

KANSAS FARMER

For the improvement

of the Farm and Home

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Vocational Agriculture in Kansas

High Schools Rapidly Taking Advantage of Federal Aid Provided by Smith-Hughes Act

THIRTY-ONE of the 600 high schools of Kansas now offer courses in vocational agriculture. These courses have been possible through the use of federal funds provided in the Smith-Hughes act. These schools are scattered from Webster and Eden City, in the western part of the state, to Ft. Scott and Tonganoxie, in the east end. In these high schools vocational agriculture is being taught in a way which could be duplicated in any high school in the state. In fact, it is the kind of work every rural high school ought to do.

The time has come when the public school system of the state must give as much training to the boy who runs the home farm as it does to his brother who becomes an experiment station expert, or a doctor, or a lawyer," said J. Zahmley in the twenty-first biennial report of the State Board of Agriculture. "That kind of training, or work in vocational agriculture, must be given in the local high school, and it must include two things: a study of the best practices and the scientific reasons underlying these practices, and then actual practice in conducting projects under the supervision of a trained instructor.

First Methods Wrong

Only a few years ago agriculture was introduced into the high schools. It was taught as any other academic subject. The teacher, copying after the sciences, the text book was supplemented by laboratory exercises. This was good, but agriculture is a vocation, the occupation of a great majority of the people in this middle west, and after all, were we teaching agriculture, or were we just teaching about agriculture? Are we not confining the students within the walls of the school room to teach agriculture when nature, with all her wealth of agricultural information, is just outside, ready to open her arms to satisfy the active, inquiring mind of the boy. Herbert Quick has said that the home farm affords a better laboratory than money can buy if only we can develop a school system that will make use of it. Thanks to those who have been crusaders against the academic type of agricultural teaching, such a system is being rapidly developed."

In the round table discussion on vocational agriculture in the high schools of Kansas, at the recent teachers' convention in Topeka, led by H. L. Kent, director of vocational education in Kansas, it was clearly brought out that the key in teaching vocational agriculture in the high schools of Kansas is to get the student to think of farm problems in terms of dynamic activity—not just on paper. He must be inspired with an actual working things out as a farmer on his land. Practical work to make of him a real producer and not a theorizer is the basis of the course. The boy does not learn how to treat

seed wheat for smut or potatoes for scab solely from a text book. He is taken into the field and required to treat the wheat or potatoes himself. He may even be given the task of taking care of the seed supply of some farmer. He must do his own planning and solving of farm problems, so that when ten years from now he desires to build a chicken house, for instance, he can do it by himself. He must decide whether he shall use a four-inch or a six-inch board. Thus the course is not only for skill in manual training, but intellectual training also.

The idea is not to teach all about wheat at one time, potatoes at another and livestock some other time. The course is divided into field and shop work. The field work occurs in the fall and spring when the farmer is meeting real problems. An important part of the fall work is the practical study of wheat at the time the farmer is preparing the seed bed. With this comes soil and moisture study, with its consequent problems of the kind of wheat to sow and the best method to use. In this work the school must have the co-operation of the farmer. One farmer, who did not believe in the work, was greatly helped by the vocational agriculture class of the town school. On one of its trips around the country the class noticed that the man's alfalfa field was being destroyed by the cut worm. After finally convincing him of the fact, the boys were able by quick action to save the field and enlist the farmer's co-operation.

The study of farm machinery is taken up just before Dad is going to use machinery on the farm. It is not a text book theory of machinery and not given from the point of view of the engineer, but from that of the operating farmer.

The things of secondary importance are left for the winter months when experiments may be carried on in the laboratories, and the definite relations be-

tween agriculture and science studied out. Biology and pathology and veterinary medicine have a direct bearing on farm life. The life history of the Hessian fly is an important study in preparation for the seeding of wheat.

Project work is a means of making the course more practical. The student must take up some experiment and carry it through to the end. Enough work is given to prevent loafing. This bars the habitual flunker. However, it sometimes happens that the salvation of the flunker in other lines of work is this chance to actually create something with his hands. Exactness is essential. When asked the amount of potatoes he is to plant the boy is not allowed to say from three pecks to one and one-half bushels. He must be definite.

The Home Project Plan

The home project plan has been successfully practiced for six or seven years in teaching agriculture as a vocational subject. Massachusetts was the first state to make use of this method. It was next introduced into New York, Pennsylvania and Indiana, all of these states giving state aid in the teaching of vocational agriculture based on the project plan. The method had aroused such wide interest that it was made one of the essential features of the Smith-Hughes Vocational Educational Act, passed by Congress in 1917. Following this Federal legislation schools all over the United States have been attempting to use the home farm in teaching agriculture.

In Kansas the home project plan is now being carried out successfully in nearly all the schools giving courses in vocational agriculture, including city, county, consolidated and rural high schools. At Webster, Kansas, a small inland town in Rooks county, five miles from a railroad, a consolidated high school is successfully following the home

project method. The rural high school of Havensville organized in 1918, is successfully handling its vocational agriculture by this method. County high schools, such as those of Dickinson, Atchison and Crawford counties, and a number of city high schools are included in the list giving these vocational courses.

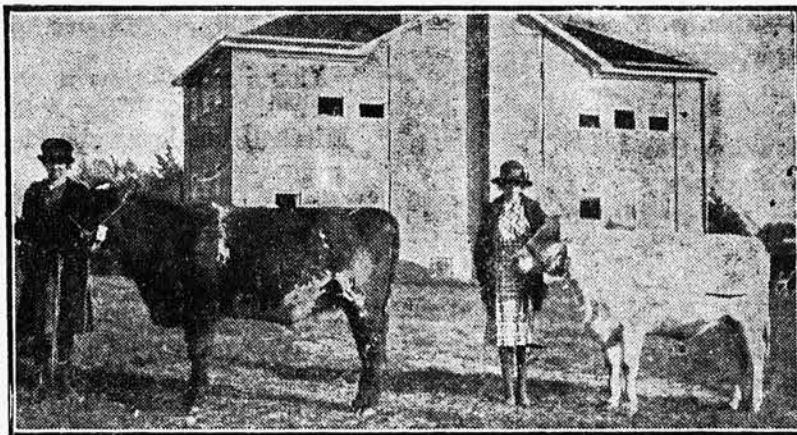
The summary of the vocational work in agriculture done by R. T. Kersey, of the Garden City high school in 1918, shows that thirteen students handled project work. One hundred and forty-seven acres were involved. The growing of cane, feterita, kafir, milo, sweet-corn and sweet potatoes were included. The products grown by these students in their home projects were valued at \$3,447.95. An itemized account of all expenses was kept. The total net profits amounted to \$1,451.10. It will be noted that all the projects were along the line of crops. They were selected along the general line of the major part of the class room work in agriculture for that year. It is interesting to note the kind of work reported in detail by the individual student. Paul Horst had nine acres in milo. His report shows exactly how he prepared the seed bed. He used three pounds of seed to the acre, harrowed his plot June 12, again June 20, used a disk sled June 25, a five-tooth cultivator July 10, and again July 23 following a shower. He headed three acres by hand October 5 and harvested two acres with a header; four acres failed to seed. The total yield was 103 bushels of grain and 22½ tons of fodder. His financial statement showed a net profit of \$298.80. This boy was only fifteen years old.

In planning these home projects the boy must get the consent of his parents and arrangements must be made for the land, implements and teams. Wherever possible these are obtained at home by payment of a reasonable rental. Sometimes it may be necessary for a student to rent a piece of land. A boy at the Webster high school last year rented ten acres of a farmer, paying share rent. He worked for this farmer to pay for the seed and the use of the tools and teams needed to carry on the work of his project. All this boy needed to make a success of his project was his ambition and willingness to work.

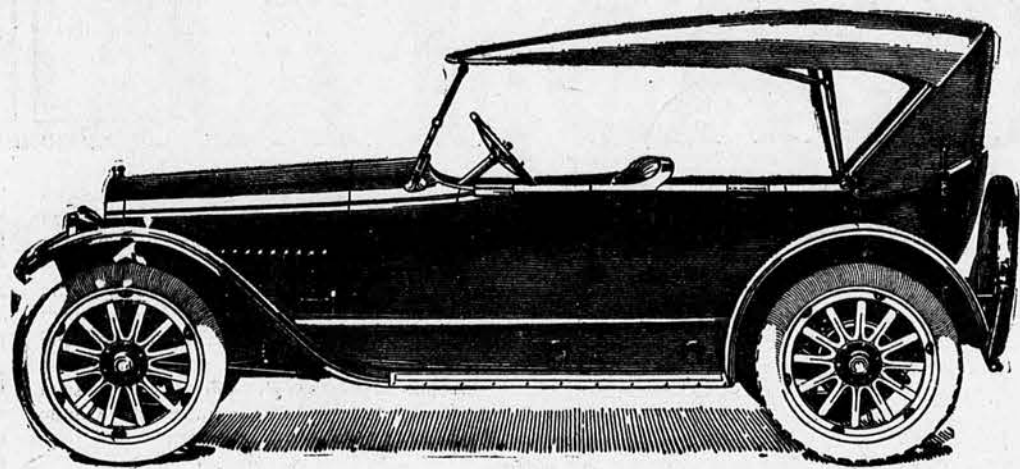
Home Projects in Livestock

Home projects are also conducted along different lines of livestock production. These projects being carried on when the class is engaged in the animal husbandry work. Work with poultry, pigs, sheep, dairy cows, afford abundant opportunity for valuable work in these different types of livestock production. In the Arkansas City high school last year under the supervision of L. B. Pollum, instructor in vocational agriculture a boy fed five pigs, for 136 days. He used corn at \$1.50 a bushel, feterita at \$1.35 a bushel, shorts \$2.30 a hun-

(Continued on Page Nine)



DORA AND EVELYN GLANOY WITH THEIR FIRST AND SECOND PRIZE CALVES OF FLOAT SHORTHORN CALF CLUB, POTTER SCHOOL, FARM AND HOME COMMUNITY FAIR.—A THOUSAND PERSONS IN ATTENDANCE



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GRANGE HONORS KANSAN

Kansas farmer—B. Needham, of Master of the Kansas State Grange, was elected Overseer of the National Grange, which held its annual convention at Grand Rapids, Michigan, last week. His office is second in rank to that of the National Grange is S. J. Lowell, Master of the New York State Grange. He succeeds Oliver Wilson, of Peoria, Illinois, who has most effectively headed the National Grange for the past few years.

The National Grange is a strong and active organization, and has in the past year steadily pursued its policy of uncompromising Americanism, which has characterized its constructive activities since it became a factor in promoting agriculture and the welfare of agricultural workers. There are certain radicals in the Grange, we are told, who express dissatisfaction with what they call the ultra-conservatism of T. C. Atkeson, who represents the National Grange in Washington. One of the features of the recent meeting was the resolution made by Mr. Atkeson, who has been the job in Washington for the past six months. We believe that it is the common sense and level-headedness displayed by men of Mr. Atkeson's type which has put the Grange in its commanding position in agricultural organization matters.

The establishment of this Washington office was authorized at the last annual session of the National Grange, and Mr. Atkeson began work January 1, 1919. His instructions were included in a single paragraph which said: "Such headquarters, in our opinion, should cooperate with other farm organizations in support of such policies or measures as may be mutually agreed upon." The wisdom of establishing this office appeared in the events which have transpired in Washington, and was clearly shown in the report of its accomplishments as given to the national meeting recently ended.

