Scarified seed usually can be secured through local seedsmen at a slight additional expense, or home-grown seed can be sent to seed houses for this treatment at a nominal cost.

In some sections sweet clover is grown for seed production, but the greatest use to which the crop can be put is in connection with grain and live-stock farming. It promotes the keeping of live stock, because the hay and pasture produced as part of the rotation and as a pasture crop in combination with bluegrass or other pastures greatly increases the carrying capacity.

A good example of a two-year rotation practiced on an Illinois farm and referred to in the bulletin consists of corn the first year, and small grains such as oats or wheat with a seeding of sweet clover the second year. The one objection to this crop system, however, is that the sweet clover must be left growing until about May 10 in order to obtain the most suitable growth for plowing under. At this time of the year the combination of dry weather and the strong sweet clover roots in the soil often make plowing very difficult and when left until this date the plowing must be done quickly in order to get the corn crop planted in the proper season.

A successful and effective three-year rotation on a grain and live stock farm consists of: First year, corn; second year, oats, barley or spring wheat, with a seeding of sweet clover and timothy; third year, sweet clover and timothy. A good four-year rotation for a hog farm is: Corn the first two years, oats with a seeding of sweet clover, alsike and timothy the third year, which is left for pasture during the fourth year. Another four-year rotation with sweet clover is: First year, corn; second year, oats with a seeding of sweet clover as

a catch crop; third year, wheat with a seeding of sweet clover; fourth year, sweet clover for hay and seed. For a general live stock farm the following four-year rotation is suggested: Corn, soy beans, wheat with a seeding of sweet clover and mixed pasture, the pasture crop being allowed to remain the fourth year. A five-year rotation is also suggested which allows a part of the land to be set aside for alfalfa. It consists of corn the first year, oats with a seeding of mammoth clover as a catch crop the second year, corn the third year, oats with a seeding of sweet clover with some alsike and timothy the fourth year, and sweet clover the fifth year.

Plow Early for Corn

In preparing land for corn it is generally agreed that the earlier the ground can be plowed in the spring, the better. There may be exceptional years when early plowing is not desirable, but these exceptions are rare. It can generally be counted a wise practice to plow as much land as possible early. Quite often the reason that more of this is not done is not because the value of early plowing is not realized, but because of the failure to organize the work properly. Some seasons it is much easier to plow early than others. In Kansas plowing can frequently be done at odd times through a good portion of the winter.

Early plowing makes possible a much better seed bed than late plowing. The soil has time to settle together below the surface. This is a very important point. Weeds are held back and there is more time in which to prepare a thoroughly pulverized surface. In late plowing the ground may be quite cloddy and in some instances quite a growth of weeds will be turned under which cannot properly decay. Both of these conditions work against the preparation of a good seed bed.

About the only cases where early plowing is not desirable are in seasons and on soils where the land runs together after plowing. A worn-out soil, lacking in organic matter, may be beaten down by the spring rains after it is plowed and become very hard before seeding time. On average soil, however, such a condition should not be expected and the earlier the plowing can be done, the better will the soil be for creating a proper seed bed.

Testing Road-Making Material

The testing of material for highway construction is being done at the engineering laboratory of our agricultural college. This testing work requires the investment of considerable time and labor, and the engineering division has been called upon to co-operate with the highway commission to an extent almost beyond the available funds. Many may not realize the amount of work being done.

Since September the road materials testing laboratories of the division of engineering have tested forty-four samples of stone, nineteen samples of sand, twenty-two samples of gravel, four samples of steel, two samples of brass, six samples of oil, twenty-four samples of cement, thirty samples of brick, eight samples of asphalt, and five samples of tar. These laboratories are the official ones for the highway commission.

Each one of these samples must have a great variety of tests and each test requires from one hour to several days.

Silage Crops to Grow

On farms equipped with silos there must be some definite planning regarding crops which are to be grown the coming season. There are a number of good silage crops which can be used. Cane and kafir are gaining in popularity in Kansas, even in sections where corn has been generally used for filling silos. These crops produce a greater tonnage and practically every test made proves the value of silage made from well matured cane or kafir. It is not only a matter of tonnage but convenience in filling. The period in which corn is in the right condition to go into the silo is very limited. Cane or kafir will wait and not deteriorate in value. A small



SWEET CLOVER, NO LONGER A DISREPUTABLE WEED BUT AN AGRICULTURAL PLANT
RECOGNIZED AND ACCEPTED ON MANY A LIVE STOCK FARM

cutter with only the regular farm help in some instances can be used, stringing out the silo-filling season over a considerable period. With corn there must be a grand rush, for the crop must be cut in a very few days' time or it will get too dry. Cane and kafir also come later in the season when the labor problem can be handled to better advantage.

Those who do not have silos should investigate the proposition before putting out crops and make their plans according to the decisions arrived at. In order to maintain milk production, no crop is better than silage. A limited amount of succulent feed is almost essential to the economical production of milk during the winter season, and no crop can be grown and stored that will meet this requirement more effectively than silage. For small herds of two to six cows, root crops, such as mangel wurzels or stock beets, may be grown, but for larger herds this is impracticable. Silage is equally well adapted to the feeding of stock cattle during the winter season. On many a farm where stock has necessarily been sacrificed because of a shortage of feed, a silo would have saved the day.

Order Nursery Stock Needed

If fruit trees or small fruits are to be set this spring they should be ordered at the earliest possible moment, because the stocks of many nurserymen are running low and already some lines of stock are practically exhausted. Make out a list of the varieties wanted and write to several nurserymen for prices. Deal with the nearest nurseryman who can supply your needs, so the stock will not be long on the road.

If the trees do not come too early, open the package, stand the trees in a slanting position, and cover the roots and part of the trunks with slightly moistened earth. Work the earth around the roots and do not let it dry out or the roots will be injured. This is called "heeling in." Plants of grapes and bush

fruits should also be "heeled in" but strawberries should be set straight up and only the roots covered, as earth or sand spilled in the crowns will render the plants useless if it does not kill them. In the milder winter sections nursery stock may be planted now or be heeled in out of doors. In the latter case dig a small trench to stand the trees in, and slant the tops toward the south. Be sure to keep the roots covered with earth.

Prune Grape Vines Early

Grape vines should be pruned before the buds start. On mild winter days the cut ends will "bleed" some, but not enough to matter. If not pruned until after the growth starts there will be a serious loss of sap. After the work is done, gather up and burn all the trimmings so as to destroy any insects and disease germs which may be present. The remaining canes should be tied carefully to the wire supports, and there is no reason why the job should not be done early enough to be out of the way before the spring rush.

Early Orchard Work

This month is an important one in the care of the orchard. Trees and small fruits should be pruned and the spraying work begun. Splendid returns will come from the investment in time and effort in caring for the orchard in the late winter and early spring months. Those who are not familiar with the proper procedure can usually get valuable suggestions from the county agent. Even though he may not be an expert orchard man himself, he is in position to get the desired information.

An early start is very necessary in winning a race. The jockey knows this and does his best to get a good start. An early start will mean much this year in farming. Let us begin early and continue diligent till harvest.

Democracy in Education

(Continued from Page One)

and made no adequate provision for educating the youth of rural communities. Efforts more or less successful have been made to bring secondary education to rural young people within the bounds of their own communities by means of the township and rural high schools, and the consolidated schools. These schools for the most part, however, have traversed the usual fields of general education.

Vocational Training for All

In answer to the urgent, widespread need, the Smith-Hughes Act was passed, providing for vocational education below college rank and carrying with it immense possibilities. The conditions of war under which it was brought to adoption, the widespread and recognized need which it attempts to fill, its possibilities for good and evil, are a remarkable reminder of that other epoch-making act in 1862. It has brought rejoicing to those who see in it a just and fair provision for fitting the child to adjust himself successfully to the economic world. Yet that the act carries within it an element of danger has been pointed out. That danger is that in our zeal to enable a blacksmith to become an efficient blacksmith, and a farmer a proficient farmer, we may inadvertently sow the seeds of class distinctions. From the beginning of our national existence, our wills have been resolutely set against the division of society into upper and lower classes. Our educational system, numerous as have been its defects, has nevertheless served admirably in bringing about an unexampled democratization of society. That several of the most distinguished executives of the nation have come from the lowly log cabin has been a matter of great national pride with us as symbolizing the reality and truth of our democracy.

The task of applying the provisions of the Smith-Hughes Act, like that of the great Land Grant Act, will require foresight and wisdom, careful experimenting and study. We must not foster the thought that the son of the blacksmith must be a blacksmith or that the son of the farmer must inevitably stay on the land. As a matter of fact, the interchange of blood between country and city has been one of the most wholesome, leavening influences upon our national life. We must encourage a continuance of this interchange, rather than discourage it. We must offer to every child, whether of urban or rural community, opportunity to enter whatever vocation or profession he may choose.

What is needed is a balance between vocational or industrial education on the one hand and liberal education on the other, type of education which shall give a broad insight into the industrial world of activity and yet develop the individual's capacity for esthetic appreciation to the highest degree of which he is capable. The purpose underlying the training of the child industrially must not alone be the production of more at less cost. Industrial training in education is not to be allied with exploitation. The chief, animating purpose must be to insure the welfare of the child by widening his opportunities. It is only thus that we may safeguard the welfare of society.

Training for Citizenship

The new education embodies in it the larger, broader aim of training for citizenship. In the past we have believed that training in the principles of citizenship would somehow take care of itself. We have believed that no group of nationality could withstand the fusing influence of our great melting pot. How greatly we have erred in this belief is evidenced most strongly by the persistence of German ideals among German immigrants and their descendants. We have failed to make of many of these people real Americans. The existence of conflicting groups in our national life is shown by the continuous struggle between labor and capital. The division of a large portion of our population into two great groups is not without elements of good, within certain limits. Both labor and capital have learned the value and power of united force, of co-operation, in contrast to individual competition. But the elements of danger to the republic in the situation are immense. Should the schism prove permanent, then we are already divided into classes. But it must not continue. The first consideration of all citizens must be, not the in-

terests of the laboring group, nor the interests of the moneyed group, but the interests of free America. Through the schools as the first medium we must teach that American citizenship with its gift of privileges, imposes duties. We must instill into the minds of growing boys and girls ideals of citizenship which shall insure justice to all. With justice secured, the forces of labor and capital will be free to unite to insure a more perfect democracy.

There are two functions which the agricultural and mechanical arts colleges may be expected to perform in helping to initiate universal secondary vocational education. The first of these is to make available in adapted form to secondary schools, for use in their curricula, a considerable part of the practical subject matter in agriculture, home economics, and mechanic arts which has heretofore been reserved for the college curricula. The second of these functions is that of providing trained men and women for the teaching corps of secondary vocational schools.

War Shows Value of Education

The war has demonstrated as never before the value of education, especially of the kind of education which prepares men and women for definite tasks. During the war the government manifested its appreciation of the technically trained man by using the colleges and universities in the training of national army men and in the establishment of the Students' Army Training Corps. It indicated its recognition of the need which the educational institution must fill in the reconstruction period, by its system of utilizing college equipment and teaching force in preparing men for military service. It thereby made it possible for practically all to retain their full instructional forces and remain prepared to handle problems as they might arise during the conflict and thereafter.

Federal Department of Education

There is now a movement under way in this country to establish a federal department of education and to centralize all of the educational activities of the national government under one head. From the theoretical standpoint, this would seem logical and in line with efficiency. The established system, however, possesses advantages which cannot be overlooked and which would be seriously jeopardized by a strong centralization of supervision. When the Land Grant colleges were established, their national supervision was intrusted for the most part to the Department of Agriculture. For more than fifty years these institutions have worked together and out of this experience has grown a most satisfactory and harmonious relationship. The common interests, aims and ideals of the agricultural colleges and the Department of Agriculture have made possible more rapid progress than could otherwise have been achieved. Were a strongly centralized federal department of education to be established, the old, conservative, academic ideals of education might easily predominate and retard immeasurably the evolution of the new education in which industry is to be properly utilized and the best Americanism developed.

There are undoubtedly improvements needed in our national education which could be best effected through a strong national educational center, and the project is one which merits the best thought of all those interested in the cause of education. But in working out a plan for centralization, the advantages of the present system must be safeguarded if all educational forces are to maintain a united force.

World-wide Education

The program which I have outlined is a program for education in the United States, a program designed to promote the best Americanism, the purest ideals of democracy. But education in this country alone is insufficient. With modern transportation facilities, with modern methods of gathering and transmitting news, with modern interests transcending community, state, and national lines, practically any national problem may at any moment become an international problem. Education cannot deal with the United States as it was a century ago, when our educational system was developing—a nation isolated, self-supporting, self-sufficient.

Ultimately, the education which is necessary is world education. Every step possible must be taken to insure that



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education be disseminated over the entire world and that it be democratic education, not education designed to develop efficiency at the expense of initiative, or acquisitiveness at the expense of justice. Moreover, peoples of varying temperament, ideals, and other racial characteristics must by education be led to an understanding of each other. Insistence on those principles in world education—democracy and mutual understanding—will do more than any other one thing to make wars impossible. Any league of nations which is established may wisely have somewhere in its organization a commission on education to suggest to the constituent nations large

general plans which would lead toward the fulfillment of the ideals which all right-thinking nations seek. We cannot have a world curriculum, but we can have world ideals toward which education in all countries may strive.

Upon us, servants of the new era in world politics and in world education, has the mantle of the ancient leaders fallen. They laid the foundation upon which we must build the superstructure. By the touch of that mantle in our hands—be they quickened with justice and zeal—the waters of error, of prejudice, of injustice, will be parted, and education for democracy will cross over into its own.

Alfalfa in Western Kansas

ALFAFA is one of our most valuable crops. It is profitable in most sections of the state. At the Fort Hays Branch Experiment Station it has been one of the most profitable crops grown. On the station farm alfalfa has aided in carrying stock over winter that might have otherwise been sacrificed on a cheap market during seasons of shortage of other crops. In the dry years a very satisfactory first crop of alfalfa is always secured and usually two and occasionally three later crops are harvested. These make an average yield of about two tons per acre.

Since alfalfa can be grown successfully in Western Kansas, Charles R. Weeks, superintendent of the station farm, thinks it well to encourage the growing of more alfalfa in this section and to point out some of the controlling factors in its successful production.

Alfalfa can be profitably grown in Western Kansas only on creek and river bottoms where the sheet water is within fifteen or twenty feet of the surface, or on fields so located as to catch and hold considerable surface run-off. This station has grown alfalfa on upland and it has never returned a profit except in an occasional wet season. This failure cannot be attributed to lack of inoculation, since all Western Kansas land seems to be well supplied with alfalfa bacteria. Neither are acid soils a cause of failure, since limestone enters into the composition of all soils in this region. The supply of soil moisture seems to be the chief controlling factor in regions of limited rainfall.

Farmers having bottom land which is well drained, with a fairly open and deep top soil and free from hardpan below, can be reasonably sure of increasing their annual farm profits with a good stand of alfalfa.

The growing of 305 acres of alfalfa as a commercial enterprise on the Fort Hays Experiment Station farm has furnished an opportunity for verifying, under field conditions, the results secured on the station experimental plots.

Alfalfa in Rows on Upland

This experiment station, recognizing that alfalfa had not produced a profitable yield when seeded upon the uplands of western Kansas, began an experiment in 1913, to determine the value of alfalfa in rows wide enough to permit cultivation.

Alfalfa, seeded broadcast, was grown on equal-sized small fields, in comparison with alfalfa in rows varying from twelve inches to forty-two inches apart. The five years average yields of these plots were practically the same. One-half to one ton of cured hay per acre was usually obtained from these upland fields from the first cutting. The second and third cuttings were usually light and did not pay the cost of harvesting.

These experiments indicate that alfalfa in rows has no advantage over broadcast alfalfa on the upland. In spite of this unprofitable showing for upland alfalfa, some Western Kansas farmers may find it profitable to grow a small patch, much the same as they would a family orchard or garden.