Resolutions adopted by the National Grange include recommendations for business and legislative co-operations, prohibition enforcement legislation, 100 per cent Americanism, orderly government and the rule of majority, personal and governmental economy, strong government control of corporations, especially those engaged in supplying the necessities of life, punishment of profiteers by imprisonment as well as opposition to all government price fixing, and opposition to taxation of general land bank bonds. A resolution was also adopted declaring that the Secretary of Agriculture should be a practical farmer, and pledging the Grange to its best efforts in securing the appointment of a man "fulfilling these conditions regardless of politics." Another resolution opposed universal military training and a large standing army, declaring "a caste of military authority, which has its sole excuse in its shoul-

der-strap."

from twenty-four central and western states. Approximately half of these manufacture farming implements, tractors, threshing machines, wagons, barn equipment, silos, fresh water systems, windmills, gates, fences, boilers, stoves, beds, milk cans, and countless other articles which are purchased by the farmer, the dairyman and the stock raiser. We feel sure our readers will be interested in this campaign for a "Chicago base" which is being made by this association of manufacturers, although we do not feel certain that the obtaining of the Chicago base will do all that it is supposed to do. The competition in the Chicago territory may be such that steel producers can cut loose from Pittsburgh and make their own prices independently, depending entirely upon the competitive demand for the product in their territory. On its face it would seem that the establishment of the Chicago base would eliminate the payment of the unearned freight from Pittsburgh and give the consumer the advantage of the cheaper production claimed at the mills in the Chicago territory as well.

THE PEACE TREATY

From present indications the question of the peace treaty and the League of Nations will be the big issue in the presidential campaign of 1920. There seems little hope now that the opposing factions in the United States Senate will get together when Congress meets in December for the regular session. The slate has been wiped clean as a result of the final vote of the Senate as the special session ended, and it will have to begin all over again if the treaty is again presented for ratification. It seems almost unbelievable that this country, so united in the conduct of the war, has become so widely split in the attempt to take a forward step in world brotherhood. We do not assume to hold a brief for either of the political parties involved in the controversy, but those who have hoped for non-partisan consideration of the great world problems growing out of our entrance in the war have been grievously disappointed. It is significant that the outcome of the negotiations in the Senate has given cause for rejoicing on the part of the bolshevists, I. W. W.s, and extreme Sein Feiners of this country. Unless something wholly unexpected happens when Congress reassembles in regular session the final decision will be up to the people.

PAYMENT OF INCOME TAX

It will soon be time to close up the year's business and make out returns for the payment of the income tax. It is announced from the Wichita office of the Bureau of Internal Revenue that the forms for filing income and excess profits tax returns will be ready for issuance early in December. This will be a convenience to taxpayers, for they can make out their returns immediately upon closing their accounts for the year 1919, when accurate knowledge of all items will be fresh in mind. The period for filing the reports is from January 1 to March 15. W. H. L. Pepperrell, revenue collector for Kansas, is urging that taxpayers avail themselves of the opportunity to make their returns early, both as a convenience to themselves and as a means of expediting the work of the government. Form 1040-A will be used for filing individual tax returns of \$5,000 and less, and Form 1040 for filing returns of incomes in excess of that amount. The normal rate of tax for 1919 provided for in the revenue act of

1918 is 4 per cent on the first \$4,000 above the exemptions and 8 per cent on the remaining net income. The tax for 1918 was 6 and 12 per cent respectively. The surtax rates remain the same, as do the exemptions of \$1,000 for single persons and \$2,000 for married persons and heads of families. As soon as the forms are available at the offices and branch offices of collectors of internal revenue announcements will be made.

BANISH THE SCRUB SIRE

No more progressive program could be advanced by improved live stock associations than the placing of good pure-bred sires on all farms coming within its jurisdiction. A county association can by a well organized campaign of publicity and community effort do much to promote the use of pure-bred sires upon the farms of the county. Pure-bred sires mean better stock. If half the effort had been spent in pushing for the universal use of the pure-bred sire that has been exerted in setting up new inexperienced men as breeders of pure-bred live stock, the general run of our market stock would rank much higher than it does. Breeders of pure-bred live stock will do well to line up with the nationwide program of boosting for an increased use of pure-bred sires in live stock production.

CONSERVING LIFE AND HEALTH

What would you do if one-fifth of your calves died each year? If worms and insects destroyed or damaged your crops before they had barely begun to grow? If one in every ten of your business enterprises failed just as it was getting a start? If your roads and bridges and buildings deteriorated and wore out too soon?

Do you know that one in every five babies dies before its first birthday? Contagious diseases kill 300,000 children every year and permanently injure countless others. One in every ten men and women dies of tuberculosis in the prime of life. More women die in childbirth than of any disease except tuberculosis. Countless numbers of men, women and children are hampered and distressed by ill health. And yet the prevention of much of this sickness and these premature deaths is within the control of man.

The progressive farmer reads his farm journals, attends institutes, and keeps himself constantly up to date about the latest improvements in stock breeding and in agriculture. The prosperous business man spends money and effort to keep abreast of the latest devices to protect and build up his business. The first class engineer scraps his old machines as fast as improved ones are invented, and abandons old methods for the minute science discovers better ones. No one who wants to succeed is content with old ways, worn-out, handed-down methods, clumsy, old-fashioned tools. He wants the newest and best. What good is your business if you lose your health? The strength to work is man's surest capital. Health is his most priceless possession. And yet he may throw them both away by clinging to old ideas handed down from father to son, by believing old superstitions, and by using old remedies and treatments long since proved by science and common sense to be useless or worse than useless. If you protect your business by seeking the most modern methods and the latest inventions, why not protect your health in the same way?

Good health and long life are the inherent rights of everyone. But these

rights are not to be obtained for the asking, and often are needlessly sacrificed. The science of medicine has made tremendous advance in the last two decades. It has discovered many ways of saving life, preventing sickness, and fortifying health. Wherever these new scientific methods have been practiced, their value has been proved by the decrease in the amount of sickness and the number of deaths. If you wish to preserve your health and that of your family, you should see to it that your community is protected by the agents of modern health practices. The community nurse is one of the best of these agents for the protection of life and health. When the influenza epidemic swept across the country many a community awakened too late to its unpreparedness and discovered that it had no public health nurse to help fight its battle against the invading hosts of disease.

The community nurse cares for the sick, protects the well, and teaches the principles of good health to all. The best dollar any community can spend is the dollar it invests in conservation of community life and health. It yields biggest returns. The finest advertising asset which a community can have is a low sickness and death rate. The big cities have long recognized this fact, and have supplied themselves with large staffs of public health nurses. Is the life of the city baby, the city boy and girl, the city mother and father, more precious than the life of your baby, your boy, your wife, your mother?

AGRICULTURE IN HIGH SCHOOLS

"Vocational Agriculture in the High Schools of Kansas" is the subject of an article appearing on the front page of this issue. This work in our Kansas high schools has made rapid progress since it first began in 1918. The teachers are employed for twelve months and the salaries have been advanced from \$1,500 to about \$2,200. Teachers properly qualified are not easily found. It has been the policy to maintain a high standard of experience and preparation in order that the instruction be worth while. College graduates must have special training before they are considered competent to teach the vocational agriculture courses.

In 1918 six schools were conducting courses in vocational agriculture under the terms of the Smith-Hughes Act. During the second year there were fifteen and at the present time the number has increased to thirty-one. H. L. Kent, state director of vocational education, reports that one school has already made application to qualify for the work beginning next year. In several schools the enrollment is double that of last year. In one school all the freshmen boys are enrolled in the course, and in three it has been necessary to employ a second instructor.

The federal funds for employing vocational teachers available this year will amount to \$24,250. This amount is duplicated by the state. Next year there will be a federal fund of \$30,330, and the same in state funds.

This work is given in county, city and rural and small town high schools, and the work is fully as successful in the small schools as in the larger, because of rural patronage.

We are glad to note the progress being made in this line of school work. We would urge a careful reading of the article in this issue on vocational agriculture as taught in the high schools of Kansas.

FARMER'S INTEREST IN STEEL

We are printing in this issue an article setting forth some facts relative to the method of selling steel. The prevailing practice of selling rolled steel to consumers on the basis of the Pittsburgh price plus freight from that point, no matter where the steel is actually produced, would seem to work a great injustice to the western consumer. This information is furnished by the Western Association of Rolled Steel Consumers, which is composed of 800 manufacturers

ECONOMIC STATUS OF HORSES

More Power Available on Farms Than in All Our Factories

By WAYNE DINSMORE,
Secretary Percheron Society of America

HORSE power (in the form of horses) is produced with less expenditure of human labor than is any other type. On the prairies of the West colts are conceived, foaled and matured without the intervention of any human labor whatsoever. Even on corn belt farms, human labor enters but slightly into the production of horses, for where intelligent management prevails the growing colts run on pasture from May 1 until December 1, and are out during the day for the remaining months of the year. The additional feed required per colt during the five winter months—December 1 to May 1—will be amply supplied by the crops grown on one acre together with winter pasture. One acre of pasture—half in sweet clover and half in bluegrass—will grow a colt well from May 20 till November 1, and another half acre of bluegrass pasture is reserved through the season to turn on about November 1, being used, with the roughage and grain from the one acre devoted to crop, to carry the colt through the winter. It follows therefore that it requires, to grow a colt from foaling till thirty-six months of age, the use of two and one-half acres for three years, or seven and one-half acres in all.

The horse and man labor required to grow the grain and forage crops on three acres of the above amounts to eight days of horse labor and four and one-half days of man labor; and to this we must add twelve days more man labor—four days per year—spent in fertilizing and seeding pastures and in feeding and caring for the colt during the winter.

These figures are based on crops which are being produced by good livestock farmers, and pertain to land producing per acre fifty bushels oats, and one ton straw, sixty bushels corn and one and one-half tons stover, and four tons of alfalfa hay, part of which is exchanged for bran at the rate of two pounds alfalfa for one pound bran; and these yields are being secured by thousands of good livestock farmers in the middle west. The days' labor required are figured from actual time records of farm operations worked out by the University of Illinois.

The total cost of a good grade draft colt at three years of age in acreage and labor therefore amounts to the use of two and one-half acres of land three seasons, or seven and one-half acres in all, at such rent as prevails in such a community, plus sixteen and one-half days of man labor and eight days of horse labor. To this cost we must add the service fee of the sire, \$20; and still further 20 per cent of the foregoing cost, which we add to allow for the individual colt's share of fence and shelter, seed and machinery, possible loss of colts after some expenditure has been incurred thereon, veterinary expense, taxes and other incidentals. This gives us the total cost of the colt at thirty-six months of age; but against this we must credit the fertilizer produced, which will be discussed later.

Limited labor is required also in the maintenance of a horse at hard work on the farm. Under conditions similar to those cited for growing draft colts two acres in crop—corn, oats and alfalfa—together with one acre in pasture, will carry a hard-worked draft horse a year on the farm and provide an ample allowance for a horse weighing over 1,600 pounds in working flesh. Reducing this to terms of men and horse labor, we find that it will require five and one-third days of horse labor and three days of man labor to produce the two acres of crop. The labor required to care for the horse while at work may be ignored for it is covered by the general labor charge, and is less in any event, than the labor required with any other type of motive power, and much less expensive,

for specialized, highly paid labor is required to operate other types of motive power satisfactorily, while the horse will operate generally with good results even though handled by boys or indifferent employees.

Labor required in caring for the horse when idle, but not out on pasture, must be provided for however, and this amounts to about eight days man labor per year; so that the cost of maintaining a horse at hard farm work consists of the use of three acres of land one year (at such rent as prevails in communities where such productive land is found,) five and one-third days of horse labor and eleven days of man labor. To this, in reckoning costs, we must add ten per cent of the preceding cost to provide for extra horses carried during the busy season, \$20 for insurance, \$10 for shoeing, and \$20 for the annual share each horse must continue to shelter, harness, taxes, depreciation and other incidentals; though it must be stated that under good farm management horses are sold before much, if any, depreciation occurs.

Against this total cost, the fertilizer produced must be given credit at its actual worth.

Reduce Labor Expenditure

The production of other types of motive power calculated to do work which the horse does in agriculture or commerce requires a much greater labor expenditure. Prof. W. F. Handschin, chief of the Department of Farm Organization and Management, at the University of Illinois, declares, after seven years cost studies on Illinois farms, that mechanical power, even on larger farms, has not displaced more than 20 per cent of the horses used. If we were to assume, however, that it might displace one-third of the horses, it would displace but four horses where twelve were used. Mr. Parsonage, a well known engineer, states that testimony taken before the War Priorities Board in 1918, indicated that it required at least 150 days labor to produce the gasoline tractor, which is, at present, the most widely advertised competitor of horse power on the farm. We have already noted, however, that to produce and rear four horses to working age, requires, in man labor, but 66 days; and it must also be remembered that farm labor is much less costly than the highly specialized labor required to produce types of motive power other than horses. The use of horses for motive power purposes on the farm and in transportation therefore reduces materially the burden on human labor and the cost thereof. It may be argued that we should expend this additional human labor rather than to give up the use of the land, but to this the answer is that it is lack of labor, not lack of land, that is the most pressing problem now; and that this will be true for so

many decades yet to come that such a contention is of academic interest.

Avoids Labor Concentration

The production of power in horses keeps labor widely scattered, close to food sources, and the farmer free from possible arbitrary action on the part of employer or employees which might suddenly, even arbitrarily, double or treble the cost of power, or cut off that power entirely. Numerous instances in point could be cited but two will probably suffice.

Horse an Efficient Power Plant

The horse is—next to man himself—the most efficient power unit in existence, delivering more effective motive energy in proportion to energy consumed than any other type of motive power unit, when the work done as a self-reproducing, self-repairing organism, is taken into account. Millions of horses have worked from the time they were three till they were twelve years old, without the expenditure of a dollar for repairs; and this factor of long life must be taken into account in reckoning the efficiency of a power unit, for one which wears longest and with least expense for repairs has an appreciable advantage. From the economic standpoint therefore, the horse requires a minimum of human labor in his production, and has the merit of long life and low repair cost—factors important to low cost of production in any enterprise in which power in the form of horses may be used.

Wherever power is needed to move loads over fields or roads, emergencies arise where the power required to move the load becomes three or four times normal. Horses excel in such emergencies for they can, in a pinch, exert a tractive pull equal to more than three fifths of their live weight, or can, for a short time, pull an overload of 300 per cent to 400 per cent. In this the horse is unequalled, for no other type of motive power can handle more than a 100 per cent overload. This capacity to sustain an overload is of incalculable value in field work, especially in the spring season, when fields may be in perfect condition for work, save for occasional irregularly distributed soft spots. Horses go through these with ease, because of their reserve power, and this gives a reliability possessed by no other power unit used in field work. In city work, also, particularly on cobblestone paving, a pair of big drafters can handle an eight ton load on a two ton truck solely because of the overload capacity they possess, which enables them to start the load, ten tons in all, which, once started, can be drawn without difficulty. This ability to exert three or four times the pull usually required is therefore a distinct economic advantage.

The great flexibility of power in horses is especially valuable on the farm. One

eight horse team on a double disc with a harrow behind, may later be broken into two four horse teams for seedbed or into one pair for planting and a pair for harrowing, and an extra pair for general work; or a little later into four separate teams for cultivating. No other source of power in actual use on the farm has this flexibility; and the same applies to hauling, for, when six-horse teams are needed on heavy loads, they can be used readily, but can be broken into three teams and put on three separate jobs when necessity requires.

Horse Labor Low in Cost

The total cost of producing and rearing a draft colt to thirty-six months of age depends first of all on the rent per acre charged for land. Ground productive enough to yield such crops rent in Illinois for about \$10 per acre; labor including board, costs about \$3 per day and horse labor not over \$1.50 per day. On such costs, after taking to account all factors previously discussed as entering into the cost of a draft colt, we find the total cost to be \$187 again, which we have a credit of thirty tons of fertilizer, which even if valued at \$3 per ton, cuts the cost of a draft colt at three years of age, to \$97.

The work horse if figured on the same rate for rent and labor, plus all other factors previously discussed as entering into the annual total, will cost \$12 less thirteen tons of fertilizer at \$3 making the net annual cost of a good draft horse on the farm only \$89 and the allowances made for feeding the colt and the work horse, are most liberal.

Horses Utilize By-Products

It must not be forgotten that while we have charged every item of cost on the basis of a full utilization of the land and all products thereof, there is, on a corn belt farm, a good deal of forage which it is not profitable to attempt to market save through live stock, such as stubble pasture, cornstalk fields, and grass near fence rows and field edges. This feed is utilized by idle horses, and while it could be utilized by beef cattle or sheep, it is safe to say that but few men will have enough cattle or sheep to completely utilize such by-product feeds; so that counting such by-products so utilized on good farms by horses, the cost will be less than we have estimated.

A low power cost is favorable to efficient production and the general use of horses in all possible agricultural work will not only help to maintain fertility but will also make possible production of foodstuffs at the minimum cost, provided the horses are used in large units as they can be wherever the owner has a sincere desire to obtain maximum results from his man and horse labor.

Surplus Power for Peak Load

On every farm the peak load in power requirements comes in the summer; and in the corn belt it occurs in June in corn cultivation. Providing surplus power for this, on an economical basis, is a problem in good management. On 240-acre farms where mixed corn belt farming prevails, five teams of mares, aged three, four, five, six and seven respectively, with one team of three-year-old geldings, will be ample. Four of the mares will, on the average, have living colts at side; the other six mares, being dry, can do as much per pair as a team of geldings and they, with the three-year-old geldings, provide four teams that can be in the harness every day. The four mares with foals will do the work of one pair all the time, and in a pinch, both pairs can be put into harness for a few days without any particular injury to the colts; but as a matter of good practice horsemen like to give mares with foals half time off; and this can be done most of the time under the plan outlined above. Each fall the mares past seven years of age should be

(Continued on Page Nine)



SHOWING FARM DRAFT TEAMS, INDIAN CREEK GRANGE FAIR

MARKETING HELP NEEDED

Secretary Houston Promises Aid to Farmers' Co-Operative Enterprises

THAT we do not need and can not have an unlimited number of farmers unless we are to return to the old basis when the farm was self-sufficient and produced little or no surplus, was the assertion of D. F. Houston, Secretary of Agriculture, in addressing the state agricultural secretaries and commissioners in their recent annual convention in Chicago. "We should have, and in the long run will have, just as many farmers as will produce what the world will take at a profitable price," said Secretary Houston. "Farming must pay and rural life must be made attractive and healthful, schools with their instruction properly related to rural life must exist, good roads be provided, and adequate medical, hospital, and sanitary arrangements be developed. When these conditions are met, the problem will have been solved and the Nation need not worry about the number of its farmers or the requisite supply of materials for food and clothing."

In his address, Secretary Houston dealt with what he called the fallacious notions that "in point of productivity American agriculture is on the decline and that we are in sight of the limit of production, that we need an unlimited number of farmers, that agriculture is not a business which requires expenditure of capital and labor and must show a profit, that the remedy for an assumed shortage of production is a back-to-the-land movement, that the American farmer has been ignored by the Government, or that it can solve all the problems of production and distribution."

No Ground for Pessimism

"In view of the facts, it is singular," said the Secretary, "that the notion should still be disseminated that American agriculture has been deteriorating and that there is ground for pessimism about the future. It is true that the production of some of the staple commodities has not kept pace with population, but this in itself may be of little significance. The advance in agriculture has revealed itself not so much in the expansion of the staple commodities as in a greater diversity of products, in the appearance of new crops, in the rise of minor crops to large proportions, and in the availability of supplies throughout the year. But even in reference to the staple products as measured by one important test, there has been a very marked upward movement. The yield per acre of crop production in the United States has gradually increased. The average rate of this increase for the past twenty-five years has been small, it is true, being only one-half of one per cent a year, but the aggregate results have been enormous. This upward trend is not readily observed in yields from one year to another, owing to the wide yearly variations caused by the differences in seasons. But when averages are obtained for a series of years, it is readily observed. During the seventies and eighties, when there was a vast expansion in farm area in the West and crops were grown on a more extensive scale, the tendency of yields was downward. Since the early nineties, however, it has been upward. For the ten years ending with 1890, the average yield per acre of wheat in the United States was 11.8 bushels; for the ten years ending in 1918, the average yield was 14.8 bushels, or an increase of 25 per cent. In the first period the average yield of corn was 23.4 bushels; in the second 25.9, an increase of 10 per cent; of oats 25.9 in the first period, in the second of 32.2, an increase of 24 per cent; of potatoes 72.9 bushels for the first period, and 86.8 for the second, an increase of nearly 33 1-3 per cent. Cotton, notwithstanding the ravages of the boll weevil, increased from an average of 169 pounds in the first period to 175 pounds in the

second, an increase of 3 1/2 per cent. All other field crops have likewise improved in yield, the average for the ten years ending in 1918 being 16 per cent greater than that for the period ending in 1890. This tendency is general throughout the Union. It is not due to the shifting of production. For example, in the older state of New York, the increases for the two periods were as follows: Corn, 24 per cent; wheat, 44 per cent; oats, 21 per cent; barley, 24 per cent; buckwheat, 42 per cent; potatoes, 30 per cent; hay, 10 per cent; weighted average of all 18 per cent. The facts for New England are even more striking and significant. For the six States, the weighted average increase for all field crops in 1909-1918 over 1881-1890 is 26 per cent and over 1866-1875, 25 per cent."

"In considering the rate of extension of the area in farms, it is important to recognize that the expansion of the Nation's agriculture is limited by the supply of labor and capital available for use in agriculture as distinguished from other uses, rather than by the scarcity

of undeveloped lands. It is true that in general the best land is in cultivation, but without question much of the remainder can be tilled when the Nation reaches the economic stage which would justify the utilization. It probably would be unwise to stimulate a large increase in the acreage of farm land at the present time, especially as such an increase would have to be effected by utilizing land which is inferior or which would be made available at a heavy outlay of capital for drainage, irrigation or clearing. Apparently, therefore, American agriculture should consolidate the gains already made, prepare for the period of competition which is to be expected with the return of normal world conditions, principally by increasing through sound and economical methods the productivity of lands already under cultivation, and utilize the services of the most experienced and judicious agricultural leaders in determining where, when, and how to bring into cultivation and develop public and private unused land.

"The best experts of the Federal De-

partment and of the agricultural colleges should make a careful study of the possibilities of utilizing land not now devoted to agriculture. In respect to the 200,000,000 acres of cut-over land, 60,000,000 acres of land needing drainage, and 30,000,000 acres which might be irrigated, there is great variation from district to district as to the possibility of economic use. Distinctive regions should be fully studied with a view to assemble all existing data on productivity, the cost of making the land available, present tenure and prices, the type of agriculture best adapted to the conditions, the possible returns, the minimum size of farms capable of supporting families in reasonable comfort, the minimum equipment needed in the beginning of settlement, sources of credit, and marketing and transportation facilities.

"It would be desirable if Governmental agencies, by systematic aid, should furnish reliable information to those seeking farms, should take particular pains, through their agricultural machinery, to give new settlers very special assistance and guidance, and where conditions are favorable, should aid in the development of well-considered settlement plans.

Promote Co-operative Marketing

"There is no question that everything which can legitimately be done to eliminate waste in marketing and to promote orderly distribution should be done. Certainly we can proceed further by state, federal, and individual action in standardizing the production, the handling and the packing of farm products, and in promoting the use of standard containers and proper storage on farms, in transit, and at the market centers.

"Particularly must the Federal and state agencies omit nothing to promote helpful farmers' co-operative associations. Already within a generation many such bodies have developed and expanded rapidly. It is estimated that such associations in this country now market annually approximately a billion five hundred million dollars' worth of commodities. The indications are that with the continued success of these enterprises and with the proper educational effort and direction, they will develop even more rapidly in the future."

After referring briefly to existing machinery for aiding the farmers in solving their marketing problems, the Secretary said, "the rational program would seem to be to expand activities which have clearly demonstrated their value, to follow the scent, as it were, and to further develop the machinery through which increased assistance may be furnished. There should be in every state one or more trained market specialists of the Department of Agriculture, working in co-operation with the proper State authority, to stimulate co-operative enterprises and to aid farmers in their marketing work by helpful suggestions as to plans and methods. The department is requesting increased funds to make this extension possible and will take the necessary action promptly if the appropriations are made. Both the colleges of agriculture and the state departments have large duties in this direction and an immense opportunity. The field is broad enough not only for both of them, but also for the Federal Department and for farmers and farm organizations."