Alfalfa Varieties

Varieties of alfalfa from all parts of the world have been tried on the Fort Hays Experiment Station farm for the past five years and in no case has the average yield of any variety exceeded the average yield of alfalfa grown from common Kansas seed. Common Kansas alfalfa is the best variety for this region.

Preparation of Seed Bed

Success in obtaining a stand of alfalfa depends upon a good seed bed and favorable moisture conditions at seeding time. Land that has been ordinarily cropped will usually be too weedy to permit starting a good stand of alfalfa. Careful cultivation to destroy weeds for a year or two before seeding alfalfa is a good insurance toward getting a stand. A plentiful supply of available moisture and plant food is necessary to start alfalfa strongly and quickly so that it may withstand weed enemies during the first season.

Alfalfa requires a firm, clean, moist, and moderately fine seed bed. Such a seed bed can be secured in several ways preparatory for seeding the following spring. If the land has been in wheat it should be plowed immediately after harvest. Frequent working during the late summer and fall months, and the rains that may come at this season will recompact the soil. If a large amount of stubble or trash is turned under it will interfere with this packing and may

lessen the certainty of securing a good stand. This can be partially overcome by disking before plowing. If corn land is to be seeded to alfalfa the cultivation of the corn should be as thorough as possible. The corn should be removed from the land and cultivation to prevent soil drifting given before winter sets in. The following spring only light cultivation should be given to warm and air the soil, and kill the weeds. If the land must be plowed in the spring considerable work should be done upon it to thoroughly recompact the soil. Packing can best be done with a disk harrow, weighted and set straight. A common drag harrow, weighted, may be used, but care must be taken not to get the soil fine enough to be blown by heavy winds.

The Farm Inventory

The town business man would not think of trying to get along without making an inventory of his stock and equipment at stated intervals. Unless a man inventories his property and debt or liabilities, he cannot know with certainty whether he is gaining or losing.

By listing all resources and liabilities the financial status can be very definitely judged. The resources are land, buildings, and other improvements, live stock, machinery and tools, feed, supplies, growing crops, accounts receivable,

and cash. The liabilities are the debts. The difference between the resources and the liabilities is the present worth, or the actual business standing of the farmer at the time the inventory is taken.

Professor Grimes of the agricultural college, who has made a close study of farm management problems, suggests that the inventory be taken during the winter months when there are few growing crops and there is more time for such things. "For income tax purposes it should be taken January 1," said Mr. Grimes, "but one who did not take an inventory at that time will still find it worth his while to do so. On many farms the changes in the amounts and values of property since January 1 are so negligible that the value of the property at the beginning of the year can be determined easily from an inventory taken a few weeks later.

"The values assigned to the various items should be conservative and, as nearly as possible, the prices for which the articles could be sold. Growing crops are frequently inventoried at the cost of seed, seed bed preparation, seeding, and any other costs incurred previous to the time of taking the inventory. Buildings and other improvements should be listed separately from land, since the income tax makes allowance for their depreciation.

"The amount of hay in stacks and mows and of grain in bins can be determined with reasonable accuracy. To

measure hay in well settled rectangular stacks or ricks, multiply the width by the length by one-third of the overthrow. The overthrow is the distance from the ground on one side, over the stack, to the ground on the other side. To find the number of tons, divide this result by the number of cubic feet in a ton. A seven-foot cube, or 343 cubic feet, of well settled hay, is usually considered a ton.

"To find the number of bushels of grain in a bin, multiply the width by the length by the depth of the grain in the bin. Since a cubic foot of space holds about eight-tenths of a bushel, multiply the first result by eight-tenths to determine the number of bushels of grain. A bushel of ear corn occupies approximately twice as much space as a bushel of shelled corn or other grain. Therefore a given space will contain one-half as much ear corn as other grain."

When a heifer and a bull are born together, the heifer is known as a free-martin. The bull, twinned with a heifer, is as certain to be a breeder as a bull of single birth, but the free-martin heifer is almost sure to be sterile. Only a very few free-martins have been known to breed, and the chances are very small that they will ever reproduce. As a rule it is not advisable to raise free-martin heifers as they usually result in failures and are worth no more than their beef value.

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Alfalfa and Silage For Milk

THERE is no better or cheaper feed for dairy cows at this season of the year than alfalfa hay and silage. In many herds these two feeds can profitably constitute the sole ration. Cows of high productive capacity may pay for grain in addition. Such cows should have grain added in proportion to the milk they give.

The cow that gives one and one-half gallons of milk a day needs no grain. If she gives more than that amount she is not able to eat enough hay and silage to keep up her strength and milk production and must have grain. A good standard to feed by is: One pound of hay and three pounds of silage to each hundred pounds of live weight, and grain mixture in proportion to the amount of milk given.

This standard can apply quite generally to Kansas, as alfalfa can be grown cheaply and in great quantities over almost the entire state. In some parts, however, where it is necessary to ship in hay, silage has become the basis of rations, together with some concentrated proteid food, such as oil meal or cottonseed meal. Sudan grass hay or kafir fodder may be used instead of silage.

In the absence of alfalfa hay and silage, a grain mixture of four parts of corn chop, two parts of bran, and one part of linseed oil meal can be fed in addition to corn, "cane," or kafir fodder, feeding one pound of the grain mixture to each four pounds of milk given. Cottonseed cake does very well for beef cattle, but is not so satisfactory for the dairy cow when fed with silage or alfalfa.

In Western Kansas where it is necessary to buy hay, fodder can usually be raised and used to advantage when combined with some proteid food.

Organize Test Associations

Now that men are being released from army service, more cow test associations can be formed in Kansas dairy communities. Without a good official tester an association cannot be organized and conducted. Many communities have attempted such organizations, but their cow-testing work has been delayed because a suitable man could not be found to act as tester.

These associations are organized in groups of twenty-five farmers who employ a man having experience in feeding and testing cows. This man spends one day of each month with each herd of cattle. He weighs the milk night and morning and tests it for butter fat. These results are entered in a book where a record of the cows is kept. The tester also advises the farmer in regard to feeding the cows and estimates the amount of feed required to produce a certain amount of milk or butter fat. These testers save the dairymen money by advising them in the feed and care of their cattle.

Many things of interest are found in these associations. Often cows which were thought to be among the best are found to be the poorest and most unprofitable.

If unable to become a member of a cow-testing association, the dairyman will find it worth while to keep a record of each cow's production as best he may himself and have a sample of the milk tested each month. It is not as satisfactory a plan as to belong to a regularly organized association, but some sort of record work can hardly be dispensed with in handling a dairy herd. Records are a great help in feeding economically, because each cow can be fed in accordance with her productive capacity.

At present there are four cow-testing associations in Kansas organized and at work, and as many more are in process of organization.

Dairy Cows in Kansas

A recent report from Edward C. Paxton, field agent of the Bureau of Crop Estimates for Kansas, credits the state with 964,000 dairy cows January 1, 1919, as compared with 945,000 a year ago. This is an increase of 2 per cent. Cows have increased in value from \$75.40 to \$81 a head during the year. The total value of the dairy cows of the state is placed at \$78,084,000; a year ago, \$71,530,000. The increase in the average value of dairy cows in the state is partly due to the shipping in of high grade dairy stock from outside the state, but largely a result of the general upward trend in prices for dairy stock. The

trend during the past few years has been toward more dairying in this state. Dairy cows are being recognized as a valuable feature in a system of permanent farming.

Cost of Milk Distribution

The retail distribution of milk is one of the difficult problems of the dairyman selling whole milk. Companies which make a business of distributing milk in Kansas City, St. Joseph, and St. Louis, can afford to sell milk cheaper than the farmer who produces and retails his own product. This information is evident from figures gathered by the farm management department of the Missouri College of Agriculture.

"On the basis of the difference between wholesale and retail prices, it appears," says the Department, "that central distributors can sell at the same price as farm retailers with a margin three to four times as large, because milk can be bought wholesale cheaper than it can be produced." The data on which conclusions are based are published as Missouri Agricultural Experiment Station Bulletin 156.

Comfort for Cows

The dairy cow which gives a calf every year and from twenty to fifty pounds of milk a day needs a lot more of the comforts of life than the beef steer, whose chief business it is to put on flesh and a blanket of fat. It takes energy, and energy means feed, to produce milk. The cow in winter needs to be protected from the cold and from drafts, but should have a sufficient quantity of pure air, along with enough feeds with a little extra carbohydrates to keep her in prime condition. When you think of your dairy cows, remember that they need all the comforts of home.

Results of Proper Care

An Iowa cow twelve years old, which in 1915 produced only 246 pounds of butter fat, in 1918 produced 716 pounds of butter fat. The reason was that her owner in 1917 joined a cow-testing association and began to give more attention to the care and feeding of his cows. This cow got a nicely balanced ration and good care, and as a thirteen-year-old produced 429 pounds of butter fat. Last year her owner began milking her three times a day and she came through with 716 pounds of butter fat.

The question arises: Do we give our butter-making machines the right kind of care?

Stock Cattle of Kansas

The number of cattle in Kansas January 1, 1919, other than milk cows, has been estimated by Edward C. Paxton, field agent of the Bureau of Crop Estimates for Kansas, at 2,401,000 as compared with 2,354,000 a year ago. The average value is given as \$52.70, or a total valuation of \$126,533,000. Last year's valuation was \$116,052,000, or an average per head of \$49.30.

The calf production was stimulated by the war's demands and there was a heavy influx during the year of range cattle from West Texas and other western ranges. The fall of 1918 saw larger shipments of stockers and feeders into the state to graze on the unusually luxuriant growth of wheat. Much of this foreign stock was returned to the market when finished, or when pastures and feed ran short. However, thousands of head still remain on Kansas wheat fields and on the buffalo grass pastures of the West. It is not yet apparent how great the mortality among range cattle has been from the severe winter weather of late December and early January. Undoubtedly much suffering was experienced and considerable loss of life. Conditions were relieved by the mild weather following and cattle are now grazing quite freely both on wheat and native pasture. The native pastures have, however, been seriously injured by too much moisture.

Sultana's Jolly Topsy, Jersey in the agricultural college dairy herd, made a yearly record of 464.9 pounds of butter fat and 7,940.5 pounds of milk, which places her first in the state in the junior two-year-old class. Her mother, Sultana's Topsy, was tested in the college herds from 1911 to her death, which occurred a few months ago. She produced in that time 42,907 pounds of milk and 2,326 pounds of butter fat.

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Hour's Work Pays \$2.90

TIME spent by F. E. Uhl, Manhattan, in caring for his flock of hens during January paid him at the rate of \$2.90 an hour. It is sometimes difficult to prove that doing chores brings any cash returns. Of course, some chores cannot be expected to pay immediate returns in cash, says Mr. Uhl, in relating his experience in caring for his poultry. "The work horses and growing and breeding stock must be well cared for to insure efficient results later in the season. Machinery and tools must be kept in good working order for the same reason. Good care in such matters pays in the long run. If the milk cows and young stock, the pigs and chickens are made to rough it in the stalk fields or around the straw stack with only tumble-down sheds for shelter or none at all, the chances are that chores will not pay. A good motto is to take care of no more stock than you can care for properly during the worst weather." Since chore work as a rule does not pay an immediate cash return, the reader may wonder how simply doing chores could possibly return the amount stated in the opening sentences of this article. "It may be that it is possible only with the co-operation of the often-neglected hen," said Mr. Uhl. "With no other stock on the farm is the range of profit and loss so great, and no other stock responds so well to proper care."

"During the first three weeks of January, with the thermometer ranging from 19 degrees above zero to 18 degrees below, our flock of 170 Single Comb White Leghorn pullets continued to increase their egg production, as is shown by the daily egg-laying record for this period, which is as follows, beginning with January 1: 48, 41, 50, 59, 61, 62, 68, 77, 78, 82, 83, 93, 95, 94, 90, 103, 97, 94, 91, 93, 108, 93. The total for the twenty-two days was 1,760 eggs, or 146½ dozen. These eggs were sold to a grocery at an average price of 60 cents a dozen, bringing \$88."

"The feed consumed for the period and its cost was as follows: Skim milk and fresh ground bone, \$1.75; 275 pounds of rescreened wheat screenings, \$2.85; 210 pounds of barley, \$5.60; sixty pounds kafir and milo, \$1.80; forty-five pounds of oats, \$1.15; thirty-five pounds of soy beans, \$1.05, and 240 pounds of dry mash, \$6.00—a total feed cost of \$21.80. They also received alfalfa chaff from the cow manger, stock beets and small potatoes, and two weeks on rye pasture, for which no charge was made. Deducting \$21.80, the feed cost, from the \$88 received for the eggs, leaves a net return of \$66.20. If we make a charge for insurance, interest and depreciation of \$2.40 as a proportionate amount for the twenty-two days, we have remaining \$63.80, which can be considered as gross profits or labor wages."

"The time required for cleaning dropping boards we do not consider, since the value to our garden and fruit offsets the labor of cleaning. As I was away from home about nine hours a day during this period, the pullets were cared for before daylight, a short time at noon, and by the Mrs. scattering the evening feed—in all not more than one hour each day, including time required to mix feed, etc. Since the average daily net returns were \$2.90, this may be considered as the wages received for one hour of time required to tend the flock. Considering only the last half of the period, the returns would have amounted to an average of \$3.50 an hour."

"These results can be attributed to several causes: First, having a good laying strain of chickens; second, a good warm combination glass, wood and curtain-front house with a well littered scratching floor; third, the giving of proper feed and water; and, finally, advantageous buying of feed and the present high prices paid for fresh eggs. Will this profitable return continue? Can it be duplicated yearly by others? We believe it may be exceeded by other

poultrymen this season, but another winter the market may be different. However, it goes to show that we can gather an egg harvest in mid-winter if we are prepared to do so.

"As we acquire much of our knowledge from the exchange of ideas and experience, I am glad to tell of our results, in the hope that our methods and the suggestions offered may be helpful to others. Probably the most important factor in egg production is the hen herself."

Cleaning the Incubator

In setting up the incubator and making preparations for the first hatch, remove all the trays and scrub them with hot soapsuds. After they have dried, brush the entire inside of the incubator and all the trays with wood alcohol. Clean out all the lamp flues to see that there are no cobwebs or carbon deposit; also that these spaces have not been used for mice nests in the winter time. Clean the oil chamber of the lamp with hot soapsuds and remove the old wick from the burner and boil the burner in a soda solution for fifteen or twenty minutes. Run the incubator for forty-eight hours to get the thermostat properly adjusted. After running the incubator five days, test the eggs and remove all that are infertile. Now is a good time also to clean the brooder. Give it a thorough coating with some good disinfectant, fix a clean, dry place for the young chicks when they are hatched, and, if possible, keep them removed from the main flock until they are half grown.

In saving eggs for the first setting in the incubator, select even-shape, medium-size eggs, and keep them in a cool place. Better results will be secured if these eggs are turned carefully every day. Do not keep them over ten days or two weeks before putting them in the incubator.

Seed Oats Early

The growing season for oats in Kansas is short, therefore it is important to seed early and plant early maturing varieties. Among these are Kherson, Sixty-day and Burt. Red Texas is an old stand-by. New varieties are being developed at our experiment station by the same methods followed in producing the Kanred wheat, which has outyielded all other varieties by three to four bushels to the acre. A most promising new variety of oats is now showing up in the experimental plots. From present indications it will be superior to any variety now being grown.

It is also important to treat seed oats for smut, using the same formalin treatment used for seed wheat. A quick and easy method is as follows: First, fan the oats, which blows out all light grain, many weed seeds and smut spores. Then take one pint of formaldehyde and one pint of water and place in an ordinary quart hand sprayer, and shake well. As one man shovels the oats from the pile, spray one or two strokes of the solution on each shovelful of oats, and then shovel the pile back, treating as before. One quart of the solution will treat fifty bushels and the cost of the pint of formaldehyde is 50 cents, or one cent per bushel. Cover the oats up with a canvas cover or blankets and let stand five hours, or until you are ready to use them.

Training for Citizenship

There is an old story to the effect that when a stranger goes to live in Boston, they will ask him, before admitting him to society, "How much do you know?" In Philadelphia the question is, "Who was your grandfather?" and in New York, "How much are you worth?"