Denying that the American farmer has been ignored either in legislation or in machinery for furnishing him practical assistance, Secretary Houston said: "This Nation has more beneficent legislation for agriculture than any other country, and agencies actively assisting the farmer which in point of personnel, support, and range of activities exceed those of any other three nations of the world combined."

State Champion Canning Team

PLUCK, Perversance and Push have won for three girls from Coffey County the highest honors in a canning team that can possibly be won. The three girls—Captain Jennie Mellor, First Lieutenant Grace Baxter and Second Lieutenant Lydia Lipman are all county girls blessed with health and contented spirits. School is reached each morning by a four or five mile drive whether the weather be fine or stormy.

On Monday, August 4, news went out from Otis Hall, state club leader, that ten of the best canning teams over the state of Kansas would be selected to compete at the Kansas Free Fair Topeka and The State Fair at Hutchinson. Five were to attend each place and the three best at each place were to compete against each other at the International Wheat Exposition held in Wichita.

As a result of this selection, the three girls from Coffey county, winners over other clubs in that county won out at the state fairs and finally at Wichita. They are now the proud possessors of the beautiful \$50 silk banner, \$50 in

money and the blue ribbon which proclaims to everyone that they hold the title of the Champion Canning Team. Besides all of this, their complete expenses were paid during the fairs and for their traveling. Coffey county may well be proud of her youthful citizens for had it nothing else of which to boast these girls have placed it on the map. Not only did these girls beat others in the canning demonstrations that were held but judges decided this group of girls were the best singers.

The record shows that Jennie Mellor canned alone 130 quarts of fruit and helped her mother to can 350. Grace Baxter has to her credit 100 quarts canned by herself and assisted her mother with 250, while Lydia Lipman canned 118 quarts and aided her mother in the canning of 324 quarts.—L. M. CALDWELL, Extension Division, K. S. A. C.

For the Thanksgiving table decoration there is nothing more beautiful than a golden pumpkin shell filled with sprays of bright colored autumn leaves.



STATE CANNING CLUB CHAMPIONS—THE COFFEY COUNTY TEAM.—FROM RIGHT TO LEFT: JENNIE MELLOR, CAPTAIN; GRACE BAXTER, FIRST LIEUTENANT; LYDIA LIPMAN, SECOND LIEUTENANT

GENERAL FARM AND STOCK ITEMS

Something of Interest for All—Overflow from Other Departments

THAT marketing problems are being given more and more attention by state governments is shown by a survey which the Bureau of Markets, United States Department of Agriculture, has been conducting.

Following the example of the Federal Government, 30 states have established bureaus of markets or similar agencies to study the buying and selling of farm products. Four state legislatures have created such bureaus this year. The model law prepared by the Bureau of Markets has been adopted by one state with practically no change and has been incorporated wholly or in part in the laws of several other states. In a few cases state departments of agriculture have begun marketing work under authority of general clauses in their laws.

The activity of the bureaus vary from simply studying the conditions affecting marketing, through regulation of marketing practices, to the actual buying and selling of farm products. This latter activity, however, has been discontinued in at least one state. Most of the bureaus have authority to establish grades and standards, inspect farm produce, and maintain market news services.

Hunger Knows No Armistice

Peace has blessed Europe and America for more than a year, but in Western Asia conditions more frightful than any war time experiences of the martyred populations of Belgium and France, still exist. Thousands of women and children escaped massacre by the Turkish soldiers only to face the terrible agonies of death by starvation.

Col. William N. Haskell, joint high commissioner by authority of the Paris Peace Conference and representative of the Near East Relief in Armenia recently cabled to the United States that 800,000 destitute Armenians will starve unless food is provided for them until next year's harvest. He estimates the minimum requirements are 7,000 tons of flour a month and one full cargo of supplies for 150,000 children for Armenia and \$500,000 monthly for relief in the Caucasus.

The Near East Relief, 1 Madison Ave., New York is at present the only organization giving aid to these suffering people and lack of funds still prevents the reaching of more than a small part of the stricken people.

National Grange Meeting

Attendance at the fifty-third annual meeting of the National Grange held in Grand Rapids, Michigan, November 12-21, reached its highest point on Friday afternoon, the last day, when nearly 4,000 members were present. The seventh degree, the highest degree of the order, was conferred on about 1,600 candidates in two classes at the evening session.

Worthy Master, Oliver Wilson of Peoria, Illinois, announced his retirement after eight years' service. In his address summarizing the work of the eight years during which he had been at the head of this order, he stated that 3,610 new Granges had been organized and the Grange membership shows a proportionate increase. In his farewell address he called attention in strong and vigorous language to the problems of the immediate future in American agriculture and American National life.

"The greatest need of American agriculture," he said, "is neither subsidies, patronizing, nor uplifting. The time has come to classify agriculture as one of the great industries and for such an adjustment of prices of farm products, such a recognition of production costs, such a scale of hours and wages as shall enable the farmer to run his business exactly like every other manufacturer."

"One of the imperative necessities of

today is the putting of emphasis upon the sacred rights of property as opposed to the wild orgy of radicalism, nationalization and anarchy. The right to individual property ownership has always been a fundamental American principle. A home owning Nation is a strong Nation, but unless individual property rights are safe guarded, no home will be safe."

"The keynote of the hour is found in a single sentence—we must all be Americans together."

National Secretary G. M. Freeman reported 269 new Granges organized during the year and 19 reorganized. Election of officers will take place on Tuesday, November 18 and action on most of the important resolutions was deferred until after the election.

Among the important matters discussed and acted upon during the early days of the session were the future of the railroads, the future of the American merchant marine, the relationship between the Grange and other farmer organizations, a National legislative program and soldiers' settlement legislation.

Men Still in Army Hospitals

Although it is a year since the signing of the armistice, about 25,000 of our American boys are still in hospitals reminding us of part of the price we paid in the great war.

These are boys who suffered from some serious wound or disease, and are courageously pulling through by patience and medical skill. Perhaps only one-half of this number will ever be well

the very best corn growers in the country competing for the \$10,000 in prizes offered by the Chicago Board of Trade.

In addition to the corn which will be on display from the various states, fourteen agricultural colleges will have exhibits of an educational nature.

One of the special features will be a miniature farm, in the exhibit from the Kansas Agricultural College. This will be a complete layout of a farm showing the number of cattle, hogs, sheep, horses, chickens, etc., that an average corn-belt farm can profitably carry. It also will show a good crop rotation, with the farm all laid so as to save labor and increase the efficiency of the operator.

Judging from the many entries of corn, oats, wheat and all kinds of hay now being received, the show this year will far surpass that of previous years. The corn and small grain growers not only are interested, but the hay producers, who are given an opportunity to show what they can do, will be at the show in force.

What is Ton of Manure Worth

Trials made on the various experiment fields throughout the state by the University of Missouri College of Agriculture have shown that an average application of eight tons of manure to the acre once in four years has increased the yield of corn 10.5 bushels, oats 5.17 bushels, wheat 5.24 bushels, and clover hay 937 pounds. At prices which prevailed the first of the year this increase would be worth \$4.83, and at pre-war prices \$2.34, for each ton of manure applied.



COUNTY AGENT MACY DELIVERED PURE-BRED COWS BOUGHT FOR SEDGWICK COUNTY FARM IN TRAILER.—TAKEN TO BULL IN SAME WAY

enough to take up life normally again. They will need the most thorough vocational retraining that can be given, as they must learn from the beginning to master the new profession compatible with their new condition.

The Federal Board for Vocational Education is planning for these seriously disabled men. Already vocational advisers in hospitals have talked with the men, and given them something to look forward to in the way of a useful life. As soon as they are released from the hospitals, they will be given training in some vocation for which they are fitted and by which they can become self-supporting citizens.

These are the boys who will be the last to receive training under the Board.

Grain Show at International

Chicago will be the battleground this year for the annual struggle between the best corn producers of the entire country to determine who will be crowned Corn King of the United States. The struggle will be staged at the International Hay and Grain Show, which will be held in connection with the International Live Stock Exposition at the Union Stock Yards, November 29th to December 6th. This is the first grain show since 1914, because of the war.

Already the entry list is large, with

plied. It will cost the farmer not more than one dollar a ton to collect the manure and haul it to the field. This would leave a net profit of \$3.83 at present prices, or \$1.84 at pre-war prices, for each ton of manure applied. The full value of the manure is usually not obtained during the first four years, for it leaves the soil in better condition and its effect upon later crops is often quite significant. This becomes more noticeable after the first two or three applications, since a liberal application of manure every four years will result in permanent improvement to the land.

By very careful handling of manure a live stock farmer, on average soil, should be able to return annually about two tons of manure per acre to his cultivated fields. It is not easy to save this amount except by very careful methods and persistent efforts. It is necessary that all straw and other suitable materials be worked through the barns as bedding. This not only adds to the comfort of the animals, but serves as an absorbent for the liquid manure. If straw piles are sold, burned or left to rot, it is, of course, impossible to return this amount of manure.

Keep the manure together, don't let it get scattered about the barn or lots. Hogs and chickens may waste much of it. Where possible haul it to the field

as soon as produced. If this is not possible, store it in shallow concrete-lined pits to prevent leaching. Use plenty of bedding in the stable or on the feeding floor to absorb the liquid. Straw, hay, grass and leaves may be used for this purpose.

About 35 per cent of the nitrogen and 55 per cent of the potassium is to be found in the liquid material. There is, however, practically no phosphorus in this part. The plant foods in the liquid are all in soluble form and are very easily lost through leaching. Furthermore, the nitrogen in this liquid portion readily passes off as ammonia when the manure is allowed to ferment, hence the necessity for preventing fermentation as far as possible.

The total solid and liquid manure produced in a year by a well fed, mature horse is about eight tons, with a plant food value of more than \$30. In the case of a well fed steer weighing from 1,000 to 1,200 pounds the production is nine to eleven tons, with a slightly greater total value than the manure from a horse.

Three to five months exposure to the weather in an open lot may cause manure to lose approximately one-third of its plant food. If manure must be exposed to the weather it should be in a pit with a water-tight bottom.

What Our Nation Owes

Every citizen of the United States is interested in what we as a nation owe for a national debt is after all a debt against every man, woman and child in the nation. Before we entered the war our national debt amounted to \$9 for each man, woman and child in the country. Today it is \$242. When the war expenses are all in it is estimated that the per capita debt will be close to \$280. The total amount at the present time is \$25,921,000,000. More than a third of this is represented by loans to European governments associated with us in the war, and presumably some day we shall be able to collect this portion of the debt from these countries. It is estimated that our debt as it now stand constitutes about 8 per cent of our total wealth, and that it will reach 10 per cent of our wealth at a maximum.

The interest on this debt will be around one billion dollars a year, an amount equal to the total annual expenditures of our government before the war. It is estimated that the average per capita income of our population, including children, is \$560. Thus the interest on our debt amounts to 1.66 per cent of our income. A per capita debt of \$242 is 43.2 per cent of the per capita income of \$560. In other words the average person is in debt on account of his nation to the amount of almost half his annual earnings.

These figures showing the extent of our national obligations should make us realize the task ahead of us and the necessity of getting to work and increasing our production to make up for the losses of the war. The warring nations in Europe are in a much worse plight than we are in the matter of national debt. In Italy the debt per capita is \$350; in Great Britain \$782; and in France \$900.

If not convenient to remove a squeaking spring or to jack it up to stop the squeaking, try the following: Go over the outside of the leaves with kerosene to remove dirt, guiding it down the sides of the leaves with the fingers, so that some of it may run in between the leaves. Wipe off the excess and pour cylinder oil over the leaves the same way, guiding it down the sides. The kerosene will thin the oil and lead it in between the leaves.

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Feeding Silage to Dairy Cattle

SILAGE is the main reliance of dairy farmers in many sections for cow feed, since it has been found to be particularly well adapted as feed in this connection. While silage is an excellent feed for dairy stock, it should be combined with some other leguminous feed, such as clover, cowpeas, or alfalfa, owing to its insufficient productive quality.

The leguminous material will tend to correct the deficiencies of the silage in dry matter, protein, and mineral constituents. A ration of silage, and, say, alfalfa hay alone is satisfactory, however, only for cows which are dry or giving only a small amount of milk and for heifers and bulls. Cows in full milk require some concentrated feed in addition to hay and silage, as they can not consume enough of these feeds to keep up a large flow of milk and maintain body weight.

The amount of silage to feed a cow will depend upon the capacity of the animal to consume feed. She should be fed as much as she will clean up without waste when consumed along with her hay and grain. Raise or lower the amount until the proper quantity is ascertained. Generally speaking, a good cow should be fed just short of the limit of her appetite. If she refuses any of her feed it should be reduced at once. The small breeds will eat twenty-five or thirty pounds per day; the large breeds forty or more; and the medium-sized ones amounts varying between.

Ironclad directions for feeding cows can not be given. In general, however, they should be supplied with all the roughage they will clean up with grain in proportion to butter fat produced. The hay will ordinarily range between five and twelve pounds per cow per day when fed in connection with silage. For Holsteins one pound of concentrates for each four pounds of milk produced will prove about right. For Jerseys one pound for each three pounds of milk or less will come nearer meeting the requirements. The grain for other breeds will vary between these two according to the quality of milk produced. A good rule is to feed seven times as much grain as there is butter fat produced. The following rations will be found good:

For a 1,300-pound cow yielding 40 pounds of milk testing 3.5 per cent:

Silage	40
Clover, cowpeas, or alfalfa hay	10
Grain mixture	10

For the same cow yielding 20 pounds of 3.5 per cent milk:

Silage	40
Clover, cowpeas, or alfalfa hay	5
Grain mixture	5

For a 900-pound cow yielding 30 pounds of 5 per cent milk:

Silage	30
Clover, cowpeas, or alfalfa hay	10
Grain mixture	11

For the same cow yielding 15 pounds of 5 per cent milk:

Silage	30
Clover, cowpeas, or alfalfa hay	8
Grain mixture	3

A good grain mixture to be used in a ration which includes silage and some sort of leguminous hay is composed of:

Corn chop, kafir, milo or feterita meal	4
Wheat bran	2
Linseed meal or cottonseed meal	1

In case the hay used is not of this kind some of the corn chop may be replaced by linseed or cottonseed meal. In many instances brewers' dried grains or crushed oats may be profitably substituted for the bran, and oftentimes gluten products can be used to advantage in place of bran or oil meals.

The time to feed silage is directly after milking or at least several hours before milking. If fed immediately before milking the silage odors may pass through the cow's body into the milk. Besides, the milk may receive some taint directly from the stable air. On the other hand, if feeding is done subsequent to milking, the volatile silage odors will have been thrown off before the next milking hour. Silage is usually fed twice a day.

Calves may be fed silage as soon as

they are old enough to eat it. It is perhaps of greater importance that the silage be free from mold or decay when given to calves than when given to mature stock. They may be given all the silage they will eat up clean at all times. Yearling calves will consume about one-half as much as mature stock; that is, from fifteen to twenty or more pounds a day. When supplemented with some good leguminous hay, little, if any, grain will be required to keep the calves in a thrifty, growing condition.

One of the most trying seasons of the year for the dairy cow is the latter part of summer and early fall. At this season the pastures are often short or dried up, and in such cases it is a common mistake of dairymen to let their cows drop off in flow of milk through lack of feed. Later they find it impossible to restore are fed. Good dairy practice demands that the milk flow be maintained at a high level all the time from parturition to drying off. It becomes necessary, therefore, to supply some feed to take the place of the grass. The easiest way to do this is by means of silage. Silage is cheaper and decidedly more convenient to use than soiling crops.

The amounts to feed will depend upon the condition of the pastures, varying all the way from ten pounds to a full winter feed of forty pounds. It should be remembered in this connection that silage contains a low percentage of protein, so that the greater the amount of silage fed the greater must be the amount of protein in the supplementary feeds to properly balance the ration.

The sixth decennial census, taken in 1840, was the first one to cover agricultural statistics, now one of the most important parts of the entire census.

The Department of Agriculture assisted the Census Bureau in preparing the list of questions to be asked of every farmer at the coming census.

There were 6,361,502 farms at the last decennial census, valued at more than forty billions of dollars. The 1920 census is expected to show more than seven million farms.

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Vocational Agriculture in Kansas

(Continued from Page One)

dred, and tankage \$4.00 a hundred. The detailed summary of his project shows that the average weight of his pigs at the beginning was 49 pounds, and that he obtained a gain of 149 pounds, or bringing them to an average weight of 198 pounds when the project ended. This was a gain of one and one-tenth pounds daily to the pig, and it had cost at the rate of 12.7 cents a pound. The five pigs had cost him \$40.35 to which was added the \$94.55 cost of feed and \$10.00 cost of labor. This left a total profit of \$18.07. This boy had neither pasture nor skim milk. His observation and study in connection with the work taught him that he would have made a larger profit if he could have run his pigs on pasture and given them some skim milk. He also came to the conclusion that it would have been more profitable if he had continued feeding his hogs until they weighed 250 pounds.

The Arkansas City high school has eighteen such projects running during the past summer.

During the season of the year when the student is not actively engaged on his project, his time is employed in studying the principles of agriculture with particular reference to the project being conducted. The students during this period are encouraged to get all the information they can on the particular project they have under way.

Boys Butcher Hogs

Most of these home projects are carried on individually, but occasionally a class or group takes up a line of work aside from the individual project. W. F. Hearst, who teaches the vocational agriculture in the Crawford county high school, writes of a butchering project conducted under his supervision. He says, "The butchering project was done just as the boys would have to do it at home, and was all done by the boys. They fixed up the scalding barrel and platform one evening, heated the water in a couple of wash boilers in the laboratory and butchered the hog the next morning. The carcass was allowed to cool until evening and was carried into the laboratory where the boys cut it up the next morning. Before undertaking the work, bulletins on butchering were procured and material from them assigned as a lesson, and the work thoroughly discussed in class. Next year we will plan for three good class projects with our hogs, namely, building a self-feeder, feeding the hogs, and butchering. Shop work has also been a part of the vocational instruction given. The students learn to build hog houses, hay-racks, wagon-beds, work benches, sewing horses for repairing harness. They build coal houses and other out-houses for the school, make rope halters, splice rope, repair harness, and perform numerous other jobs that boys should be able to do on the farm.

Sixteen years is the minimum age at which a boy can enter a vocational course in agriculture which is now arranged to cover two years in the regular high school course. A plan which is giving good results is to alternate the years, giving one year to crop study and the other to live-stock. Since vocational agriculture is being put into the accredited high schools, it is allowed for college entrance. The course, however, is not intended for boys who plan to go on to college, and in some schools boys planning to go to college are not allowed to take the vocational agriculture course.

In the schools where vocational agriculture has been introduced two-fifths of the total vocational time is given to shop work, and three-fifths to field work. The course is not definitely apart from the rest of the school. Fifty per cent of the student's time is given to vocational agriculture and fifty per cent to other work. One half year of physiology and hygiene are required. History and civics are also required.

The course has not yet been completely worked out. It is difficult to find

qualified and experienced teachers. The question of salaries is not yet settled. The teacher's division of the time, summer activities and supervision are problems yet to be solved. The actual working time in the fields must be decided and an efficient outline of the year's work settled upon. It is doubtful if it would be practical to definitely set aside one day each week through the year for field work. Time should be arranged according to farm conditions. The questions of weekly reports and methods of grading are still to be answered.

The finding of a practical text book to supplement field work is a big undertaking. It must be a book that deals with actual farm life, the marketing of goods, shipping of stock, commercial geography as applied to the farm, farm economics and organization, the purpose of farming, its effect on national life, and other farm interests. It is the aim to give the student the world-wide point of view rather than the local outlook.

ECONOMIC STATUS OF HORSE

(Continued from Page Four)

sold unless some younger mare has proved persistently barren, in which case she should go instead; and the young geldings, now three and a half years of age, should also be disposed of, so that in this way the peak load requirements are taken care of without carrying a surplus of horse power throughout the year; and this is all important, for while it is desirable to have ample surplus through the busy season, the extra power—in such a case, two pairs—should be disposed of as soon afterward as possible, even though the price may not be quite as high as is desired; and in making such sales, the actual cost of production should not be overlooked, for it is under most conditions considerably less than is usually estimated.

Effect Upon National Life

Any great shift in the use of horses as power units must have far-reaching, incalculable effects upon our national life. More human labor must be used in iron and coal mines, on vessels and railroads, in smelters and steel mills, and in the factories where other type of motive power—be they gas, steam or electric—are finally fabricated. This draws more heavily upon our existing supply of human labor, calls more men from farms to cities, mines and factories, drives labor higher and higher in price, and curtails the production of other things, useful to the world, which might have been made with the labor devoted to manufacturing motive power units designed to do the work the horse can do, and does do, more efficiently and more economically than such horse substitutes.

Horticultural Society Meeting

The Kansas State Horticultural Society will hold its fifty-third annual meeting December 16-18, 1919, at the State House in Representative Hall. There will be addresses and discussions by men and women prominent in the field of horticulture. Every day will have something of interest to horticulturists as well as others interested in the products of the soil. The Kansas State Beekeepers Association will hold its annual meeting on December 18-19, in connection with the State Horticultural Society meeting.

At this time of year the sheep are coming in to the feed lots in large numbers, we frequently have heavy losses from hemorrhagic septicemia. The sheep should be watched closely in order to see whether this disease is present. Any considerable loss of these animals is always suspicious of this trouble. As soon as losses begin, or even before, vaccination for the purpose of prevention of the disease is always desirable.

The United States leads all other countries in the number of newspapers and periodicals. England is second. In periodicals and printed matter on agriculture America is also pre-eminent.

Leadership Through Service

A generation ago leadership in any industry was interpreted to mean the ruthless use of power.

Today it is recognized that leadership in industry is attained and maintained only when, through efficiency, an organization is able to render superior service.

A generation ago competition meant getting the business without regard for its effect on the industry.

Today competition means friendly rivalry in supplying the world with superior products at a minimum cost, and getting the business through superior service.

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It is the ambition of those responsible for the activities of the Company to strengthen this leadership.

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Steel Controversy Effects Farmers

FARMERS are often tricked. This is done sometimes by means of customs that have the sanction of long tradition.

And what is more, this is sometimes cloaked in such a manner that the farmer isn't even aware that he is paying out utterly unearned money to men who don't need it and shouldn't have it.

A conspicuous illustration of this is offered by the controversy now prevailing, known as the "Pittsburg base dispute."

The name of this controversy may not mean much to the average man, but the great steel interests of the country know exactly what it means. It means between thirty and fifty million dollars every year to the people of the west, and that is probably the reason why Judge E. H. Gary, head of the United States Steel Corporation, called it "the greatest law suit ever tried in America."

Now what is the Pittsburg base? And what is the west trying to do to escape it?

When America first began the production of steel, plants were established in the Pittsburg district, but later plants were also built in the west, south and east. Their production was not large, however, and at the time it seemed necessary to protect these plants until their footing became more firm.

Before the United States Steel Corporation was formed, if the manufacturer bought steel from a plant located closer to him than to Pittsburg he was able to save something on the freight. After the steel corporation had been formed, rolled steel was sold f. o. b. Pittsburg regardless of where it was produced. However, the freight from mills in the Chicago district to the West, Northwest, South and Southwest and to a few points a short distance east of Chicago, is less than the freight from Pittsburg.

On all shipments from Chicago mills into this territory full freight from Pittsburg is charged, although the only freight earned and the only freight received by the railroads is that from Chicago. The mills themselves pocket the difference.

In this respect the situation in the city of Chicago itself is peculiarly flagrant and to a considerable extent it has affected the country outside of Chicago. If a manufacturer of rolled steel products in Chicago sends his truck to a Gary or South Chicago mill and carries away a load of rolled steel, he must nevertheless pay the freight—\$5.40 a ton—from Pittsburg to Chicago as part of the price of his steel. This, of course, is reflected in the price at which the Chicago manufacturer sells his product throughout the country.