After the war is over the question that every man will ask of every other will be, "Are you a good citizen?" The way in which your children will answer that question is up to you.—American Motherhood.

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If I cannot do great things, I can do small things in a great way.—JAMES FREEMAN CLARKE.

THE HOME-MAKER'S FORUM

ETHEL WHIPPLE, Editor

Letters from readers are always welcome. You are urged to send in helpful suggestions, to give your experiences, or to ask questions. Address the Editor of this Department.

Dad

"Children's children are the crown of old men; and the glory of children are their fathers."—Prov. 17:6.

Shake hands, Dad. How many children call you that? There are five who have called me Dad or Pa or Poppy. Excuse me for mentioning it, but I want you to know that I am no mere theorist in this matter of being the father of a family.

Now here is some straight stuff: It is father's duty to give some time every week to his boys and girls. The only time I have been able to give mine is Sunday. My Sundays have belonged to the children.

I have been to church and Sunday school with them always, because in the light of some hundreds of years of history there is nothing that yields better returns, in the long run, than habitual reverence for God. "Only those who believe in God do good in private," say the French.

Sunday afternoons we have always taken a walk, when the weather permitted, or if too stormy we have read story books together, or have made various kinds of scrap-books.

In our walks we usually had a definite objective. We went to see somebody, or to get a particular view, or to visit our favorite trees, or to look for some one thing in particular. We counted birds' nests one trip; on another we searched for cocoons; on a third, dug into old stumps to see what we could discover; or looked under pieces of wood and bark; found the smallest growing things; collected leaves or seed packs of as many kinds as possible; learned the wild flowers, the birds, the butterflies and moths, the ferns, the trees, the mushrooms; made collections of colored things—flowers, leaves, insects, pebbles, and so forth, and arranged them in the spectrum order; followed a brook in summer with Tennyson's Brook as a guide; followed one in winter with Lowell's Brook (in the Vision of Sir Launfal) as a guide. In a word we studied God's great wonderful outdoor book in the afternoon just as diligently as we studied the best literature in the morning.

And what results? Five open-eyed, open-minded, intelligent young men and women, devoted to their parents and grateful for what their Heavenly Father and his children have done for them, a mother who is still young and happy (because she got a little rest on Sunday during those strenuous years), to say nothing of a father who now thanks God for the privilege of still being a boy, though in his fifties.

We shall never forget those long evenings in our city home when the girls came back from seminary and high school, and the boys from Harvard and "Tech," and we sat around the dinner table together, forgetful of time. We were all more entertaining to each other than any show ever staged, because by this time each of the children had discovered his own particular field of interest and delved into it beyond the limit of the others in the great realms of nature and literature that we had begun to enjoy together when they were little children. Each one could therefore make his own particular contribution to the delight of all.

Pool rooms, saloons, clubs, stag parties? When will short-sighted, self-indulgent, arrogant fathers learn that in their own wives and children are the possibilities of perennial delights and solid satisfactions compared with which other things are dust and ashes?

NOTE.—This article by Henry Turner Bailey is one of the series issued by the United States Bureau of Education, Washington, D. C.

The New Experience

It is good for you if God brings you to the borders of some promised land. Do not hesitate at any experience because of its novelty. Do not draw back from any way because you have never passed there before. The truth, the

task, the joy, the suffering on whose borders you are standing today, go into it without a fear, only go into it with God, the God who has always been with you. Let the past give up to you all the assurance of him which it contains. Set that assurance of him always before you. Follow that and the new life to which it leads you shall open its best richness to you.—PHILLIPS BROOKS.

Bowlegs and Knock Knees

Bow legs and knock knees never come from too early walking, says Dr. E. V. McCollum, of Johns Hopkins University, but are the result of malnutrition of the child. Milk, eggs and the leafy vegetables constitute the remedy. The child that gets plenty of milk and eggs is going to be a healthy and well-formed child.

He who every morning plans the transactions of the day, and follows out that plan, carries a thread that will guide him through the labyrinth of the most busy life. The orderly arrangement of his time is like a ray of light which darts itself through all his occupations. But where no plan is laid, where the disposal of time is surrendered merely to the chance of incidents, all things lie huddled together in one chaos, which admits of neither distribution nor review.—VICTOR HUGO.

Oatmeal Muffins

- 1 cupful cooked oatmeal
- 1 1/2 cupfuls flour
- 3 tablespoonfuls sugar
- 4 teaspoonfuls baking powder
- 1/2 teaspoonful salt
- 1/2 cupful milk
- 1 egg
- 2 tablespoonfuls butter, lard, or other shortening

Mix and sift flour, sugar, baking powder and salt. Add the egg well beaten and one-half the milk. Mix the remainder of the milk with the cereal and beat it thoroughly. Then add the butter. Bake in buttered muffin or gem tins about thirty minutes in a moderate oven. —Ninety Tested, Palatable and Economic Recipes, Teachers' College, Columbia University.

Eggless Steamed Pudding

- 1 1/2 cupfuls flour
- 1/2 teaspoonful soda
- 1/2 teaspoonful salt
- 1/2 teaspoonful cloves
- 1/2 teaspoonful allspice
- 1/2 teaspoonful nutmeg
- 1/2 teaspoonful cinnamon
- 3 tablespoonfuls hardened vegetable fat
- 1/2 cupful molasses
- 1/2 cupful milk
- 1 cupful raisins, seeded and cut in pieces

Sift together the flour, soda, salt and spices; add the raisins. To milk add molasses and melted fat; add liquid mixture gradually to dry ingredients. Stir thoroughly. Turn into greased molds, filling them a little over half full; cover and steam for about two and one-half hours. Serve with pudding sauce or milk. Baking powder cans are satisfactory molds for steamed puddings.—Some Sugar Saving Sweet for Every Day, Teachers' College, Columbia University.

Daddy Knows

Let us dry our tears now, laddie,
Let us put aside our woes;
Let us go and talk to daddy,
For I'm sure that daddy knows.
Let us tell him what we've broken,
Be it heart or hope or toy,
And the tale may bide unspoken,
For he used to be a boy.

He has been through all the sorrows
Of a lad at nine or ten;
He has seen the dawn of morrows
When the sun shone bright again;
His own heart has been near breaking,
Oh, more times than I can tell,
And has often known the aching
That a boy's heart knows so well.

He will put aside the worries
That his day may follow through
For the great heart of him hurries
At the call for help from you.
He will help us mend the broken
Heart of ours or hope or toy,
And the tale may bide unspoken—
For he used to be a boy.

—J. W. Foley.

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FOR SALE OR TRADE—IMPORTED black Percheron stallion, twelve years old, weight 2,000 pounds. One black jack, registered, weight 950 pounds. Two four-year-old jacks. Can use Percheron fillies or Jersey cows. J. E. Itschner, Sayre, Okla.

SEEDS

WHITE SWEET CLOVER—GET MY LOW price before you buy. Fine quality. John Lewis, Madison, Kansas.

SEED CORN, VERY SELECT, THE 90-bushel kind. While it lasts, bushel, \$3.00. Rates to dealers. Wiltse, Rulo, Nebraska.

CHOICE RECLEANED EARLY WHITE oats, \$1 per bushel. Ernest Lamaster, Hal-lowell, Kansas.

RECLEANED ALFALFA SEED FOR sale at \$9 per bushel. Write for free sample. C. Markley, Belle Plaine, Kansas.

FOR SALE—WHITE SILVER SKIN bottom onion sets, run 10,000 to the bushel, \$4.75 bushel f.o.b. G. C. Curtis, Reference Citizens Bank, Hutchinson, Kansas.

FOR SALE—SEED CORN, TOOK FIRST premium, adapted for dry season, heavy yield under favorable conditions. Roy Lampert, Wahoo, Neb.

SEED CORN—DIAMOND JOE WHITE. Great drought resister. Hand picked, graded. Sacked, \$4.50 bushel. R. E. Denver, Milford, Kansas.

SHROCK KAFIR SEED—GREAT DRY weather crop, 1918 seed. Clean and of sure germination, for sale by grower, 15 cents per pound. James D. Wilson, Route 5, Parsons, Kansas.

CATTLE.

FOR SALE—REGISTERED GALLOWAY bulls. Address Fashion Plate, Silver Lake, Kansas.

LACK OF HELP INDUCES ME TO offer a car load of best dairy cows, high grade Holsteins and choice Jerseys. Jersey Cream Dairy Co., Monett, Missouri.

FOR SALE—SEVEN HIGH GRADE HOLSTEIN cows giving from 25 to 30 pounds of milk each day. Price, \$125 each if buyer takes them all. Strasen Bros., Alma, Kan.

HIGHLY BRED HOLSTEIN CALVES, either sex, 15-16th pure, from heavy milkers, five to seven weeks old, beautifully marked. \$25, crated and delivered to any station, express charges paid here. Send orders or write. Lake View Holstein Place, Whitewater, Wisconsin.

FOR SALE—AYRSHIRES OF QUALITY. Bull calf, yearling heifer and one four-year-old cow, closely related to Henderson's Dairy Gem, Maggie Moonshine, Howie's Dairy King, Noxemall and White Cloud of Hickory Island. Popular type and color. At farmer's prices. Taylor Maid Ayrshire Farm, Troy, Missouri.

SEEDS AND NURSERIES.

SUDAN GRASS SEED, NORTHERN grown, free from Johnson grass, 20c per pound, bags free, postage, express or freight extra. White Sweet Clover, scarified, 30c. Alfalfa, \$8 per bushel and up. Order early. Supply short. Quality guaranteed satisfactory. Henry F. Field, Shenandoah, Iowa.

FARMS WANTED.

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

IF YOU WANT TO SELL OR EXCHANGE your property, write me. John J. Black, 56th St., Chippewa Falls, Wisconsin.

DOGS.

SCOTCH COLLIE FEMALE PUPS, \$5.00 each. Fred Kucera, Clarkson, Neb.

AIREDALES, COLLIES AND OLD ENGLISH Shepherds. Pups, grown dogs and brood matrons. Large instructive list, 5c. W. R. Watson, Box 128, Oakland, Iowa.

HONEY.

DELICIOUS EXTRACTED HONEY—TWO 60-pound cans, \$29.75. Wesley Foster, Producer, Boulder, Colorado.

DELICIOUS, LIGHT-COLORED, EXTRACTED honey gathered by our own bees from alfalfa and sweet clover. Guaranteed pure. Can containing 60 pounds, \$15.25; case of two cans, \$30. You pay freight. Frank H. Drexel, Crawford, Colorado.

MISCELLANEOUS.

PACOTA KEEPS RAZOR KEEN. SHAVE yourself! Shave-E-Z. For barbers and surgeons, too. 25c. Pacota Manufacturing Co., Box 533-J, Columbus, Ohio.

\$69 BUYS A NEW \$250 MAHOGANY OR oak phonograph. Special introductory offer. Fairport Mfg. Co., 241 Rusk Ave., Milwaukee, Wisconsin.

KODAKERS—SEND ME TWO NEGATIVES for free samples of my work and money-saving prices on your finishing. Twenty-five years' experience. Saunders, B 3080, Boulder, Colo.

REAL ESTATE.

LISTEN—NICELY IMPROVED 68 ACRES, \$2,000. Terms, Timber 40, \$385. McGrath, Mountain View, Missouri.

NORTHEASTERN COLORADO IS THE place to buy your farm. Get my list of bargains at once. Barrett Land Co., Akron, Colorado.

SOUTHWEST KANSAS IS DEVELOPING fast. Farmers are making good profits on small investments. It is the best place today for the man of moderate means. You can get 160 acres for \$200 to \$300 down, and no further payment on principal for two years, then balance one-eighth of purchase price annually, interest only 6%—price \$10 to \$15 an acre. Write for our book of letters from farmers who are making good there now, also illustrated folder with particulars of our easy purchase contract. Address W. T. Oliver, Santa Fe Land Improvement Company, 405 Santa Fe Bldg., Topeka, Kansas.

THE STRAY LIST.

TAKEN UP—ON THE — DAY OF JULY, 1918, by H. N. Hunter, of Zenda, Rochester Township, Kingman County, Kansas, one yearling mare mule. Geo. A. Howe, County Clerk.

TAKEN UP—BY F. W. JEFFREY, OF Elmdale, Diamond Creek Township, Chase County, Kansas, on November 1, 1918, one two-year-old heifer, color red, white face. No marks or brands. C. A. Coe, County Clerk.

TAKEN UP—BY HERMAN WERNING, of Flusah, Pottawatomie Township, Pottawatomie County, Kansas, on the 30th day of January, 1919, one cow, color roan, three or four years old. Brand on right hip. J. B. Claywell, County Clerk.

NOTICE IS HEREBY GIVEN THAT ON the 23d of November, 1918, nine head of cattle were taken up as astray on my premises in Bonville Township, McPherson County, Kansas; age, long yearlings; color red, marked as follows: Five of said cattle have horns and are ear-marked with "V", shaped section cut from center of rim of each ear; three of said cattle have no horns and are ear-marked same as the five described above; one has horns and is ear-marked in right ear with "V", shaped section cut from under side of ear. George Paulson, A. J. Cedarholm, County Clerk.

RELIABLE POULTRY BREEDERS

PLYMOUTH ROCKS.

SEE MY AD IN FEBRUARY 1, PAGE 8. Farnsworth.

BIG BARRED ROCK COCKERELS. J. H. Fry, Paxico, Kansas.

BUFF ROCK COCKERELS, \$5 AND \$10. Eggs at reasonable prices. J. K. Hammond, 115 S. Green, Wichita, Kansas.

CHOICE BARRED ROCK COCKERELS, Parks' 200-egg strain. Gem Poultry Farm, Haven, Kansas.

BARRED ROCK COCKERELS—THIRTY years' experience. Write for prices. Mrs. Chris Bearman, Ottawa, Kansas.

BARRED ROCK COCKERELS—PARKS' 200 egg strain, \$5 each. Mrs. Lillian Marshall, Raymond, Kansas.

WEIGHER-LAYER BARRED ROCK cockerels, \$3, \$5, \$7.50. Utility eggs, \$3 hundred. C. F. Fickel, Earlton, Kansas.

PURE-BRED WHITE ROCK COCKER- els, \$2.50 and \$3.50. Mrs. Elwin Dales, Eureka, Kansas.

WHITE ROCK COCKERELS, \$3 TO \$5. Photo free. Eggs for hatching. Mrs. John Ramsey, Fort Scott, Kansas.

BARGAINS IN BARRED ROCKS AND eggs. Pekin duck eggs. W. D. Steele, Chillicothe, Missouri.

FOR SALE—PURE-BRED BARRED Rock cockerels, laying stock, \$2 each. Frank Hund, Paxico, Kansas.

PURE-BRED BARRED ROCK COCKER- els with size and quality, \$2 each. C. E. Romary, Olivet, Kansas.

BARRED ROCK COCKERELS AT FARM- ers' prices. Western Home Poultry Yards, St. John, Kansas.

FOR SALE—WHITE ROCK COCKERELS out of a good laying strain of hens, \$3, \$5 and \$10 each. Thomas Owen, Route 7, Topeka, Kansas.

PURE-BRED BARRED ROCKS—EGGS in season, one dollar for thirteen; seven dollars per hundred. Peter H. Friesen, Lehigh, Kansas.

SUNNY SIDE BARRED ROCK COCKER- els, pen matings. Bradley and Thompson strains, \$5 to \$10 each. Satisfaction guaranteed. Almeda Siler, Wells, Kansas.

FOR SALE—PURE-BRED BARRED Rock cockerels; Rhode Island Red hens, cockerels; Brown Leghorn cockerels. Albert Nickol, Bristol, Colorado.

PARK'S 200 STRAIN BARRED ROCKS— Utility, one setting, \$1.75; 100, \$7.50; pedigree, one setting, \$2.25; 100, \$9. R. B. Snell, Colby, Kansas.

BARRED ROCK EGGS—FIVE PENS mated. Mating list ready. Special: Six-pound cockerels, \$3; six, \$15. Hiram Patton, Hutchinson, Kansas.