In the last ten years prices of steel have risen up with the price of freight.

The Chicago mills, on June 1, 1919, were selling rolled steel at \$7.00 a ton. The Gary mills, on the other hand, were selling it at \$12.40 a ton. The difference of \$5.40 a ton is the freight from Pittsburg to Chicago. The Gary mills, on the other hand, were selling it at \$12.40 a ton. The difference of \$5.40 a ton is the freight from Pittsburg to Chicago.

According to this, with the selling price averaging about \$50 a ton, the cost at Gary is from \$7 to \$9 a ton less than at Pittsburg. In the face of this advantage of lower cost, the mills bill all their plates, chapes, bars, sheets, etc., f. o. b. Pittsburg, and collect the unearned freight.

This unearned freight charge must be paid by all manufacturers of rolled steel products west of a line drawn through Michigan, Indiana and the south. The unearned freight varies from \$4.40 to \$5.40 per ton. This means that in the Chicago district the mills are collecting this huge sum for an absolutely unearned service.

In turn, the manufacturer includes this unearned freight in his cost. As most manufacturers sell through middlemen, a profit is added on top of that charge. Result—the consumer ultimately "pays the freight."

The farmer is one of the big consumers. The western farmer has been quietly carrying the burden.

But the southern farmer has awakened to the seriousness of this unfair trade practice and is determined to escape the yoke of the Pittsburg base. The Birmingham district produces far less steel than Gary, but nevertheless a considerable quantity, and produces it as cheaply as Pittsburg.

Various agricultural organizations of the South are demanding that they be released from the burden which they have long carried. At the annual meeting of the Farmer's Educational Co-operative Union of America, Alabama division, a resolution was adopted protesting to the Federal Trade Commission and to congress against the Pittsburg single base system, and other organizations in the south are taking like action. The resolution follows:

"Resolved, That the Alabama Division of the Farmers Educational and Co-operative Union of America in convention this day Assembled does hereby protest to the Federal Trade Commission and the Congress of the United States against the discrimination practiced by the steel interests of America in maintaining the Pittsburg single-base system of making steel prices, as the result of which the farmers of Alabama are compelled to pay an unjustifiable, excessive price for their wire fencing, nails, concrete bars, cotton ties, plows and every article which they use in farm operations and which contains steel. This organization hereby urges the Federal Trade Commission and the Congress of the United States to do all in their power to remove this arbitrary discrimination against their members and in favor of farmers who may be situated in territory tributary to Pittsburg and notwithstanding that steel is manufactured in the Birmingham district in the heart of the agricultural South at a materially less cost than at Pittsburg."

What is the western farmer going to do to escape the yoke?

The Western Association of Rolled Steel Consumers—with 800 members—not by any means of Chicago, but manufacturers of rolled steel products in twenty-four western states where rolled steel products are manufactured, has been working to establish Chicago base on rolled steel. The association has asked the Federal Trade Commission to issue a complaint against the mills. The question will come before the Commission December 2.

The western farmer should awaken—and now. Here is given an indication of the manner in which he is hit by the Pittsburg base: The average farmer's field equipment will include from 5,000 to 15,000 pounds of rolled steel. Estimating the unearned tax of \$6 per ton inclusive of manufacturers' and midmen's profits—it can readily be seen the farmer is penalized.

His equipment is not all, however. The farmer has a large amount of rolled steel in his house and other buildings, including his furnace and heating stoves; kitchen stoves and pipe; nails in all the farm buildings; gutters and down-spouts on buildings; corrugated roofing; water systems; pressure tanks; windmills; pipe and water tanks; silos; wire fences and wire gates; milk cans; kitchen utensils; steel beds; automobiles—an almost endless variety of essential articles, all sold on the Pittsburg base, and therefore paying this unfair tribute.

The farmer as a taxpayer must also pay from \$5 to \$6 a ton unearned charges for all steel that goes into public work for bridges, culverts, road-building machinery, scrapers, public building, etc., in every agricultural community.

The members of the association declare that the Pittsburg base is causing the west to lag industrially and so long as the present practice of steel price basing is maintained it will continue to lag more and more.

They further point out that there might be justification for the practice if steel were made much cheaper in Pittsburg than in Chicago. Then there might

be a sound economic reason for this.

But as a matter of cold fact, the exact reverse is true. Steel is made cheaper at Gary, in the heart of the Chicago district, than anywhere else in the United States.

What is the western farmer going to do to shake off this yoke?

The southern farmer cannot and will not stand it. Yet the southern farmer has been classed as "less progressive."

Trapping the Mink

The mink is one of the gypsies of the animal kingdom. He loves to travel and see the sights, and unless his surroundings are congenial he won't tolerate them, but packs his grip, figuratively speaking, and takes the midnight trail to some other spot.

Thus, if you study the mink you will find him following the banks of streams and ponds, poking his sharp little nose into all sorts of holes, resting here, playing there, and maybe, during the mating season, making quite a protracted stay in one hole or another while waiting to get the family ordeal over with.

There are many ways of trapping mink, but here is one that has been found popular and successful: In stream banks that you know to be frequented by mink, dig holes. Start right at the water's edge and dig upward into the bank for about two feet. This should be done early in the fall, before the trapping season opens, so that the animals will be familiar with the holes when you are ready to trap.

Three or four days before you are ready to set your trap place some bait (fish, rabbit or fowl have proved successful) in the hole.

The trap itself should be placed at the entrance of the hole and set in the water with the full length of chain staked securely to some object. The trap should then be covered with mud or dead leaves.

While all traps should be visited at least once a day to see if a catch has been made, do not under any circumstances tarry too long at the traps or in mink haunts, nor is it wise to tread mink trails too often, as the animals are very wary of man, and will leave neighborhoods where man is too much in evidence.

Constructive Organization

Radical dominance is rife in the various organizations of industry. It is not always absent from the councils of organized farmers. So-called federations are born, every little while in the fertile brains of schemers. They grow by the very small amount of merit in theme and truth in their wide sweeping statements. Some of the best people in our country are roped in by the seductive suggestions of the results that these ardent advocates are sure will be realized at once. Then, later, these same men are very anxious that nobody should know that they had paid the entrance fee to the defunct scheme, now a past pipe dream. Did you ever stop to consider that this same energy properly directed toward the work of the well established and proved organization you belong to, would have done far more work than any sane man could expect out of mushroom activities born over night and perishing almost as quickly? But it will!

I am not sure but there ought to be "blue sky" protection for these ideas, too. They are distracting and destructive, and pull the wool over the eyes of thousands every week. When a man comes up to you and tells you he has a panacea society or order that he is forming, and that when you get into it you will find that all the ills of farm life will be cured, and that it is absolutely the only one that is universal and that will do this thing, look out! "Thar aint no sech animule!" Find out what he has in it!—The Farmers' Union.

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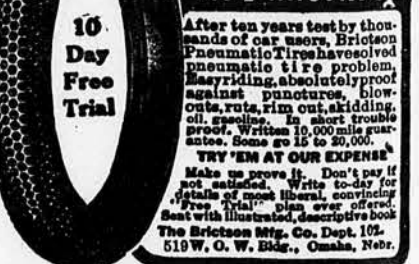
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HELPFUL POULTRY HINTS

Practical Ideas on How to Fill the Egg Basket and Increase Profits

Make Poultry House Comfortable

UNLESS the poultry house provides suitable living and working conditions the hen cannot be expected to lay well for the house is both a home for the hen and a factory where winter eggs are produced. The chief requirement is that the house must keep the birds comfortable. To be comfortable the house must be dry, well ventilated, well lighted, and have sufficient floor space to provide exercise by scratching. Dryness is insured by having a good roof, keeping the floor of the house higher than the surrounding ground, and by providing good ventilation. Ventilation must supply plenty of fresh air without drafts. This is secured in the poultry house by having the south side relatively open and the other three sides absolutely tight.

The importance of light in the poultry house has not been properly emphasized in the past, says T. S. Townsley, of the Missouri college of agriculture. Recent experiments with artificial lights show that by furnishing more light so that the working period for the birds is lengthened the egg production can be materially increased. In many farm poultry houses no windows are provided and the house is in constant twilight on cloudy days even when the door is left open. Needless to say this condition does not favor activity on the part of the hen. To insure good natural light in a poultry house the openings in the walls should equal about one-fourth of the floor space of the house. At least half of these openings should be for open front ventilation, and windows should be so arranged that the maximum amount of sunlight will be available to the birds. Wherever possible windows should be placed in the east and west ends of the building so that the early morning and late afternoon light will be secured.

To insure room for scratching not only must sufficient floor space be provided, but the droppings must be kept off the floor and a deep litter of straw of similar material be supplied so that the birds can be made to scratch for their feed. To keep the droppings off the floor every poultry house should be provided with a droppings platform arranged underneath the roosts to catch the manure.

With all other conditions favorable, but without proper feed, winter egg production is impossible because the feed is the raw material that is necessary to make the egg. The first requirement in feeding is that sufficient quantity be provided. Too many are afraid of overfeeding. The ancient buncombe about hens getting too fat to lay is still widely credited when as a matter of fact no hen except a fat hen can lay. Many farmers begrudge a hen every bite that goes down her neck, and numerous early risers on the farm get up to feed the hogs before daylight to keep the hens from eating with them. It is not desirable to have hens eat with the hogs, but when they do this it is a sure sign that they are not getting enough feed from other sources.

The kind of feed supplied the hen is fully as important as the quantity. The egg is made up of several different substances and unless these are available in the ration, eggs cannot be produced.

The yolk of the egg is largely fat and material for forming this is abundantly supplied by corn, oats and the other grains and grain products commonly fed. The white of the egg is largely protein and this is the element so commonly lacking in the ration. Some grains and grain products are quite rich in protein but the hen does not appear to be able to use these vegetable proteins in making egg white. Experience shows that hens must have animal protein in order to lay prolifically. Milk, commercial

meat scrap, and tankage are the animal proteins most available for feeding poultry and no flock owner can afford to neglect feeding one of these throughout the winter. The following ration is for 100 hens: 10 pounds corn, 5 pounds oats, 3 pounds bran, 3 pounds shorts and 3 gallons of milk or 1½ pounds of meat scrap or tankage fed daily.

Keep Hens Scratching

Feed scratch feed always in deep litter, so that the hens will be kept busy looking for feed. Four pounds of corn and one pound of oats, fed in deep litter, is foundation for one ration. This should be fed light in the morning and heavy at night. Feed in the hopper all the time 100 pounds each of bran, middlings, ground corn and meat scraps, with two pounds of salt. Feed in the trough three times a week the same mixture of ground feed moistened with skim milk or buttermilk. For the green feed which this ration demands feed cabbage, mangels, or sprouted oats. Oyster shells and charcoal should be kept in a hopper or box convenient for the hens. Fresh water in abundance should always be kept on hand.

Another ration, without the green feed, is: 3 pounds of corn and one each of oats and barley fed in deep litter, light in the morning and heavy at night; 100 pounds each of gluten feed, ground corn, ground oats or barley, and 2 pounds of salt, fed in the hopper; a moist mash of equal parts of bran and cornmeal salted slightly and fed in the trough three times a week; sour milk or buttermilk to drink; oyster shell or charcoal always on hand.

With a small two-compartment hopper or box in the poultry house large enough to hold 100 pounds of scratch feed and the same amount of mash, feeding is simplified.

Breeding for Egg Production

What can be done by good breeding to increase egg production in the flock is illustrated in two new records just completed by single comb White Leghorns on the Wisconsin Experiment Station farm. Fed the usual ration, one of these hens at the end of her second year of laying had produced 466 eggs; the other laid 464.

Both hens are from strains of high producers which have been bred up by J. G. Halpin, poultryman on the station farm, for ten years. Not only were the dams high producers, but the cocks were from dams whose egg production was high.

The hen whose two-year record is 464 eggs laid last year 263 eggs, a slightly better record than that made the first year by the 466-egg hen. The best record made previous to this year by a Wisconsin Experiment station hen is 432 eggs.