BARRED ROCK COCKERELS, BOTH light and dark lines, \$5 each; six for \$25. C. C. Lindamood, Walton, Harvey County, Kansas.

100 BARRED ROCK COCKERELS FROM prize winning birds bred to lay, large, healthy and very fine. Satisfaction guaranteed. Mrs. G. W. Dillinger, Ideal Poultry Farm, Unionville, Missouri.

WHITE PLYMOUTH ROCKS, NO BET- ter anywhere. Have bred them exclusively for 26 years and are extra good layers. Eggs, \$2 and \$3 per fifteen, from five pens; \$5 per fifteen from first pen. Expressage or parcels post prepaid. Thomas Owen, Route 7, Topeka, Kansas.

BRAHMAS.

EGGS FROM PURE-BRED LIGHT Brahmas. Setting of fifteen, \$1.25; 100 for \$7. Albert Reetz, Tobias, Nebraska.

LIGHT BRAHMA COCKERELS, \$2.50; hens, \$2. White Wyandotte pullets, \$2. W. F. Hayes, Route 3, Coweta, Okla.

LIGHT BRAHMA COCKERELS, \$5 AND \$7.50 each. Hatching eggs, \$2.50 and \$3.50 per fifteen eggs; \$4 and \$5 per thirty eggs. Geo. W. Craig, 2031 Wellington Place, Wichita, Kansas.

ORPINGTONS.

KELLERSTRASS WHITE ORPINGTON cockerels, \$2. Mrs. Adams, Waldron, Kan.

S. C. BUFF ORPINGTONS, SPECIAL mating, first prize winners. Eggs for sale. C. N. Moore, Fairfield, Neb.

PURE-BRED BUFF ORPINGTON COCK- erels, \$2 to \$5. Chas. Hoferer, Wamego, Kansas.

S. C. BUFF ORPINGTON COCKERELS at \$2 and \$3 each. W. M. Scherman, Route 3, Olathe, Kansas.

SINGLE COMB BUFF ORPINGTON eggs, \$6 per hundred. Mrs. Henry M. Schumaker, Clifton, Kansas.

FINE S. C. BUFF ORPINGTON COCK- erels, \$2 to \$6. Mrs. Frank Neel, Beverly, Kansas.

PURE-BRED BUFF ORPINGTONS— Last year we added five more prize winners to our flock, a total of twenty-four. Eggs, one dollar per setting; six dollars per hundred. Correspondence solicited. J. L. Moorhead, Blue Rapids, Kansas.

THE GOLDEN ARROW STRAIN BUFF Orpingtons—One of the comparatively few strains of truly high standard and utility quality combined. Now is the time to hatch your next winter's layers. Hatching eggs will be scarce. Order now. Three dollars per setting; fifteen dollars per hundred. Ball & Beebe, Viola, Kansas.

PLEASE MENTION KANSAS FARMER WHEN WRITING TO ADVERTISERS

RHODE ISLAND REDS.

GET WINTER EGGS! BUY LONG'S bred-to-lay velvety red S. C. cockerels. Mrs. Geo. M. Long, St. John, Kansas.

CHOICE ROSE COMB RED COCKERELS, \$3. Baby chicks in season. Lily Robb, Neal, Kansas.

S. C. REDS—EGGS FROM BLUE RIB- bon winners, \$2, \$3, \$5 and \$10. H. L. White, 1747 N. Waco, Wichita, Kansas.

SINGLE COMB RED COCKERELS, GOOD color and shape, \$3 to \$5 each. E. J. Manderscheid, Seward, Kansas.

PURE-BRED R. C. R. COCKERELS, three and four dollars each. Only a few left. Dounie McGuire, Paradise, Kansas.

HANDSOME DARK SINGLE COMB Rhode Island Red males, \$5 to \$10. James Sisters, Olathe, Kansas.

S. C. RED COCKERELS—GOOD LAY- ing strain. Eggs, \$2 per fifteen. Thomas Owen, Jr., Route 7, Topeka, Kansas.

ROSE COMB RED COCKERELS, \$2, \$3 and \$5 each. Mrs. C. H. Jordan, Wakarusa, Kansas.

SINGLE COMB RHODE ISLAND RED cockerels, large, dark red, big bone, good under color, \$2.50 to \$10. Eggs in season. R. A. Hooks, Blair, Nebraska.

FOR SALE—SINGLE COMB RHODE Island cockerels, 200-egg strain, \$5 each. Eggs in season. Write me for prices. W. W. Baker, Boone, Nebraska.

DARK RED ROSE COMB REDS, GOOD scoring, greatest laying strain; cockerels, pullets, eggs. Satisfaction guaranteed. Highland Farm, Hedrick, Iowa.

PURE R. C. RED HENS, \$1.50 EACH; \$17 per dozen. Cockerels, \$2.50 each. Fine Bourbon Red turkey toms, \$5 each. J. W. Warner, Rush Center, Kansas.

ROSE COMB REDS—HIGH SCORING cockerels, direct from Meyer's famous trap-nested strain, \$3, \$4, \$5. M. L. Van Ornam, Superior, Nebraska.

PURE ROSE COMB RHODE ISLAND Dark Red cockerels for sale. Prices right. Eggs for hatching. Maggie Gingerich, Michigan Valley, Kansas.

ROSE COMB RHODE ISLAND RED eggs from the flock that has never missed the blue ribbons in any show; two-fifty for fifteen; seven-fifty per hundred. Mrs. S. M. Williams, Fairfield, Nebraska.

A FEW ROSE COMB RHODE ISLAND Red cockerels left at \$5 each. Red to the skin. Red eyes, good type. Won third on cockerel at Hooper Poultry Show. Julia Baxter, Blair, Nebraska.

POULTRY WANTED.

RUNNER DUCKS AND PEA FOWLS wanted. Geese for sale. Emma Ahlstedt, Lindsay, Kansas.

OUR PAYING PRICES ON POULTRY and eggs published daily in Topeka Capital. Coops and cases loaned free. The Copes, Topeka. Established 1883.

BABY CHICKS.

LEADING VARIETIES, 20c DELIVERED. Request folder. McCune Hatchery, Ottawa, Kansas.

S. C. WHITE LEGHORN BABY CHICKS from heavy laying strain, 15 cents. Order now. Satisfaction guaranteed. C. G. Cook, Lyons, Kansas.

BABY CHICKS—ORDER EARLY. GET chicks from the winter layers. Write for circular. Sarver's Poultry Farm, Hastings, Nebraska.

WYANDOTTES.

PARTRIDGE WYANDOTTES FROM prize winning birds. Lidle Rodgers, Jefferson, Oklahoma.

COLUMBIAN WYANDOTTE COCKERELS cheap. Eggs in season; and all kinds of fancy pigeons. J. J. Pauls, Hillsboro, Kan.

FORTY COCKERELS—WHITE WYAN- dottes. Winners seven states. \$3, \$5 and up. G. A. Temple, Lexington, Nebraska.

ROSE COMB WHITE WYANDOTTE cockerels, \$2.50 and \$3. Mrs. H. C. Johnson, Route 4, Manhattan, Kansas.

COLUMBIAN WYANDOTTE COCKERELS—Exhibition quality. Eggs in season. O. C. Sharits, Newton, Kansas.

SILVER WYANDOTTE EGGS—FIFTEEN, \$1.75; fifty, \$4; hundred, \$7. Mrs. Edwin Shuff, Plevna, Kansas.

ROSE COMB WHITE WYANDOTTE cockerels, \$3, \$4 and \$5. Special rates on three or more. Mrs. Geo. Rankin, Gardner, Kansas.

EGGS—WHITE WYANDOTTES, KEELER strain. Utility, \$1.50 fifteen, \$4 fifty, \$7 hundred. Pen extra good, \$2 fifteen. Mrs. M. M. Weaver, Newton, Kansas.

WHITE WYANDOTTE COCKS AND cockerels. Martin and Poorman laying strains. Eggs, \$7.50 hundred prepaid. Dwight Osborn, Delphos, Kansas.

DUCKS AND GESE.

WHITE EMBDEN GANDERS, \$3. MRS. Lawrence Fitzpatrick, St. Marys, Kansas.

FOR SALE—TOULOUSE GANDERS, \$3.50 each. Thorobred. Mrs. R. H. Kandt, Herington, Kansas.

FOR SALE—FIFTY MUSCOVY DUCKS, 100 Rouen ducks. Fred Kucera, Clarkson, Nebraska.

LEGHORNS.

PURE-BRED SINGLE COMB WHITE Leghorn cockerels, \$1.50. Chas. McFadden, Morland, Kansas.

S. C. WHITE LEGHORN COCKERELS, Ferris strain, fourteen years a breeder, \$2.50 each, five for \$10. Ben Johnson, Belton, Mo.

PURE-BRED ROSE COMB WHITE LEG- horn cockerels, \$1.75 each. N. C. Dewey, Great Bend, Kansas.

L. B. RICKETTS, BREEDER OF EXHI- bition and utility Single Comb White Leghorns, Greensburg, Kansas.

FINE BRED TO LAY SINGLE COMB White Leghorns, eggs, chicks, postpaid. Armstrong Bros., Arthur, Mo.

PURE-BRED S. C. WHITE LEGHORN cockerels, laying strain. K. Skelley, Delia, Kansas.

FOR SALE—ROSE COMB WHITE LEG- horn cockerels, \$2 each. Stella May, Speed, Kansas.

PURE-BRED S. C. BROWN LEGHORN cockerels, \$2 each; six for \$10. Mrs. L. H. Hastings, Thayer, Kansas.

SINGLE COMB BROWN LEGHORNS— Winners at the big shows. Eggs, \$6 per hundred. Wm. Roof, Maize, Kansas.

SINGLE COMB BUFF LEGHORN COCK- erels, also eggs for hatching. E. S. Groves, Taytown, Missouri.

135 SELECTED RANGE WHITE LEG- horns. January 17th laid 74 eggs. Eggs only. Experienced. Reasonable. C. K. Gamble, Coffeyville, Kansas.

S. C. BROWN LEGHORNS, BRED 23 years; 222 to 266 egg lines. Eggs, fifteen, \$2; thirty, \$3; fifty, \$4; hundred, \$7. Gorsuch, Stilwell, Kansas.

HEAVY LAYING S. C. WHITE LEG- horns. Eggs, \$7 hundred; chicks, 15c. Order now. Satisfaction guaranteed. C. G. Cook, Lyons, Kansas.

S. C. WHITE LEGHORN EGGS, \$2. PER setting; \$10 per hundred. Large hens. Above 200-egg strain. Kansas' best. Frank Uhl, Manhattan, Kansas.

EXTRA CHOICE EGGS FOR HATCH- ing, \$2 to \$5 for fifteen. Single Comb Dark Brown Leghorns. Better than ever. Cocks and cockerels for sale. John W. Moore, Poplar Bluff, Missouri.

SINGLE COMB WHITE LEGHORN EGGS for hatching. Only choice hens mated to pure white Tom Barron cockerels, \$7 per hundred, \$2 per fifteen. High fertility guaranteed. Harry Gliven, Manhattan, Kan.

SUNNYSIDE EGG FARM—BARRON Single Comb White Leghorn eggs, \$1.50 fifteen, \$8 hundred. Fertile eggs guaranteed. Choice cockerels. Sunnyside Egg Farm, Box F, Hallowell, Kansas.

ROSE COMB BROWN LEGHORNS— Roosters won five state prizes. One, two dollars; two, three dollars; six, eight dollars. Prize eggs, thirty, \$2.90. Rufus Standiford, Reading, Kansas.

SINGLE COMB WHITE LEGHORNS from the famous Yesterlay strain of laying Leghorns mated with Ferris 260-egg trap-nested stock. Selected eggs, parcels post, \$7 hundred. Ten extra with each hundred order. Shady Pine Leghorn Farm, Morris Bond, Prop., Rossville, Kansas.

EGGS FROM HEAVY WINTER LAYING S. C. W. Leghorns, bred for winter laying for years. Won third and fourth pen for monthly record, second pen for monthly record, and fourth pen for yearly record, at American egg-laying contest at Leavenworth, Kansas. Write for prices. H. M. Blaine, Sylvia, Kansas.

SINGLE COMB WHITE LEGHORNS, 265- egg strain, blue ribbon winners, have never failed to win in leading shows. If you want to improve your egg record and get birds that will win, cockerels \$3 up. Eggs, \$5 \$3, \$1.50 per fifteen. Utility eggs, \$7 hundred. All pens headed by blue ribbon winners. Holden Egg Farm, Holden, Missouri.

TURKEYS.

M. B. TURKEY HENS, \$5 EACH. ELLEN Henn, Plainville, Kansas.

PURE-BRED BRONZE TOMS, ONLY three left. All good ones. L. M. Parkhurst, Plainville, Kansas.

GIANT BOURBON REDS, UNRELATED; two-year tom, \$10; hens, \$6. Mrs. Joel Smith, Byron, Oklahoma.

BRONZE TOMS—LARGE VIGOROUS show birds; \$10 and up. Bargains. R. L. Farrott, Osborne, Kansas.

PURE-BRED MAMMOTH BRONZE TUR- keys—Toms, \$7.50; hens, \$5. J. W. Wade, Brinkham, Oklahoma.

FOR SALE—MAMMOTH BRONZE breeding stock. Large bone. Fine birds. Hens, \$6; toms, \$10. E. E. Waltemire, Fort Scott, Kansas.

LANGSHANS.

BLACK LANGSHAN COCKERELS, \$2 and up. Mrs. Geo. W. King, Solomon, Kan.

BIG BLACK LANGSHAN COCKERELS and pullets, fancy and utility; also eggs. Guaranteed. H. Osterfoss, Hedrick, Iowa.

PURE BLACK LANGSHAN COCKERELS Hens and eggs. Mary McCaul, Elk City, Kansas.

SEVENTY-FIVE BLACK LANGSHAN cockerels. Won first cockerel at Illinois and Kansas State Shows, 1919. Jno. Lovette, Mullinville, Kansas.

BLACK LANGSHANS FROM BLUE RIB- bon winners. Eggs, \$6 per hundred; \$3.50 per fifty. Mrs. D. A. Swank, Blue Mound, Kansas.

CORNISH FOWLS

DARK CORNISH COCKERELS, \$3 EACH. Herman W. Peterson, Harvard, Nebraska.

GUINEAS.

WHITE AFRICAN GUINEAS, \$5 TRIO; pearly, \$3.50. The Copes, Topeka.

SEVERAL BREEDS

STRICTLY PURE-BRED COCKERELS, S. C. White Orpingtons and R. C. Silver Wyandottes, \$2 each. Eggs, \$1 for fifteen, \$5 a hundred. Mrs. Wm. Imhoff, Hanover, Kansas.

FARM AND HERD.

In connection with the live stock show at Wichita, Kansas, the American Shorthorn Breeders' Association will hold a sale of Shorthorns. The sale will occur Wednesday, February 26, in the show pavilion. An effort has been made to secure a very useful class of cattle. In picking the bulls care was taken to list those of strong ages and possessing ample scale. There are twenty bulls in the catalog and practically all are ready for immediate use. They are big enough to increase the weight of the calves in whatever herd they may go. It is of the utmost importance that along with the extra quality which is a market necessity, there be also the extra weight that may represent all of the profit to the producer. The Shorthorn bull will provide both, and these in this sale were selected with this in view. The thirty females are a very well bred and useful lot. All that are old enough are bred and practically all either have calves at foot or are near to calving. When it is understood that the entire offering was selected by W. A. Cochel, formerly of the animal husbandry department at Manhattan and now connected with the Shorthorn Association, the practical character of the cattle is assured. They haven't been entered with a view to making any sale records, but to assemble the kind that any farmer or ranchman may put in his herd and find them a profitable investment. There are a number of richly-bred lots that will at once attract the favor of established breeders who are wishing to further improve their herds. The sale will be one of importance to the stockmen of the Southwest. The sale will be under the personal charge of Mr. Cochel.

V. O. Johnson, of Aune, Kansas, is about the busiest man in Marion County. He is one of the wide-awake public-spirited men of Aune. He is cashier of the Aune State Bank and proprietor of Fashionable Stock Farm, where he cares for a splendid herd of Hereford cattle and Poland China hogs. Mr. Johnson is now building a modern up-to-date sale barn and on March 8 will dedicate this new building with his annual brood sow sale.

W. B. Van Horn, Route 1, Topeka, owns one of the good producing herds of Holsteins in this state. His herd of cows consists of two registered cows and fourteen high-grade cows and heifers. During 1918 Mr. Van Horn sold \$3,080 worth of milk from this herd at wholesale prices. Eleven head now in milk are producing \$13 per day.

The Poland China sale of F. W. Bartholomew, Great Bend, Kansas, was held as advertised on January 28. This was one of the first Poland China bred sow sales of the season and the first sale of registered Poland China bred sows ever held at Great Bend. The offering was presented in splendid condition and resulted in the disposal of 748 head of bred sows and bred gilts at an average of \$68. The top price of \$168 was paid by A. J. Erhart & Son, Ness City, Kansas, for Lot No. 6 in catalog. While there were no sensational prices, yet the average was very fair and satisfactory to Mr. Bartholomew, this being his first sale made in Barton County.

The sale of Poland China bred sows of Adams & Mason, Gypsum, Kansas, was held as advertised on January 29 and resulted in the disposal of fifty-seven head of bred sows and bred gilts at an average of \$115. The offering was presented in splendid breeding condition and sows bred to the two premier herd boars, Giant Bob by Mel-low Bob and Wonder Timm by Big Timm, were competed for at good prices. The top price of \$50 was paid for No. 60, a fine yearling gilt by Giant Jones, going to the herd of Ed Frazier, Drexel, Missouri. While no sensational prices figured in the sale, the averages were very satisfactory to Adams & Mason and yet low enough to permit of liberal investment in this class of breeding stock and at prices high enough to insure a liberal profit to the producers.

B. R. Anderson, of Royal Herd Farm, McPherson, Kansas, and owner of one of the outstanding herds of pure-bred Durocs in Kansas, has announced February 20 as the date of his annual bred sow sale. On that date Mr. Anderson will offer fifty head of bred sows and gilts that for breeding and quality will be equalled by few Duroc offerings this season. They are all bred to such boars as Royal Grand Wonder, the great boar that won the blue ribbon at the Kansas State Fair; Royal Sensation, and Royal Pathfinder, a trio of the greatest sires of the breed in service at this time.

Clarence Dean, of Weston, Missouri, has announced February 25 for his annual bred sow sale of big Poland China bred sows and gilts. The sale will be held at Dearborn, Missouri. The interurban cars from Kansas City and St. Joseph reach Dearborn every hour and all cars stop at Dearborn. Mr. Dean has catalogued fifty head of large Poland China sows and fall yearling gilts of the real big-type breeding and this offering promises to be about the best lot of Poland China sows and gilts that will be sold in any sale this year.

T. R. Maurer & Company, of Emporia, Kansas, owners of one of the good herds of Holsteins, report their herd doing well. This herd has furnished foundation stock for many good herds, and Maurer & Company report a good demand for high class Holsteins. A feature of their herd at this time is the choice lot of females from yearlings up to mature cows, and a very fine lot of high grade springer cows and heifers.

Myersdale Farm Poland Chinas

Bred Sow Sale at Gardner, Kan., Feb. 22

Our Great Offering of

BRED SOWS AND GILTS

FIFTY HEAD, REPRESENTING THE BEST BIG-TYPE BLOOD LINES OF THE BREED.

TEN TRIED SOWS

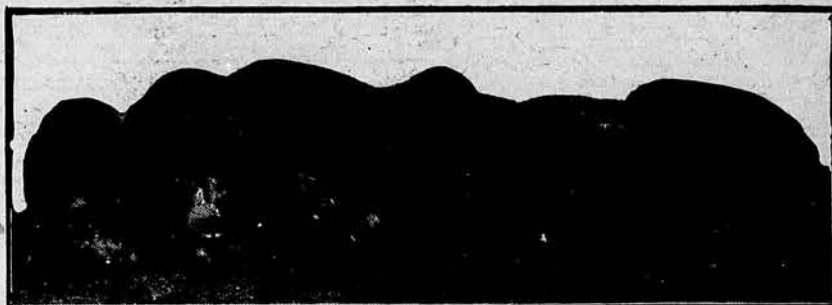
FIVE FALL YEARLINGS

All bred to our trio of herd boars.

THIRTY-FIVE SPRING GILTS

By Giant Joe bred to Jayhawker Bob by Nebraska Bob, Big Giant, Belmont Timm and The Craftsman by Oakland Orphan by McGath's Big Orphan.

Catalogs ready to mail out. Send today for one, and come. All farmers and breeders invited.



GARDNER, KANSAS, FEBRUARY 22

SALE HELD IN TOWN UNDER COVER
Auctioneers, Col. J. C. Price and Col. Marshall

Harry E. Myers, Owner

SCHMITZ BROTHERS' POLAND CHINA BRED SOW SALE

AT SENECA, KANSAS, MARCH 4, 1919

THIRTY-FIVE BRED SOWS AND BRED GILTS

Bred to Jumbo Bob by Big Bob Wonder; Schmitz Bros.' Timm by Big Timm; Gerstdale Buster by Gerstdale Jones

Two extra fine March gilts by Wonder Joe out of our futurity litter. Will sell one September boar pig by Bob's Quality. A few fall pigs by Jumbo Bob.

This is a choice lot of sows and gilts bred to our three herd boars. Two March gilts by Rest's Long Model, the first prize summer yearling boar at the Nebraska State Fair. The two gilts are bred to Schmitz' Timm and Gerstdale Buster.

Sale held right in town. We are selling a lot of useful sows and gilts that will make good for any farmer or breeder.

Please send for catalog and come to our sale.

Schmitz Bros.,

Seneca, Kansas

FARM AND HERD.

The purpose of the Kansas National Live Stock Show is to encourage the farmers and ranchmen to grow registered live stock; also, to encourage the breeders of registered live stock to grow more and a better quality of live stock. The Hereford sale includes fifty selected animals suitable for the pure-bred breeders to buy to improve their herds. At the close of this sale there will immediately be sold one hundred head suitable for the beginners, farmers, and ranchmen. Most of this lot will be sold in lots of five to a carload. Some of the best herds in Kansas, Oklahoma, Missouri and Indiana have consigned Herefords to this sale. Practically every fashionable strain of Hereford breeding is represented, including Columbus, Anxiety 4th, Beau Brummel, March On, Beau Paragon, Beau Mystic, Perfection, Beau Donnell, Beau Carlos, Bonnie Brae, Beau Onward, Prince Rupert, Beau Royal, and many other of the best strains. Twenty-five representative breeders have consigned to the sale.

The sale of Poland China bred sows of H. B. Walter & Son, Effingham, Kansas, February 6, resulted in the disposal of forty head of sows and gilts, averaging \$218.76. No sensational prices figured in the auction. The average was considered very fair and yet low enough to permit of liberal investment in valuable breeding stock. A large crowd of farmers and breeders was present and the bidding was spirited and at no time did the sale lack for interest. The top price of \$850 was paid for No. 3 in the catalog, a fine Big Bob Wonder sow, going to the good herd of Willis & Blough

of Emporia. This splendid sow was mated to the sensational herd boar, A Big Timm, for April litter.

O. P. Updegraff & Son, owners of the Riverside Stock Farm, North Topeka, Kansas, have announced February 22 for their Poland China bred sow sale. The sale will be held in the large sale barn of John Bechtelmer, 1012 North Kansas Avenue, North Topeka, Kansas. Every animal has been treated with serum and virus and should be immune. The breeding animals offered in this lot are not fat, but are in splendid breeding condition, having been grown on alfalfa and a little corn and shorts, a diet that insures a strong healthy litter. This will probably be the last opportunity to buy bred sows in this locality.

The sale of Poland China bred sows of Fred B. Caldwell, Howard, Kansas, February 8, resulted in the disposal of thirty-five head of bred sows and bred gilts for \$9,300, or an average of \$265.71. Seventeen head of sows, bred to the premier sire, Caldwell's Big Bob, averaged \$365. The sale is a record sale for the Kansas sales this year. While no sensational prices were recorded, the averages were very fair and yet low enough to permit of liberal investment of high class breeding stock. Owing to the cold spell of weather only about a hundred farmers and breeders were present. All the visiting breeders were royally entertained at the farm and it is safe to say that those who enjoyed the hospitality tendered them will need no second invitation on like occasions in the future. Mr. Caldwell is moving to his new farm near Topeka and all of Shawnee County and Eastern Kansas breeders will welcome him to his new home.

UPDEGRAFF & SON

WILL OFFER AT TOPEKA, KANSAS,
AT

PUBLIC SALE, FEB. 22, 1919

THIRTY HEAD OF POLAND CHINA SOWS,
FALL YEARLINGS AND GILTS

Bred to farrow March and April to O. U. Buster, a son of the \$3,000.00 Buster Over, and to Gerstdale Jones Again, a grandson of Gerstdale Jones. The offering are all pure-bred, big type, prolific and cholera immune. They are all by great sires and out of fashionably-bred motherly dams.

This is the last opportunity, in this locality, you will have to purchase bred sows, ready to farrow very soon.

Come to the sale if possible, but if not, send mail bids to Col. J. M. Pollom, Auctioneer, in our care. Sale will be held in the large sale barn at 1012 North Kansas Avenue, North Topeka, Kansas. Catalogs sent by request only. Address

Updegraff & Son, Rte. 6, Topeka, Kan.

Col. J. M. Pollom, Auctioneer

The Prairie View Shorthorns, of Marion, Kansas, are becoming very popular. J. R. Ely, the owner, writes that he has grown some of the best calves this year that he has ever owned. The herd now numbers sixty head of Scotch and Scotch-topped cattle of the real milking strain of Shorthorn, and a feature of the herd at this time is a splendid lot of yearling bulls.

The Poland China bred sow sale of H. E. Myers, Gardner, Kansas, was held as advertised on January 31, and resulted in the disposal of forty-four head of bred sows and gilts at an average of \$132.40. A large crowd of farmers and breeders was present and the bidding was quick and snappy. At no time did the sale lack for interest. Col. J. C. Price sold the entire forty-four head in two hours and twenty minutes. No sensational prices were established nor records broken. The top price was \$345, paid for No. 1 sow in the catalog. Mr. Myers was well pleased with the results of the sale and invited every one to be on hand February 22, at which time he will offer forty head of real farmer Poland China brood sows at public auction.

A. J. Erhart & Sons, Ness City, Kansas, have announced their annual Poland China bred sow sale to be held at Hutchinson, Kansas. This firm has been breeding the

big type Poland Chinas for more than ten years and the Erhart herd has made history for the breed. The use of such sires as Big Hadley Jr. and other good ones has brought prominence to their herd. In the purchase of the great boar, Big Sensation, at a record price for a boar purchased by a Kansas breeder, Erhart & Sons have again taken a step forward in progressive breeding. A large number of sows bred to this great sire will go in this coming sale.

C. S. Mulks, of Riceville, Iowa, and G. E. Moore, of Wallingford, Iowa, announce February 25, 26 and 27 as the dates for the dispersion sale of their two great herds of Holstein cattle. The sale will be held at Waterloo, Iowa, on the above dates, and the offering will consist of two of Iowa's greatest Holstein herds. There will be more forty-pound breeding and high-class individuality offered in this sale than ever before offered in a mid-western sale of Holsteins.

A. S. Neale, of Manhattan, Kansas, secretary and treasurer of the Holstein Friesian Association of Kansas, has claimed May 12 as the date for his public sale of Holstein cattle. Eighty head of choice A. R. O. cows and bred heifers will be catalogued for this sale.

DUROC JERSEYS.

BIG STUFF IN
DUROCS

Good bred gilts for less money. Special prices for one or a carload. Write us.

F. C. CROCKER
Box K Filley, Nebraska

Duroc Bred Sows and Gilts

For Sale—Several well bred sows and bred gilts bred for early March and April litters, priced to sell. Also a few spring boars. First check or draft gets choice. Sold on an absolute guarantee or money back.

JOHN A. REED & SONS, LYONS, KANSAS

HIGHVIEW DUROCS

Home of Repeater by Joe Orion King and Golden Repeater by Pathfinder. For sale—spring boars and a few bred gilts. I guarantee satisfaction or your money back.

F. J. MOSER - SABBETHA, KANSAS

R. H. DIX & SON'S DUROCS

For Sale—One choice spring boar, a real herd header. Twelve spring gilts bred to Giant Crimson by G. M.'s Crimson Wonder, a prize winning boar. Priced reasonable for quick sale. Write today.

R. H. DIX & SON, HERINGTON, KANSAS

WOODDELL'S DUROCS

I am going to slash prices on boars the next thirty days. If you want a good boar at a bargain, write at once.

G. B. WOODDELL - WINFIELD, KANSAS

BREEDERS' DIRECTORY

DOBBET HORN SHEEP
H. C. La Tourette, Route 2, Oberlin, Kan.
HERFORD CATTLE
F. S. Jackson, Topeka, Kan.
RED POLLED CATTLE
Maklon Greenmiller, Pomona, Kansas.
POLLED DURHAMS
C. M. Albright, Overbrook, Kan.

ANGUS CATTLE

Dietrich's Aberdeen-Angus

Aged bulls, fifteen choice spring bulls. Females, all ages.

GEO. A. DIETRICH, CARBONDALE, KAN.

Cherryvale Angus Farm

Is offering six choice Angus bulls ranging in age from 9 to 11 months. All sired by Roland L. No. 187220.

J. W. TAYLOR
Route 8 Clay Center, Kansas

POLAND CHINAS

Deming Ranch Poland Chinas.
Big-Type Poland China Hogs

For Sale—Fifty spring boars, real farmer boars and herd boar prospects; 100 bred sows and gilts. Write or come and see our herd.

Deming Ranch, Oswego, Kan.
(H. O. Sheldon, Herd Manager)

Henry's Big Type Polands

March and April pigs sired by Mammoth Orange, Smooth Prospect and Big Bob 2d, out of sows the best of big type breeding. Everything immune.

John D. Henry, Route 1, Leocompton, Kansas

BIG-TYPE POLANDS

Bred sows, gilts and boars of the easy-keeping, quick-fattening, big-type kind. Cholera immunized and priced right. Write us what you want.

ISAACS STOCK FARM, PRABODY, KAN.

OLD ORIGINAL
SPOTTED POLAND CHINAS

Eighty head tried sows and gilts, bred and proved. Satisfaction guaranteed. Write your wants to The Cedar Row Live Stock Farm, A. S. Alexander, Burlington, Kansas.

JOHNSON'S BIG-TYPE POLAND CHINAS

Herd boar Over There No. 95555, the greatest son of Caldwell's Big Bob. A few bred sows and gilts for sale. Bred sow sale March 8.

V. O. JOHNSON - AULNE, KANSAS

HOGS! HOGS! FOR SALE!

Big Registered Poland Chinas and English Berkshires that weigh and win. S. C. Brown Leghorn Chickens that lay. See or write

S. Y. BURKS, BOLIVAR, MO.

Oak Grove Stock Farm Polands

The blue ribbon herd of Spotted Polands. Fall pigs sired by O and O 25th, are immunized, recorded and the very best of breeding. Also choice Barred Rock cockerels, \$3 and \$5 each.

E. W. SONNENMOSER - WESTON, MO.

LONE CEDAR POLAND CHINAS—A splen-

did lot of bred gilts by Big Chimes, a great son of Big Hadley Jr. and out of high class mature sows; also a few tried sows and fall pigs. All immunized. A. A. Meyer, McLouth, Mo.

LANGFORD'S SPOTTED POLANDS

Bred gilts, tried sows, herd boar prospects.