Chickens Kept from Crossing

While keeping two distinct breeds of poultry in one yard without mixing the breeds seems difficult, it can be accomplished easily and with satisfactory results, as shown by the account of an experience just received by the United States Department of Agriculture from a New England poultry raiser. One of the kinds kept is a so-called egg breed, the other being a general-purpose variety of poultry. The method of preventing crossing is as follows:

One year, roosters of the egg-laying breed are retained and used for breeding,

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Advertising "bargain counter." Thousands of people have surplus items of stock for sale—limited in amount or numbers hardly enough to justify extensive display advertising. Thousands of other people want to buy these same things. These intending buyers read the classified "ads"—looking for bargains. Your advertisement here reaches over 60,000 farmers for 5 cents a word per week. No "ad" taken for less than 60 cents. All "ads" set in uniform style, no display. Initials and numbers count as words. Address counted. Terms, always cash with order. SITUATIONS WANTED ads, up to 25 words, including address, will be inserted free of charge for two weeks, for bona fide seekers of employment on farms.

AGENTS WANTED

AGENTS MAKING \$200 WEEKLY: Everyone wants it. Formulas for 200 beverages to be made at home. Book form. Send \$1 for copy and territory proposition. Act quickly. Buyers' Export Agency, 487 Broadway, New York.

IDAHO LANDS

IDAHO IRRIGATED FARMS—GOVERNMENT project. Martin & Son, Rupert, Idaho.

CATTLE.

FOR SALE—MY HERD BULL, PEDIGreed and registered Holstein, three years old, bred by C. L. Amos, Syracuse, N. Y. Too good an individual for the shambles. J. P. Dam, Corning, Kansas.

NICELY MARKED GRADE HOLSTEIN heifer calves, crated, at \$24 each, f. o. b. Elkhorn, Wis. Also registered calves, both sexes. Suncrest Farm, Route 3, Elkhorn, Wis.

PRACTICALLY PURE-BRED HOLSTEIN calves, either sex, beautifully marked, six weeks old, from registered sire and choice heavy milking Holstein cows; \$30.00, delivered to any station by express. Paid here. Send orders or write Lake View Holstein Place, Whitewater, Wis.

REAL ESTATE.

IF YOU WANT TO SELL OR EX-change your property, write me. John J. Black, 15th St., Chippewa Falls, Wis.

480-ACRE FARM CLOSE TO TOWN—80 acres cultivation, alfalfa land, 100-ton alfalfa cut, balance pasture, plenty of improvements. Price, \$55. Write for list. Clark Realty Co., Garnett, Kansas.

OKLAHOMA FRUIT AND STOCK FARM near Oklahoma City. Half section, half woods pasture, 25 a. orchard. Sell or trade part or whole, with or without stock and equipment. Reason, too many apples, unable to give personal attention. Terms. Hudson, 1714 Buchanan, Topeka.

STOCK FARM, 4,960 ACRES, RUNNING water, good land. All year grazing. Close to town and paved highway. Planted to Napier and para grasses, will more than pasture two head each acre entire year. Price, \$7.50 per acre. Easy terms. R. G. Tonkin & Co., Arcadia, Florida.

TANNING.

LET US TAN YOUR HIDE—COW, HORSE or calf skins for coat or robe. Catalog on request. Crosby Frisian Fur Co., Rochester, New York.

FARMS WANTED.

WANTED—TO HEAR FROM OWNER OF good farm for sale. State cash price, full description. D. F. Bush, Minneapolis, Minn., 1E.

TOBACCO HABIT.

TOBACCO OR SNUFF HABIT CURED OR no pay. \$1.00 if cured. Remedy sent on trial. Superba Co., P. W., Baltimore, Md.

MISCELLANEOUS.

PINTO BEANS—100 POUNDS, \$7. F. O. B. Stratton. Quality guaranteed. W. A. Hooper, Stratton, Colo.

LOST OR STOLEN—ONE BLACK COLT coming four years old. Finder please phone 222, Silver Lake, Kansas. Reward. E. H. Cutbirth, Silver Lake, Kansas.

THE STRAY LIST.

TAKEN UP—BY HARRY SCHLEHUBER, of Durham, Marion County, Kansas, on the first day of May, 1919, one heifer, red with white face, V on left ear, weight 350 pounds. O. V. Heinsohn, County Clerk.

TAKEN UP—BY C. W. WARREN, EAST Eighteenth Street, Winfield, Vernon Township, Cowley County, Kansas, about October 27, 1919, one yellow sow, Red Jersey cross, about two years old, appraised at \$30.00. Frank V. Brown, County Clerk.

TAKEN UP—BY L. O. HUNT, OF RAGO, Valley Township, Kingman County, Kansas, on the 4th day of November, 1919, two Holstein steer calves, color black and white, a slit on both ears of each. Appraised at \$18 each. Geo. A. Howe, County Clerk.

no other males being kept. The following year roosters of only the general-purpose stock are kept. The difference in the color of eggs of the two breeds selected is so great that hatching eggs have always been selected with certainty as to the breed laying them. The plan necessitates introducing new males, but the advantages of keeping the blood lines of two breeds separate outweigh the slight cost of purchasing the males. The Department of Agriculture points out that when this method is followed on two neighboring farms an exchange of roosters might readily be arranged.

HONEY.

PURE EXTRACTED HONEY, 120 LBS., \$22.80. W. P. Morley, Producer, Las Animas, Colo.

FOR SALE—EXTRA FANCY COMB AND extracted honey at low prices for thirty days. Write at once for prices. Manitou Honey Co., Manitou, Colo.

PURE STRAINED, DARK—GOOD FOR cooking or table. 120 pounds, \$20. Frank H. Drexel, Crawford, Colorado.

HOGS.

SPOTTED POLAND BOARS—A FEW boars of serviceable age. Price reasonable and pedigrees furnished. A. J. Blake, Oak Hill, Kansas.

DOGS.

FOR SALE—HIGH CLASS COON, SKUNK and Opossum dogs. If you want the kind that delivers the goods, I have it. Stamp for reply. A. F. Sampey, Box 27, Springfield, Mo.

AIREDALES, COLLIES, AND OLD English Shepherd dogs. Trained male dogs, brood matrons, pups all ages. Flemish Giant, New Zealand, and Rufus Red Belgian rabbits. Send 6c for large instructive list of what you want. W. R. Watson, Box 128, Oakland, Iowa.

SPORTSMEN—TRAINED BEAGLES, rabbit, fox, coon, skunk, squirrel and opossum dogs, bird dogs, pet and farm dogs, swine, rabbits, pigeons, pheasants, goats—100 varieties blooded stock. Circulars 10c. Violet Hill Kennels, York, Pa.

TOBACCO.

TOBACCO—NATURAL LEAF SMOKING, lb., 45 cents; chewing, lb., 50 cents, postage prepaid. Chas. Goff, Tarboro, Ky.

POULTRY.

"BEAUTIFUL" SILVER WYANDOTTES, \$3 up. Mrs. Edwin Shuff, Plevna, Kan.

LIGHT BRAHMAS, BARRED ROCKS, Buff Cochins. A. Bloom, Stamford, Neb.

BIG BLACK LANGSHANS—SATISFACTION guaranteed. Osterfoss, Hedrick, Iowa.

GOOD BLACK LANGSHAN COCKERELS, \$3. Mrs. G. W. King, Solomon, Kan.

LARGE DARK RED ROSE COMB REDS, guaranteed. Highland Farm, Hedrick, Iowa.

MAMMOTH BRONZE TURKEYS—TOMS, \$8; pullets, \$6. J. W. Wade, Brinkman, Okla.

PURE BARRED ROCK COCKERELS, farm raised, \$2 each until January 1. Mrs. H. Buchanan, Abilene, Kansas.

ROSE COMB WHITE WYANDOTTES, cockerels and pullets. Strasen Bros., Alma, Kansas.

CHOICE ROSE COMB BUFF LEGHORN cockerels from fine layers. Mrs. Anna Frank Sorrensen, Dannebrog, Neb.

DARK RED R. C. R. I. RED COCKERELS, \$2.50 each. Mrs. L. F. Hinson, Stockdale, Kansas.

IF YOU WANT BARRED ROCK COCKERELS from trapnest stock, write your wants to Farnsworth, 224 Tyler St., Topeka.

BUFF ROCKS EXCLUSIVELY—BRED them for fifteen years. Cockerels, \$3, \$5, singly. A. R. Olmsted, Route 1, Lawrence, Kansas.

FOR SALE—PURE-BRED DARK RED rose comb Rhode Island Red roosters, four to ten dollars apiece. Write for particulars. Mrs. F. V. Hawley, Belpre, Kansas.

LARGE DARK VELVETY RED COCKERELS, \$2, \$3, \$5 each. Fine Bourbon Red turkey toms, \$6; hens, \$5. Mrs. T. A. Hawkins, Wakeney, Kansas.

FOR SALE—COCKERELS—S. C. REDS from the famous C. P. Scott strain direct. Prices right. Mrs. M. W. Scott, Edgewood, Route 5, Topeka, Kansas.

BARRED ROCK COCKERELS, \$4, \$5 each. Close blood to my sweepstakes pen at Kansas State Fair, 1919. Guaranteed satisfactory. Hiram Patten, Hutchinson, Kan.

THOROUGHbred BRONZE TURKEYS, young and two-year-old toms, \$10; two-year-old hens, \$6. May hatched pullets, \$7. Order early, prices will advance after January 1. Mrs. Clyde Metz, Temple, Okla.

POULTRY WANTED.

RUNNER DUCKS WANTED—BANTAMS for sale or trade. Emma Ahlstedt, Lindborg, Kansas.

ARRANGE AT ONCE FOR MARKETING your Christmas poultry. Good prices. Square deal. Coops loaned free. Paying \$6 dozen for guineas; pigeons, \$1.25. The Copes, Topeka.

AUTO TIRES.

AUTO TIRE—ONE Q. D. CLINCHER 32x 3¼ Diamond, squeegee tread, new, unwrapped as it came from factory. Can save you about \$4.00. Auto Dept., Kansas Farmer, Topeka, Kansas.

THE HOME-MAKER'S FORUM

ETHEL WHIPPLE CROOKS, Editor, Frankfort, Kansas

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.

Lord, 'tis Thy plenty-dropping hand
That soils my land,
And gives me for my bushels sown,
Twice ten for one;
Thou makest my teeming hen to lay
Her egg each day;
Beside, my faithful ewes to bear
Me twins each year;
The while the conduits of my kine
Run cream for wine—
All these; and better Thou dost send
Me—to this end,
That I should render, for my part,
A thankful heart.
—Robert Herrick.

Serving the Hot Lunch

While the primary purpose of the hot school lunch is the securing of better food conditions for the boys and girls of the country school, it has also a social and educational value. A little attention given to the best ways of serving and the ordinary rules of table etiquette at lunch time will be well worth while.

The children's desks are used instead of a table. A paper napkin is spread upon the desk and another folded neatly at the left side. The fork is placed at the left of the napkin, tines upward; the knife at the right, cutting side toward the plate. The spoon lies at the right of the knife, bowl upward. All silver should be about one and one-half inches from the edge of the table. The plate is placed a little below the center of the paper napkin and the cup and saucer at the right. If a tumbler is used, it is set above and at the right of the knife.

At the close of the morning session the children are dismissed to wash and get ready for dinner. While they are out serving committees will lay the places. Then the children are called, each one taking his own place. The committee then serve. The following simple but comprehensive rules for table service and etiquette as applied to school conditions are given in a bulletin recently issued by the extension service of the University of Arizona:

Rules for Serving

Note: All table service should be done quietly and without any appearance of haste.