T. T. Langford & Sons, Jamesport, Missouri

ERHART'S POLAND CHINAS

Have a great lot of spring boars for sale. Some by the 1200-pound, A Big Wonder. Will make prices on pairs and trios not related. All immunized. Write your wants.

Bred Sow Sale Feb. 19, 1919.

A. J. ERHART & SONS
NESS CITY, KANSAS

PUBLIC SALE

FEBRUARY 27, 1919

Of registered Chester White sows and gilts bred to Prince Tip Top, first prize junior yearling at Topeka, 1918, and Big Prince by Prince Big Bone. Am booking names for catalogs.

Henry Murr, Tonganoxie, Kan.

SHROPSHIRE SHEEP



FOR SALE

A bunch of big heavy-wooled young registered Shropshire ewes, not high in price. Bred to fine rams.

Howard Chandler, Chariton, Ia.

AUCTIONEERS.

FRANK BLAKE Live Stock Auctioneer

Write for date. VALLEY FALLS, KANSAS

W. B. CARPENTER Live Stock Auctioneer

President Missouri Auction School
818 Walnut St. Kansas City, Missouri

LIVE STOCK AUCTIONEER - Fifteen

years' experience. Wire for date.
JOHN D. SNYDER, HUTCHINSON, KAN.

RED POLLED CATTLE.

RED POLLED CATTLE FOR SALE

Young bulls and some extra good young cows to calve in early spring. A few yearling heifers.

I. W. FOULTON, MEDORA, KANSAS

RED POLLS, BOTH SEXES, BEST OF

BREEDING.
Charles Morrison & Son, Phillipsburg, Kan.

HORSES AND MULES.



JACKS AND JENNETS

15 Large Mammoth Black Jacks for sale, ages from 2 to 6 years; large, heavy-boned. Special prices for early sales. Twenty good Jennets for sale. Two Percheron stallions. Come and see me.

PHIL WALKER
Moline, Elk County, Kansas

PERCHERON STALLIONS

Some good young stallions sired by Algare and Bosquet, two great herd sires. These young stallions are very promising and priced to sell.

D. A. HARRIS - GREAT BEND, KANSAS



PERCHERON-BELGIAN SHIRES

Registered mares heavy in foal; weanling and yearling fillies. Ten mature stallions, also colts. Grown ourselves the ancestors for five generations on dam side; sire imported. Fred Chandler, Rt. 7, Chariton, Iowa

JACKS AND JENNETS

Registered Jacks and Jennets. Good individuals, good colors. Have some choice young Jacks that are priced to sell quick.

GEO. S. APP, ARCHIE, MISSOURI

FARM AND HERD.

The dairy sale to be held at the Kansas National Live Stock Show Friday, February 28, includes Holstein-Friesian, Guernsey and Jersey cattle. Doctor Axtell of Newton has one of the largest Holstein-Friesian herds in Kansas. He has been a consignor to all of the sales held by the Association and to many others. He will sell ten head of two-year-old heifers that he says are the best bred of any that he ever consigned to a sale. Girod & Robinson of Towanda are consigning twenty-one head, including fifteen Holstein-Friesians and six Guernseys. The Rock Dairy Company of Wichita is consigning thirteen head, and the balance of the sale is made up of small consignments. A large majority of the stock offered in this sale is young stock that no doubt will be sold at bargain counter prices. It will offer an opportunity for farmers to secure some splendidly bred registered heifers at reasonable prices.

R. W. Sonnenmoser, of Weston, Missouri, held one of the successful Spotted Poland China sales of the season at that place on February 1 in the disposal of forty-four bred sows and gilts at an average of \$11.30. The top price, \$200, was paid for No. 1 sow, which went to the good herd of Henry Field, the seed corn man of Shenandoah, Iowa. A large crowd of farmers and breeders was present and the bidding was quick and snappy. The total returns for the sale were very satisfactory to Mr. Sonnenmoser, who has a large herd of the real Spotted Poland Chinas.

F. G. Houghton, of Klondyke Stock Farm, Dunlap, Kansas, reports his herds of Shorthorn cattle and Duroc hogs doing well. Mr. Houghton has built up herds of Shorthorn cattle and Duroc hogs that are among the best in the state. He has the best blood lines of the respective breeds in his herds and a strictly choice lot of individuals. He recently purchased the Frank Wilson herd of Shorthorns. This herd was established in 1879 and will be a valuable addition to Mr. Houghton's good herds.

A. S. Alexander, of Cedar Row Stock Farm, Burlington, Kansas, owner of one of the great herds of old original Spotted Polands, reports his herd doing fine. The blood lines of Mr. Alexander's herd are the best of the Spotted breed and few herds have furnished more high class foundation stock for new herds.

Faulkner's Famous

Spotted Polands

Shorthorn Sale at Wichita, Kansas

Wednesday, February 26, 1919

IN CONNECTION WITH THE LIVESTOCK SHOW

A collection of FIFTY SHORTHORNS has been selected personally by W. A. Cochel for the American Shorthorn Breeders' Association for this sale. The purpose was to provide TWENTY BULLS of liberal scale and strong ages—old enough for immediate service—and THIRTY FEMALES of the strictly useful sorts. A number of the cows have calves at foot and all of breeding age are bred and near calving. They have been selected from the better known herds of Kansas and represent attractive blood lines, a number of the most fashionable strains. It is the desire that the buyers shall get their full money's worth. Several of the lots included are prize winners and others will be in the show there.

The catalogs will be obtainable at this association's office. Keep the date in mind.

American Shorthorn Breeders' Ass'n.

Chicago, Illinois, 13 Dexter Park Avenue

HAMPSHIRE HOGS

Registered Hampshire Hogs—Sows and Spring Gilts, bred or open. Choice spring boars. Double treated. Geo. W. Eln, Valley Falls, Kansas

GUERNSEY CATTLE.

GUERNSEY BULLS
Good individuals of serviceable age, of May Royal, May Rose, Mashel Sequel, Raymond of the Peel breeding. Write or come and see them.
ADAMS FARM, GASHLAND, MISSOURI
Twelve miles from Kansas City.

SHORTHORN CATTLE.

USE A SHORTHORN BULL

And add 200 pounds to every steer you raise. A load of Shorthorn yearlings sold for \$20.75 at Denver in January, the record price for feeders. Four loads of Shorthorn steers brought \$324, \$361, \$358, and \$349 per head at Chicago in December. Why not start a Shorthorn herd by putting in two or three registered females and keeping the female increase? You would soon have a valuable herd at small cost. Pure-breds pay the best.

PRAIRIE VIEW
Shorthorns

Seven Head of Scotch-Top Bulls
Reds and roans, one year old in February and March. Good growthy fellows, priced to sell.

J. R. Ely - Marion, Kansas

SHORTHORN BULLS

For Sale—Ten bulls, seven to fifteen months old; Scotch and Scotch topped. Two Scotch bulls by Type's Goods, one a Braith Bud, the other a Duchess of Gloster. All in good condition and priced reasonably.

S. B. AMCOATS, CLAY CENTER, KANSAS
Write Me Your Wants

Ellen Dale Breeding Farms

Ellen Dale Shorthorn cattle and Duroc hogs. Bred sows, bred heifers, also choice bulls for sale. Inspection invited.

R. C. Watson, Altoona, Kansas

Shorthorn Bulls & Duroc Gilts

Service bulls at \$125 and up to \$200. Come and see them or write me your wants.

KLONDYKE VALLEY FARM
F. C. Houghton Dunlap, Kansas

Mulefoot Hogs-Shorthorn Bulls

No hogs for sale at present. Four bulls eight to fourteen months old, roans and a red, sired by Knox Knoll Dale 617322, priced from \$150 to \$225.

Knox Knoll Stock Farm, Humboldt, Kansas

MARK'S LODGE RED SHORTHORNS

For Sale—25 well bred cows and heifers bred, priced reasonable. A few young bulls by Double Diamond by Diamond Goods.

Price, \$150. Come and see my herd.
M. F. MARKS, VALLEY FALLS, KANSAS

MAURER'S HOLSTEIN FARM

Is offering some exceptionally good registered females from yearlings to matured cows; also a fine lot of high-grade spring cows and heifers. All reasonably priced. Come and see them or write

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

HOLSTEIN CATTLE.



\$17,500 per
Year in Prizes

for officially authenticated butterfat records is offered by the Holstein-Friesian Association of America for the purpose of furnishing reliable data as to the merits of the Holstein-Friesian breed as butter producers. This method has demonstrated the unequalled ability of the breed. These cows hold all A. R. O. records for amount of butter.

HOLSTEIN CATTLE

Send for our booklet—they contain much valuable information.

HOLSTEIN-FRIESIAN ASSOCIATION OF AMERICA, Box 114, Brattleboro, Vt.

A. R. O. HOLSTEINS

A bull calf born December 12, 1918, nine-tenths white. Sired by a 24-pound bull, dam is a 17-pound three-year-old. The first check for \$125 takes him.

Pinedale Stock Farm

H. A. DRESSLER LEBO, KANSAS

REGISTERED HOLSTEINS

Ten fresh registered cows and heifers, six registered bulls, serviceable ages, out of cows with records up to 23 pounds of butter in seven days. Ten high grade heifers out of a bull whose three nearest dams averaged over 25 pounds per week. Bred grade heifers, \$125; yearlings, \$65; almost white. Write or come and see my herd.

Chas. V. Sass

1013 North Fifth St., Kansas City, Kansas

HOLSTEIN CATTLE

We offer cows and heifers due to freshen soon. Also a few choice calves ready for shipment. Write us for prices, etc.

W. C. Kenyon & Sons

Holstein Stock Farms, Box 33, Elgin, Illinois

BUTTER-BRED HOLSTEINS

Three choice registered Holstein bulls, ready for light service, and some bred heifers to a 32-pound sire.

J. P. MAST - SCRANTON, KANSAS

BRAEBURN HOLSTEINS

My King Segis herd bull's dam and sire's dam both held world records. No other bull within 1,000 miles is of that class; and not many anywhere.

H. B. Cowles, 608 Kansas Av., Topeka, Kan.

SEGRIST & STEPHENSON, WOLTON, KANSAS

Breeders exclusively of pure-bred prize-winning record-breaking Holsteins. Correspondence solicited.

GOLDEN BELT HOLSTEIN HERD

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

W. E. BENTLEY, MANHATTAN, KANSAS

CHOICE HOLSTEIN CALVES

12 Heifers and 2 Bulls, highly bred, beautifully marked, and from heavy producing dams, at \$25 each, crated for shipment anywhere. Safe delivery guaranteed. Write

FERNWOOD FARM, WAUWATOSA, WIS.



IN BROOD SOW SALE

TUESDAY, FEBRUARY 18, 1919

You know the kind—big bones, big hams, and big spots—the prolific kind. If interested in the world's greatest pork hog, write for catalog.

H. L. FAULKNER, Box K, Jamesport, Mo.

JONES BROS. Poland China Bred Sow Sale HIAWATHA, KANS., MARCH 5, 1919

TWENTY EXTRA GOOD SPRING GILTS, TEN TRIED SOWS, FIVE FALL YEARLINGS, FIVE SPRING YEARLINGS

The offering is bred to three great boars—

JONES' COL. JACK

The sensational son of the \$10,200 Col. Jack, dam Long Maid by Big Bob, for whom we paid \$900 last fall.

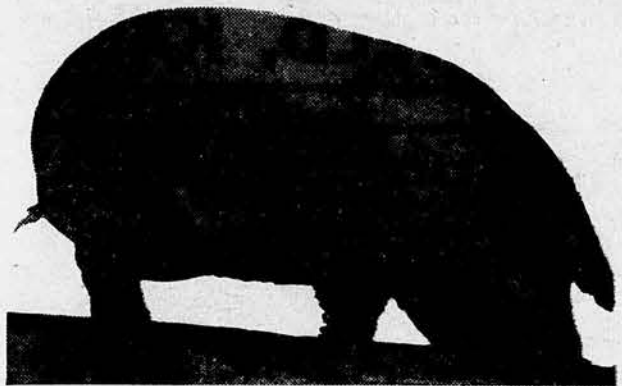
JONES' JONES

The great breeding yearling son of Geratdale Jones, dam Silver Tip by Big Orange.

NORMAN BOB

By Black Bob by Big Bob, the best of all line-bred Big Bob boars.

Immured Bred Sows



Forty Head

One of the attractions—Miss Maid 639686

By Smooth Big Bone, dam Model Maid by Big Bob. This massive two-year-old sow is without doubt a feature of the winter sale season. An outstanding individual, bred in the purple and proven a splendid mother, and bred to Jones' Col. Jack for early March farrow. She is such a sow as seldom passes through a sale ring.

Other attractions are offered; in fact, the entire offering has been selected as the tops of richest breeding, and will please discriminating buyers.

When writing for catalog please mention Kansas Farmer.

JONES BROTHERS, HIAWATHA, KANS.
Col. J. C. Price, Auctioneer

THE DISPERSION

of the

Two Great Iowa Herds

of registered

HOLSTEIN-FRIESIANS

OWNED BY C. S. MULKS AND G. E. MOORE

will take place at

Waterloo, Iowa, February 25, 26, 27

This sale offers more 40-pound breeding and high-class individuality than ever before led into a mid-western sale ring.

Mr. Mulks' herd is headed by **KING KORNDYKE PONTIAC LASS**, the \$10,000 son of the world's first 44-pound cow, **K. P. PONTIAC LASS**. All the females in this herd are either his daughters or bred to him. His daughters are bred to **S. F. TWEDE CORNUCOPIA PONTIAC**, another 41-pound bull.



Mr. Moore's herd is headed by **KING FAN OF ROCK**, whose dam has a seven-day record of 26.64 pounds of butter, 107.4 pounds in 30 days, and 767.34 pounds in one year, at the age of two and one-half years. His granddam is also a splendid A. R. O. cow and his sister was the State A. R. O. champion in her class in Illinois.

This herd is splendidly developed, well grown and beautifully marked. It has showyard quality and A. R. O. capacity.

All the herd sires will be sold. Nothing is kept back. You cannot afford to miss this sale.

For catalogs, mentioning Kansas Farmer, address

C. S. MULKS - - - - **RICEVILLE, IOWA**
G. E. MOORE - - - - **WALLINGFORD, IOWA**

DUROC JERSEY BRED SOW SALE

AT HORTON, KANSAS, FEBRUARY 26, 1919

FIFTY-TWO HEAD

30 Spring Gilts :: 8 Tried Sows :: 14 Fall Yearlings

Sired by King's Col. Jr., Cherry King

All bred to **SENSATION KING** by **GREAT SENSATION** by **GREAT WONDER I AM**; dam, **Proud Bess 2d** by **King The Col.** All except seven head will be bred to **Col. Botma**.

Please send for catalog and come to our sale. It will be held right in town in a comfortable building. Please write today for catalog.

GORDON & HAMILTON - **HORTON, KANSAS**
Auctioneer, **J. T. McCulloch**

Kentucky Jacks at Private Sale

E. P. Maggard, formerly with the firm of Saunders & Maggard, Poplar Plains, Ky., has shipped 21 head of jacks to Newton, Kansas, and they will be for sale privately at **Johnson's Barn**. This is a well bred load of jacks, including imported jacks, and they



range in age from coming three to matured aged jacks; height from 14 to 16 hands. I will make prices reasonable. Any one wanting a good jack will do well to call and see them. Barn two blocks from Santa Fe depot, one block from Interurban. Come and see me.

E. P. Maggard, Newton, Kansas

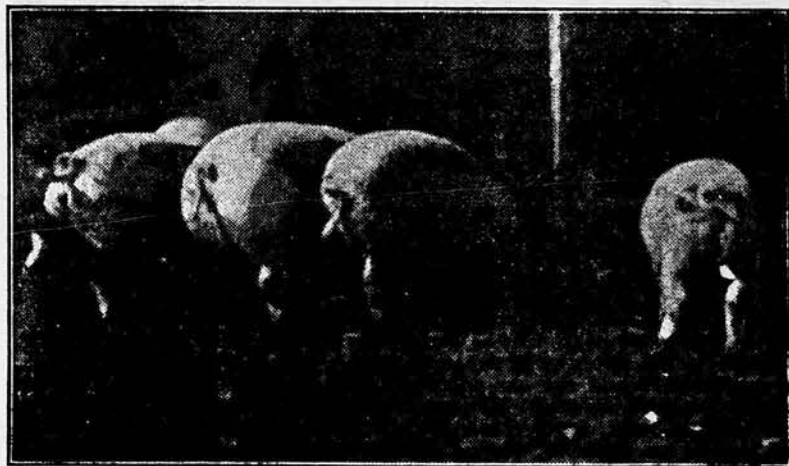
Chester White Bred Sow Sale

At Tonganoxie, Kansas, February 27, 1919

**THIRTY-FIVE HEAD BRED SOWS AND BRED GILTS
FIVE FALL AND SPRING BOARS**

I am including some of my best herd sows and some of the best gilts I ever raised. They will be bred to **Prince Tip Top**, the first prize junior yearling boar at the Kansas State Fair and one of the best Chester White boars in the West.

Several Will Be Bred to Big Prince by Prince Big Bone.



Prince Tip Top is out of the great show sow, **Tip Top**, that was first and champion at nine state fairs and has been considered for several years by competent judges the best Chester White sow in the West.

Big Prince is One of the Real Big-type Boars

His sire, **Prince Big Bone**, was the champion at the 1917 National Swine Show and a half brother to **Wildwood Prince Jr.**, the 1918 champion.

I am selling **Big Prince** in this sale, also two of his litter sisters bred to **Prince Tip Top**.

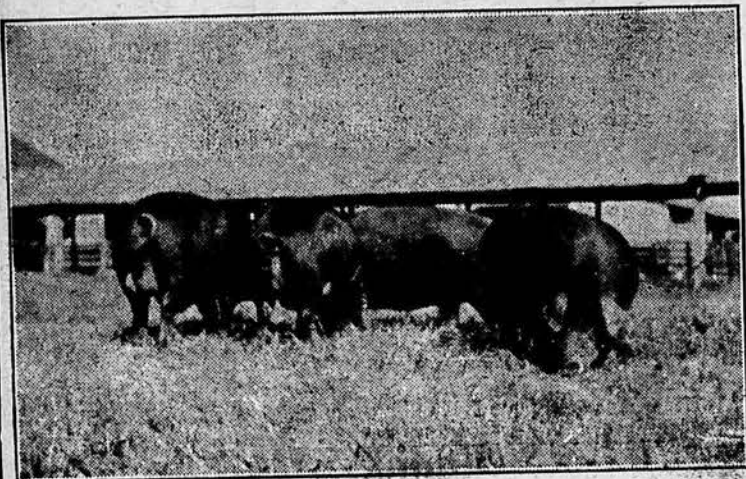
PLEASE SEND FOR CATALOG AND COME TO SALE

(Sale right in town)

Henry Murr,

Tonganoxie, Kan.

Auctioneers—**J. Zach Wells, J. C. McCulloch, Col. O'Brien.**



DUROC-JERSEY BRED SOW SALE

Winfield, Kan., February 28, 1919

60 HEAD OF BRED SOWS AND GILTS

Sired by such boars as Crimson King, Gano's Pride 2d, Danner's Col., Pathfinder Chief 2d, and Chief's Wonder, and they are bred to five of the best bred boars that the breed affords:

CHIEF'S WONDER, first prize and reserve senior champion boar, Kansas State Fair, 1918.
I AM GREAT WONDER, sired by Great Wonder I Am, the largest boar of the breed.
PATHFINDER JR. by Pathfinder, dam Big Lizzie that sold for \$805 last winter.
Z'S ORION CHERRY by King of Orion Cherries, dam by Prince Defender.
ORION KING'S ILLUSTRATOR by Crimson Orion King, dam Illustrator 2d.

Please send for catalog. We guarantee a good offering.

DANNER & WOODDELL,

- WINFIELD, KANSAS

The Pioneer Herd Poland China Sale

AT FARM NEAR DANVILLE, KANSAS

FEBRUARY 18, 1919

Tried Sows, Yearlings and Gilts

Fifteen corking A WONDERFUL KING gilts bred to BLACK BUSTER and COLUMBUS WONDER.

Ten fall gilts by LOGAN PRICE bred to OLIVIER'S BIG TIMM.

Five choice tried sows bred to the old hero, LOGAN PRICE.

Two sensational fall OLIVIER'S BIG TIMM gilts bred to a good son of A Wonder King.

Other good things bred to our good sires.

Fifty head of the best bred sows and gilts we have ever offered; we believe one of the best lots to be sold in any sale this spring.

OTHER ATTRACTIONS

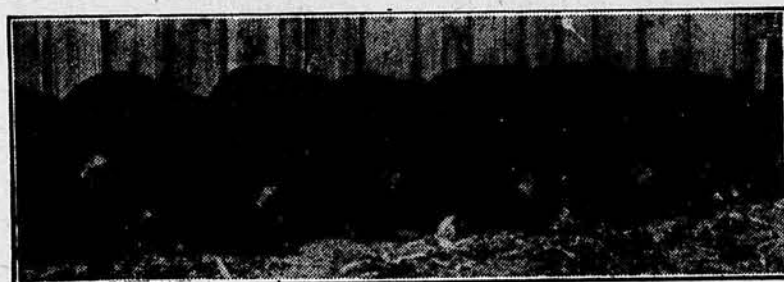
WONDERFUL LADY 2D by A Wonderful King out of a Logan Price dam, bred to Black Buster.

KING'S LADY by King After All, bred to Columbus Wonder.

GOLDEN LADY 2D by Golden Price, bred to Black Buster.

BIG SUSIE by King After All by A Wonderful King, bred to Big Lunker,

the massive son of Disher's Giant now at the head of the Ezra Warren herd at Clearwater, Kansas. Bred to our trio of herd boars: Olivier's Big Timm by Blue Valley Timm; Columbus Wonder by Big Bob Wonder; Black Buster by Giant Buster. Please send for



catalog and arrange to attend our sale. We guarantee a splendid lot of sows that will make good to both farmer and breeder.

F. Olivier & Sons, Danville, Kansas

THE SOUTHERN KANSAS CIRCUIT: Bert Hodson's Dispersion, Wichita, Kansas, February 17; Francois Olivier & Sons, Danville, Kansas, February 18; A. J. Erhart & Sons, Hutchinson, Kansas, February 19; Ross & Vincent, Sterling, Kansas, February 20; Bruce Hunter, Lyons, Kansas, February 21.

Bruce Hunter's Big Reduction Sale

Lyons, Kan., February 21, 1919

I am reducing my Poland China herd and will sell

FIFTY HEAD

Two Herd Boars, Ten Tried Sows, Seven Fall Yearlings, Thirty Spring Gilts

Only in a sale of this kind or in a complete dispersion would I consider parting with the class of animals I am here offering you. Heading the list is the great spring yearling herd boar,



LONGFELLOW TIM

By Longfellow Jumbo (Sigel Brown)

a boar with plenty of size for age, right as to general conformation and a great breeder.

Among the tried sows will be the great matron, O K Maid 2d by Big Bob Wonder, a full sister to Kemmerer's Bobbie Wonder. I bought this sow in the fall of 1916 and she has daughters and granddaughters in the sale. Pawnee Prospect Giantess and Mammoth Expansion Lady, bred by Williams Bros. of Villisca, Iowa, are a great pair. A number of big fall yearlings by Hadley Mastiff are included. Spring gilts by Longfellow Timm, Model Wonder and Big Valley Timm. I will show you as much size, age considered, as you will see in any sale this year.

The offering is bred for seasonable spring farrow to LONGFELLOW TIMM, JOHN HADLEY 2D by King John, and STERLING GIANT, a son of Will Lockridge's noted boar, The Giant.

Sale held in Palace Livery Barn, two blocks from the hotel. Every arrangement has been made for your comfort. Please send for catalog and come to my sale. I guarantee a good offering.

BRUCE HUNTER, LYONS, KANSAS

Col. J. C. Price, Auctioneer

THE SOUTHERN KANSAS CIRCUIT: Bert Hodson's Dispersion, Wichita, Kansas, February 17; Francois Olivier & Sons, Danville, Kansas, February 18; A. J. Erhart & Sons, Hutchinson, Kansas, February 19; Ross & Vincent, Sterling, Kansas, February 20; Bruce Hunter, Lyons, Kansas, February 21.

John W. Petford's Duroc Bred Sow Sale

IN NEW PAVILION AT

Saffordville, Kansas

February 26, 1919

FIFTY HEAD

Twenty Choice Duroc Sows and Thirty Fall and Spring Gilts

The tried sows are by Defender, King's Col., Big Wonder, John's Combination, Fancy Victor, Giant Wonder, Pathfinder, Grand Model, and others.

The spring gilts are sired by Illustrator's Orion 2d, Pet's Great Wonder by Great Wonder, dam by Grand Model, and a son of Burke's Good Enuff, dam by Great Wonder; Pathfinder, King's Col. Again, Cherry King Orion, Grand Model, Grand Model's Giant, Cherry King Disturber, and others, including the great sows, King's Lena by King the Col.; Pathfinder Girl by Pathfinder; Helen Gano by Educator, and Grand Lady 46th. These sows will be bred to Illustrator Orion 3d.

The fall yearlings are sired by Cherry Chief's Pride; Peter Pan; Burke's Good Enuff, and Illustrator Orion 3d, and will be bred to Model Ally, Illustrator 3d, and other good boars.

John W. Petford, Saffordville, Kans.

Please Send for Catalog and Arrange to Attend My Sale.

I Guarantee a Splendid Lot of Brood Sows and Gilts.

Clarence Dean Poland China Bred Sow Sale

At Dearborn, Missouri, February 25, 1919

On the electric line from Kansas City and St. Joseph, Mo.

Fifty Head Large Sows and Gilts

Including Mouw's Black Miss, the largest sow I ever owned, also two of her daughters, all bred to Dean's Big Timm.

Sixteen Fall Yearlings sired by Dean's Big Timm, Big Bone Model and Smooth Black Bone

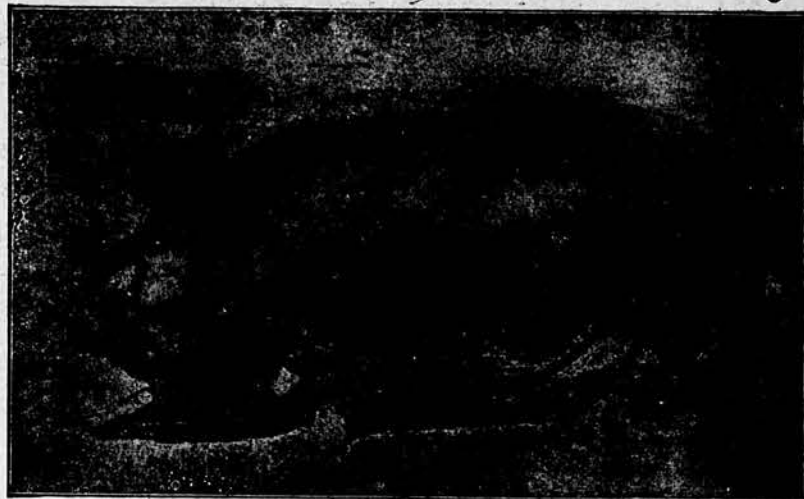
Several gilts in sale by Bloemendahl's Big Chief Again and Young Jones. Several by Iowa's King Best out of Black Maid 2d. Several by Karver & Vanderwilt's King out of Karver's Maid. Several out of a Big Bob sow and sow by Long Big Bone.

This will be the best lot I have ever offered, and the best lot of breeding.

Clarence Dean sold in his sale February 27, 1918, six of the largest Poland China sows I ever saw sold in one sale. They ALL MADE GOOD. The offering this year consists of several extra large sows and fall yearlings of unusual size.

(Signed) O. W. DEVINE.

Cars every hour and all cars stop at Dearborn.



PLEASE SEND FOR CATALOG AND COME TO SALE
ALL IMMUNED AND GUARANTEED RIGHT

Write for catalog to

Clarence Dean,

Weston, Mo.

REMEMBER, SALE WILL BE HELD IN DEARBORN, MO.

Auctioneer, P. M. Gross

Largest Registered Live Stock Sale Event in America

700 Head of Registered Animals Will be Sold at the Kansas National Live Stock Exposition, Pet Animal and Horse Show

AT WICHITA, KANSAS, FEBRUARY 24th to MARCH 1st, 1919

\$35,000 IN CASH FOR PREMIUMS AND EXPENSES

\$7,000 IN CASH PREMIUMS FOR THE SOCIETY HORSE SHOW

\$500 IN CASH AND SPECIAL PREMIUMS FOR PIGEONS, RABBITS AND FUR-BEARING ANIMALS

THE DAILY SALE PROGRAM

TUESDAY, FEB. 25, 2 P. M.

100—Registered Sheep—100
Shropshire and Hampshire

WEDNESDAY, FEB. 26, 9:30 A. M.

Poland China Swine
50 Bred Sows 5 Boars
2 p. m., 50 Shorthorn Cattle
30 Females 20 Bulls

THURSDAY, FEB. 27, 9:30 A. M.

Duroc Jersey Swine
50 Bred Sows 5 Boars
25—Galloway Bulls—25
30 Jacks 20 Jennets

FRIDAY, FEB. 28, 9:30 A. M.

125 Hereford Bulls 30 Females

9:30 a. m.

40 Holstein Cows 10 Bulls
6 Guernsey Cows 1 Bull

3 Jersey Cows 1 Bull
9:30 a. m., Aberdeen Angus
40 Females 10 Bulls

SATURDAY, MARCH 1, 9:30 A. M.

30 Trotting-Bred Stallions, Mares
and Geldings

15—Saddle Horses—15
5—Belgian Stallions—5
30—Percheron Stallions—30
50—Percheron Mares—50
10—Colts—10

Separate Catalog for Each Breed. Write for One You Want

F. S. Kirk, Supt.,

Wichita, Kansas

Entries to the Show Close February 10

TWO CHARTS

Study them both. They show how to protect your new engine from the start

LARGE production of automobiles is resumed. Tractor production expands. The farmer's growing needs will bring hundreds of thousands of new tractors and automobiles to the farms of America.

A warning is not out of order.

Many a tractor or automobile has gone too soon to the scrap heap because it got the wrong *start* in the first forty acres or the first one thousand miles.

When the engine is new, it is naturally "stiff." The bearings and all frictional surfaces must adjust themselves to each other by *use*.

If an *incorrect* oil is in the crank case at the start, the engine loses vital lubricating protection during the most trying period of its existence.

That is one reason why automobile and tractor manufacturers emphasize so strongly the importance of correct lubrication.

To be absolutely certain—to know without question—that you are doing everything possible to give your new engine its proper protection, fill up with the correct grade of Gargoyle Mobiloils at the *start*. Consult Charts shown here.

For years these Charts have been recognized authorities on *correct* engine lubrication—the kind that makes engines use *less* fuel and oil, deliver greater power and go longer between overhauls.

Gargoyle Mobiloils are put up in 1- and 5-gallon sealed cans, in 15- 30- and 55-gallon steel drums, and in wood half-barrels and barrels.



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

VACUUM OIL COMPANY, New York, U.S.A.

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

Domestic Branches:

New York Philadelphia Detroit Minneapolis Kansas City, Kan.
Boston Pittsburgh Chicago Indianapolis Des Moines



Correct AUTOMOBILE Lubrication

How to read the Chart

The four grades of Gargoyle Mobiloils, for engine lubrication, purified to remove free carbon, are:

- Gargoyle Mobiloil "A"
- Gargoyle Mobiloil "B"
- Gargoyle Mobiloil "E"
- Gargoyle Mobiloil Arctic

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

This Chart is compiled by the Vacuum Oil Company's Board of Engineers and represents our professional advice on Correct Automobile Lubrication.

AUTOMOBILES		1910 Models	1911 Models	1912 Models	1913 Models	1914 Models
Summer	Winter	Summer	Winter	Summer	Winter	Summer
Abbott	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.
Abbott-Detroit	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.
Allen	A	A	A	A	A	A
Apperson	A	A	A	A	A	A
Autocar (8 cyl.)	A	A	A	A	A	A
Autocar (6 cyl.)	Arc.	Arc.	Arc.	Arc.	Arc.	Arc.
Autocar (4 cyl.)	A	A	A	A	A	A
Autocar (2 cyl.)	A	A	A	A	A	A
Autocar (10 cyl.)	A	A	A	A	A	A
Autocar (12 cyl.)	A	A	A	A	A	A
Autocar (14 cyl.)	A	A	A	A	A	A
Autocar (16 cyl.)	A	A	A	A	A	A
Autocar (18 cyl.)	A	A	A	A	A	A
Autocar (20 cyl.)	A	A	A	A	A	A
Autocar (22 cyl.)	A	A	A	A	A	A
Autocar (24 cyl.)	A	A	A	A	A	A
Autocar (26 cyl.)	A	A	A	A	A	A
Autocar (28 cyl.)	A	A	A	A	A	A
Autocar (30 cyl.)	A	A	A	A	A	A
Autocar (32 cyl.)	A	A	A	A	A	A
Autocar (34 cyl.)	A	A	A	A	A	A
Autocar (36 cyl.)	A	A	A	A	A	A
Autocar (38 cyl.)	A	A	A	A	A	A
Autocar (40 cyl.)	A	A	A	A	A	A
Autocar (42 cyl.)	A	A	A	A	A	A
Autocar (44 cyl.)	A	A	A	A	A	A
Autocar (46 cyl.)	A	A	A	A	A	A
Autocar (48 cyl.)	A	A	A	A	A	A
Autocar (50 cyl.)	A	A	A	A	A	A
Autocar (52 cyl.)	A	A	A	A	A	A
Autocar (54 cyl.)	A	A	A	A	A	A
Autocar (56 cyl.)	A	A	A	A	A	A
Autocar (58 cyl.)	A	A	A	A	A	A
Autocar (60 cyl.)	A	A	A	A	A	A
Autocar (62 cyl.)	A	A	A	A	A	A
Autocar (64 cyl.)	A	A	A	A	A	A
Autocar (66 cyl.)	A	A	A	A	A	A
Autocar (68 cyl.)	A	A	A	A	A	A
Autocar (70 cyl.)	A	A	A	A	A	A
Autocar (72 cyl.)	A	A	A	A	A	A
Autocar (74 cyl.)	A	A	A	A	A	A
Autocar (76 cyl.)	A	A	A	A	A	A
Autocar (78 cyl.)	A	A	A	A	A	A
Autocar (80 cyl.)	A	A	A	A	A	A
Autocar (82 cyl.)	A	A	A	A	A	A
Autocar (84 cyl.)	A	A	A	A	A	A
Autocar (86 cyl.)	A	A	A	A	A	A
Autocar (88 cyl.)	A	A	A	A	A	A
Autocar (90 cyl.)	A	A	A	A	A	A
Autocar (92 cyl.)	A	A	A	A	A	A
Autocar (94 cyl.)	A	A	A	A	A	A
Autocar (96 cyl.)	A	A	A	A	A	A
Autocar (98 cyl.)	A	A	A	A	A	A
Autocar (100 cyl.)	A	A	A	A	A	A
Autocar (102 cyl.)	A	A	A	A	A	A
Autocar (104 cyl.)	A	A	A	A	A	A
Autocar (106 cyl.)	A	A	A	A	A	A
Autocar (108 cyl.)	A	A	A	A	A	A
Autocar (110 cyl.)	A	A	A	A	A	A
Autocar (112 cyl.)	A	A	A	A	A	A
Autocar (114 cyl.)	A	A	A	A	A	A
Autocar (116 cyl.)	A	A	A	A	A	A
Autocar (118 cyl.)	A	A	A	A	A	A
Autocar (120 cyl.)	A	A	A	A	A	A
Autocar (122 cyl.)	A	A	A	A	A	A
Autocar (124 cyl.)	A	A	A	A	A	A
Autocar (126 cyl.)	A	A	A	A	A	A
Autocar (128 cyl.)	A	A	A	A	A	A
Autocar (130 cyl.)	A	A	A	A	A	A
Autocar (132 cyl.)	A	A	A	A	A	A
Autocar (134 cyl.)	A	A	A	A	A	A
Autocar (136 cyl.)	A	A	A	A	A	A
Autocar (138 cyl.)	A	A	A	A	A	A
Autocar (140 cyl.)	A	A	A	A	A	A
Autocar (142 cyl.)	A	A	A	A	A	A
Autocar (144 cyl.)	A	A	A	A	A	A
Autocar (146 cyl.)	A	A	A	A	A	A
Autocar (148 cyl.)	A	A	A	A	A	A
Autocar (150 cyl.)	A	A	A	A	A	A
Autocar (152 cyl.)	A	A	A	A	A	A
Autocar (154 cyl.)	A	A	A	A	A	A
Autocar (156 cyl.)	A	A	A	A	A	A
Autocar (158 cyl.)	A	A	A	A	A	A
Autocar (160 cyl.)	A	A	A	A	A	A
Autocar (162 cyl.)	A	A	A	A	A	A
Autocar (164 cyl.)	A	A	A	A	A	A
Autocar (166 cyl.)	A	A	A	A	A	A
Autocar (168 cyl.)	A	A	A	A	A	A
Autocar (170 cyl.)	A	A	A	A	A	A
Autocar (172 cyl.)	A	A	A	A	A	A
Autocar (174 cyl.)	A	A	A	A	A	A
Autocar (176 cyl.)	A	A	A	A	A	A
Autocar (178 cyl.)	A	A	A	A	A	A
Autocar (180 cyl.)	A	A	A	A	A	A
Autocar (182 cyl.)	A	A	A	A	A	A
Autocar (184 cyl.)	A	A	A	A	A	A
Autocar (186 cyl.)	A	A	A	A	A	A
Autocar (188 cyl.)	A	A	A	A	A	A
Autocar (190 cyl.)	A	A	A	A	A	A
Autocar (192 cyl.)	A	A	A	A	A	A
Autocar (194 cyl.)	A	A	A	A	A	A
Autocar (196 cyl.)	A	A	A	A	A	A
Autocar (198 cyl.)	A	A	A	A	A	A
Autocar (200 cyl.)	A	A	A	A	A	A
Autocar (202 cyl.)	A	A	A	A	A	A
Autocar (204 cyl.)	A	A	A	A	A	A
Autocar (206 cyl.)	A	A	A	A	A	A
Autocar (208 cyl.)	A	A	A	A	A	A
Autocar (210 cyl.)	A	A	A	A	A	A
Autocar (212 cyl.)	A	A	A	A	A	A
Autocar (214 cyl.)	A	A	A	A	A	A
Autocar (216 cyl.)	A	A	A	A	A	A
Autocar (218 cyl.)	A	A	A	A	A	A
Autocar (220 cyl.)	A	A	A	A	A	A
Autocar (222 cyl.)	A	A	A	A	A	A
Autocar (224 cyl.)	A	A	A	A	A	A
Autocar (226 cyl.)	A	A	A	A	A	A
Autocar (228 cyl.)	A	A	A	A	A	A
Autocar (230 cyl.)	A	A	A	A	A	A
Autocar (232 cyl.)	A	A	A	A	A	A
Autocar (234 cyl.)	A	A	A	A	A	A
Autocar (236 cyl.)	A	A	A	A	A	A
Autocar (238 cyl.)	A	A	A	A	A	A
Autocar (240 cyl.)	A	A	A	A	A	A
Autocar (242 cyl.)	A	A	A	A	A	A
Autocar (244 cyl.)	A	A	A	A	A	A
Autocar (246 cyl.)	A	A	A	A	A	A
Autocar (248 cyl.)	A	A	A	A	A	A
Autocar (250 cyl.)	A	A	A	A	A	A
Autocar (252 cyl.)	A	A	A	A	A	A
Autocar (254 cyl.)	A	A	A	A	A	A
Autocar (256 cyl.)	A	A	A	A	A	A
Autocar (258 cyl.)	A	A	A	A	A	A
Autocar (260 cyl.)	A	A	A	A	A	A
Autocar (262 cyl.)	A	A	A	A	A	A
Autocar (264 cyl.)	A	A	A	A	A	A
Autocar (266 cyl.)	A	A	A	A	A	A
Autocar (268 cyl.)	A	A	A	A	A	A
Autocar (270 cyl.)	A	A	A	A	A	A
Autocar (272 cyl.)	A	A	A	A	A	A
Autocar (274 cyl.)	A	A	A	A	A	A
Autocar (276 cyl.)	A	A	A	A	A	A
Autocar (278 cyl.)	A	A	A	A	A	A
Autocar (280 cyl.)	A	A	A	A	A	A
Autocar (282 cyl.)	A	A	A	A	A	A
Autocar (284 cyl.)	A	A	A	A	A	A
Autocar (286 cyl.)	A	A	A	A	A	A
Autocar (288 cyl.)	A	A	A	A	A	A
Autocar (290 cyl.)	A	A	A	A	A	A
Autocar (292 cyl.)	A	A	A	A	A	A
Autocar (294 cyl.)	A	A	A	A	A	A
Autocar (296 cyl.)	A	A	A	A	A	A
Autocar (298 cyl.)	A	A	A	A	A	A
Autocar (300 cyl.)	A	A	A	A	A	A
Autocar (302 cyl.)	A	A	A	A	A	A
Autocar (304 cyl.)	A	A	A	A	A	A
Autocar (306 cyl.)	A	A	A	A	A	A
Autocar (308 cyl.)	A	A	A	A	A	A
Autocar (310 cyl.)	A	A	A	A	A	A
Autocar (312 cyl.)	A	A	A	A	A	A
Autocar (314 cyl.)	A	A	A	A	A	A
Autocar (316 cyl.)	A	A	A	A	A	A
Autocar (318 cyl.)	A	A	A	A	A	A
Autocar (320 cyl.)	A	A	A	A	A	A
Autocar (322 cyl.)	A	A	A	A	A	A
Autocar (324 cyl.)	A	A	A	A	A	A
Autocar (326 cyl.)	A	A	A	A	A	A
Autocar (328 cyl.)	A	A	A	A	A	A
Autocar (330 cyl.)	A	A	A	A	A	A
Autocar (332 cyl.)	A	A	A	A	A	A
Autocar (334 cyl.)	A	A	A	A	A	A
Autocar (336 cyl.)	A	A	A	A	A	A
Autocar (338 cyl.)	A	A	A	A	A	A
Autocar (340 cyl.)	A	A	A	A	A	A
Autocar (342 cyl.)	A	A	A	A	A	A
Autocar (344 cyl.)	A	A	A	A	A	A
Autocar (346 cyl.)	A	A	A	A	A	A
Autocar (348 cyl.)	A	A	A	A	A	A
Autocar (350 cyl.)	A	A	A	A	A	A
Autocar (352 cyl.)	A	A	A	A	A	A
Autocar (354 cyl.)	A	A	A	A	A	A
Autocar (356 cyl.)	A	A	A	A	A	A
Autocar (358 cyl.)	A	A	A	A	A	A
Autocar (360 cyl.)	A	A	A	A	A	A
Autocar (362 cyl.)	A	A	A	A	A	A
Autocar (364 cyl.)	A	A	A	A	A	A
Autocar (366 cyl.)	A	A	A	A	A	A
Autocar (368 cyl.)	A	A	A	A	A	A
Autocar (370 cyl.)	A	A	A	A	A	A
Autocar (372 cyl.)	A	A	A	A	A	A
Autocar (374 cyl.)	A	A	A	A	A	A
Autocar (376 cyl.)	A	A	A	A	A	A
Autocar (378 cyl.)	A	A	A	A	A	A
Autocar (380 cyl.)	A	A	A	A	A	A
Autocar (382 cyl.)	A	A	A	A	A	A
Autocar (384 cyl.)	A	A	A	A	A	A
Autocar (386 cyl.)	A	A	A	A	A	A
Autocar (388 cyl.)	A	A	A	A	A	A
Autocar (390 cyl.)	A	A	A	A	A	A
Autocar (392 cyl.)	A	A	A	A	A	A
Autocar (394 cyl.)	A	A	A	A	A	A
Autocar (396 cyl.)	A	A	A	A	A	A
Autocar (398 cyl.)	A	A	A	A	A	A
Autocar (400 cyl.)	A	A	A	A	A	A
Autocar (402 cyl.)	A	A	A	A	A	A
Autocar (404 cyl.)	A	A	A	A	A	A
Autocar (406 cyl.)	A	A	A	A	A	A
Autocar (408 cyl.)	A	A	A	A	A	A
Autocar (410 cyl.)	A	A	A	A	A	A
Autocar (412 cyl.)	A	A	A	A	A	A
Autocar (414 cyl.)	A	A	A	A	A	A
Autocar (416 cyl.)	A	A	A	A	A	A
Autocar (418 cyl.)	A	A	A	A	A	A
Autocar (420 cyl.)	A	A	A	A	A	A
Autocar (422 cyl.)	A	A	A	A	A	A
Autocar (424 cyl.)	A	A	A	A	A	A
Autocar (426 cyl.)	A	A	A	A	A	A
Autocar (428 cyl.)	A	A	A	A	A	A
Autocar (430 cyl.)	A	A	A	A	A	A
Autocar (432 cyl.)	A	A	A	A	A	A
Autocar (434 cyl.)	A	A	A	A	A	A
Autocar (436 cyl.)	A	A	A	A	A	A
Autocar (438 cyl.)	A	A	A	A	A	A
Autocar (440 cyl.)	A	A	A	A	A	A
Autocar (442 cyl.)	A	A	A	A	A	A
Autocar (444 cyl.)	A	A	A	A	A	A
Autocar (446 cyl.)	A	A	A	A	A	A
Autocar (448 cyl.)	A	A	A	A	A	A
Autocar (450 cyl.)	A	A	A	A	A	A
Autocar (452 cyl.)	A	A	A	A	A	A
Autocar (454 cyl.)	A	A	A	A	A	A
Autocar (456 cyl.)	A	A	A	A	A	A
Autocar (458 cyl.)	A	A	A	A	A	A
Autocar (460 cyl.)	A	A	A	A	A	A
Autocar (462 cyl.)	A	A	A	A	A	A
Autocar (464 cyl.)	A	A	A	A	A	A
Autocar (466 cyl.)	A	A	A	A	A	A
Autocar (468 cyl.)	A	A	A	A	A	A
Autocar (470 cyl.)	A	A	A	A	A	A
Autocar (472 cyl.)	A	A	A	A	A	A
Autocar (474 cyl.)	A	A	A	A	A	A
Autocar (476 cyl.)	A	A	A	A	A	A
Autocar (478 cyl.)	A	A	A	A	A	A
Autocar (480 cyl.)	A	A	A	A	A	A
Autocar (482 cyl.)	A	A	A	A	A	A
Autocar (484 cyl.)	A	A	A	A	A	A
Autocar (486 cyl.)	A	A	A	A	A	A
Autocar (488 cyl.)	A	A	A	A	A	A
Autocar (490 cyl.)	A	A	A	A	A	A
Autocar (492 cyl.)	A	A	A	A	A	A
Autocar (494 cyl.)	A	A	A	A	A	A
Autocar (496 cyl.)	A	A	A	A	A	A
Autocar (498 cyl.)	A	A	A	A	A	A
Autocar (500 cyl.)	A	A	A	A	A	A
Autocar (502 cyl.)	A	A	A	A	A	A
Autocar (504 cyl.)	A	A	A	A	A	A
Autocar (506 cyl.)	A	A	A	A	A	A
Autocar (508 cyl.)	A	A	A	A	A	A
Autocar (510 cyl.)	A	A	A	A	A	A
Autocar (512 cyl.)	A	A	A	A	A	A
Autocar (514 cyl.)	A	A	A	A	A	A
Autocar (516 cyl.)	A	A	A	A	A	A