1. Place all dishes before the guest from the right.
2. Pass all dishes from which food is to be taken from the left.
3. Remove all dishes from the right when convenient. Avoid reaching in front of the person served.
4. If a second helping is to be served, the dish should be passed from the left and the child helps himself, using the right hand. It is better to put the hot food on the plates in the kitchen. If cocoa or soup is to be served, the empty cup or bowl could be placed when the table is set and the cocoa or soup poured from a large pitcher after the children are seated.
5. In case a child drops his spoon or fork, one of the serving committee should take it to the kitchen, wash it carefully and return it on a tray, never in the hands.
6. If food is spilled or dishes broken, they should be cleaned up at once by the serving committee.
7. When all have finished, the teacher gives the signal and each child promptly and quietly carries his dishes back to the kitchen. The serving committee are on hand to sort, stack and wash the dishes.

Table Etiquette

1. The first requirement of good manners is to be prompt in responding to the call for dinner.
2. No child should appear at the table unless his hands are clean.
3. The boys should remain standing until the girls are seated. The teacher should be served first.
4. Sit naturally, but do not lounge at the table. When not eating, keep hands

in the lap. Elbows should be kept at the sides, not rested on the table.

5. Do not eat with a knife. The knife should be used only for cutting or spreading butter on bread. After using, it should be kept on the plate, never resting on the side of the plate or lying on the table.

6. The fork is used in the left hand in cutting but may be taken in the right hand when carrying food to the mouth. The fork should be carried with the tines upward. Avoid loading the fork with food. When the fork is not in use it should be placed on the plate beside the knife.

7. In eating soup, eat from the side of the spoon and dip away from you into the dish. If a spoon is used to stir a hot drink the stirring should be done quietly and the spoon removed from the cup and placed in saucer or plate. Never drink from a cup with a spoon in it.

8. In buttering bread, break off a small piece and hold in the hand while spreading the butter. Do not butter a whole or half slice at one time. Do not lay a piece of bread on the table to spread with butter.

9. If the food is too hot to eat, let it stand until cooler. Do not blow it. Never take a drink while there is food in the mouth.

10. Keep the mouth closed while chewing and masticate the food properly.

11. Do not talk while there is food in the mouth. Do not eat while passing food or serving others.

12. If asked to partake of food, reply quietly either, "Yes, if you please," or "No, thank you." Do not fail to say "Thank you" when served.

13. Never appear greedy. Always try to see that others are served first.

14. Toothpicks have a place as a part of the equipment for the hot lunch, but they should never be used at the table or in the presence of others.

15. If one is compelled to sneeze while at the table, the mouth and nose should be covered with the handkerchief—not the napkin—and the face turned away from the table. If a child has a cold and must use his handkerchief during the progress of a meal, he should be excused from the table and wash his hands before returning. Do not handle the hair during mealtime.

Respect for Child's Possessions

It is no wonder that during infancy and early childhood life's lessons are so difficult for the small beginner when the laws which govern them must seem to him just or unjust, consistent or inconsistent, according to the knowledge or the caprice of the adult administering them.

One of the first lessons which the little child should learn is the proper care of his own possessions and respect for those of others, and a mother has the first opportunity to inculcate this important life lesson.

Since one of the strongest instincts of the child is to imitate, there seems no more logical way to teach this lesson than by example. If a mother teaches her child not to touch the articles on her desk or dressing table without her permission, then has she the right to dispose of his toys without his permission?

The writer recalls an instance where a mother secretly put away a doll which had been given to her little girl, and, for no reason except that the child already had a number of dolls and this particular one was "too beautifully dressed to be played with until the child was older."

Another common way of disregarding children's rights is to force them to give

up some new or much-prized possession. For example, a little girl of six, who was delighted with the gift of a doll's fan, was obliged by her mother to hand it to her screaming baby in order too quiet him. In his excitement he soon crushed the tiny toy, his screams increased, and his little sister was broken-hearted. Nor had the unjust and short-sighted mother "saved the scene" which she had hoped to avert.

In each of these cases the child should have been consulted and her permission given before the mother disposed of the plaything. In this way the mother could have explained the reasons for her own action, and the child, in her turn, would have had an opportunity of expressing herself, a habit which should be encouraged. Then, too, personal responsibility for her possessions and the recognition of the right of ownership would have emphasized the difference between "mine" and "thine."

There is no better way to create habits of orderliness and a sense of responsibility than by giving the child a place for keeping his playthings and then allowing him full control of these possessions.

Show him how to use his books, how to take care of his toys, how to protect his pets, and then see to it that he has a shelf or a small bookcase for his books, a play corner for his toys, and an appropriate home for his pets.

After playtime require him to put away whatever he has been using, and let him understand the necessity for regular attention to his pets. Such training will of necessity react upon his character since possession entails responsibility. Ownership also teaches generosity, for without possessions how can a child learn to share?

It may not be out of place in advising parents to respect their children's possessions to add a warning on behalf of the children. Do not surround them with numberless ready-made toys. Give them blocks, boards, nails, a few tools, hammers, saws, planes, spools, scissors, thread, cloth, dolls, paper, crayons, clay, sand, and books. They will get more happiness from these possessions of constructive possibilities than from all the finished toys of the biggest toy shops in the land.

"Childhood has its own way of seeing, thinking, and feeling, and nothing is more foolish than to try to substitute our own for them."

Respect your child's right to his possessions and he will learn to respect the rights of others, and, with such recognition, there will be no fear for the outcome of his place in society. Help to reach all the parents of the country by cutting this out and passing it on to a friend.—HELENA WILSON, National Kindergarten Association.

Hammock for Baby's Ride

The county agent in Walsh County, N. Dak., has found a solution for a problem that has perplexed many a mother—what to do with the baby when the family is taking an automobile ride. He describes his apparatus as follows:

"Take two pieces of 3-8-inch rope, each long enough to reach from one top bow around back of the seat to the other. Into these splice two short pieces to make a rectangle about a foot wide and nearly as long as the car body is wide. Leave ends of rope at the four corners to tie to the four bows on the top. Over this rectangle fit a denim basket about 2 feet long. This will make a very satisfactory hammock and one that can be used at any time of the year. The baby carried in it will be happier than in the mother's lap and the mother will have a pleasant trip."

Eat More Nuts

Nuts serve as an excellent source of heat and energy, and may replace to a considerable extent other proteins in a diet. Because they are a concentrated food, they must be used with care, remembering that nuts added to an already hearty meal may be the cause of digestive disturbances. They should be



TRAPPERS You Will Dance

with joy when you get your returns for furs shipped to the Abraham Fur Co., the house that never disappoints fur shippers. Our expert graders in our "Take-up" Department have positive instructions to see that every shipper gets a liberal grade on every skin and are held accountable for all furs taken up by them. Our prices are the highest ever known and now, more than ever, you need the services of an old established, reliable and experienced fur house. There are no fur houses in the world which have these qualifications to a greater extent than the Abraham Fur Co.

Ship Every Pelt You Have—Now

We urge you to send us your next shipment of furs and let us prove to you that our prices are the highest—our grading the most correct and liberal and our returns most prompt. We have been in the fur business continuously for 48 years and we have made more staunch friends and have a larger percentage of regular old shippers than any other fur house in the U.S. These facts justify our claims that Abraham is America's Leading Fur House. Other fur houses make these same claims, but it is generally conceded by our competitors that the hardest fur house to fight against for business is the Abraham Fur Co. Why? Because our returns are always top of the market and any fur house that wants to keep pace with us will have to go some and be on the job early and late.

SUPPLIES Get one of Abraham's wonderful Smoke Pumps—\$2.00 postpaid, with extra extension \$2.10. Abraham's Animal Bait and Trap Scent \$1.00 per bottle, 3 bottles for \$2.50. Best bargain in Rain Coats \$5.95. Get our free book "Fur Facts" and Trappers' Supply Catalog. It's free—drop us a card today. Weekly Reports—Tags and other literature—also free. Get the whole business with one postal card—write today.

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\$2,500 DOWN SECURES 220 A. Missouri Farm With

Five horses, three cows, bull, hogs, 150 poultry, complete machinery, convenient R. R. city, high school, etc. Tillage is productive loam soil, raises big crops; 40-cow, sheep and hog pasture woven wire fenced; estimate 3,000 cords wood, million feet oak timber. New house, two barns, one new one, other buildings. \$6,545 gets everything. \$2,500 down, balance easy terms. Full details page 88, Strout's Fall Catalog Farm Bargains 23 States; copy free.

Strout Farm Agency,

831 A. S. N. Y. Life Bldg., Kansas City, Mo.

The constitution of the United States requires that a census of the United States be taken every ten years. It is by this means that the apportionment of members of the House of Representatives is made as to states.

combined with bulky foods, such as vegetables or fruits, and may be used in this way in a salad. Nuts are generally greatly valued because of their characteristic flavor and are added to many dishes to make them more palatable. In this manner we find them used in salads, cakes, confectionery, stuffing in goose or chicken, in desserts, or even as a flavoring to soups. Among vegetarians, nuts and legumes are the main source of protein. They are used as nut butters, nut meals, made into bread, nut loaf or croquettes to replace meat in the diet. They are also served raw, salted and unsalted. Among the French the puree of chestnuts is a favorite dish and a most palatable one. The cost of nuts varies greatly with their availability and the time of the year, but they are generally considered rather expensive. They are approximately 50 per cent waste when bought in the shell. Beef at the same price averages about 25 per cent waste. An excessive use of nuts may bring about digestive disturbances.

Cottage Cheese

Do you remember the cottage cheese that mother used to make? Why, it was fairly melted in your mouth. It was always made of the very best quality of clabbered milk. A little heat quickly ripened the curd. Then the whey was carefully drained away. The curd was seasoned with a little salt, cream was added, and the cheese was ready for the table. How we liked it! How we ate it! Don't you wish you had some now? Never cry over sour milk. Just make it into cottage cheese.—J. C. McDowell, U. S. Department of Agriculture.

The Use of Butter

Everybody likes butter. Butter makes us strong and keeps us well. The use of butter is so common that we sometimes forget how good it is. Like the little girl in the poem, "When it's good, it's very, very good"—and it should always be good. We use butter every day in a dozen different ways. Butter is especially valuable for children. It supplies the very necessary food element, fat, in its most palatable and easily digested form. The standard childhood lunch, bread and butter, is a perfect meal, a producer of rosy cheeks and sturdy limbs. Butter is an excellent food for everybody. We like it on mashed potatoes, corn bread, and griddle cakes. Butter is such a valuable food that it should always be used wisely, never extravagantly. It adds flavor to every dish. Healthful and appetizing, it appeals to the palate and brings to the user a full measure of satisfaction and content.—Circular 26, U. S. Dept. of Agriculture.

Cranberry Jelly

Pick over, stem and wash big red cranberries. Add half as much water as berries and cook until the skins burst. Remove skins by putting mixture through a sieve. Add same amount of sugar and boil until answers following test: Dip a clean spoon into the mixture. If the jelly runs to the center of the spoon, it is not done. When it drips in more than one spot the jelly is done.

"Cleaning kid gloves with gasoline and the little heating stove for heating irons burning on the opposite side of the room, was the cause of an explosion." This is the report received by the state fire marshal of a fire at Stockton recently. In view of all that has been said and written regarding using gasoline for cleaning purposes, comment is unnecessary.

In cleaning garments with gasoline, mark spots with white thread. Otherwise they are hard to find after the whole garment is wet. Immerse the whole garment in the bath. Take out spots by rubbing very lightly between the fingers. Rinse in clear liquid, changing it until it remains clear. If too little is used, the garment will look grimy. Used gasoline may be strained through muslin or allowed to settle and

then poured off and used again for the first washing, but not for the final rinsing. Dry the garment out of doors.

To remove shine on woolen garments, use one tablespoon ammonia to one quart water. Apply with a clean, soft, lintless cloth, a sponge, or a piece of the material itself. Sponge with light, even strokes in the direction of the grain of the goods, using only a little moisture at a time. Finish with clear water. Iron on the wrong side with a medium-hot iron or press with a damp cloth over the right side. Brush up nap if too closely pressed down.

A good way of removing water spots on dress goods is by steaming. Work over a tub or bowl of very hot water or use one of the special steam spreaders which fit on the spout of a teakettle. Shake dry, or in the case of outer garments dry on a hanger which holds the garment in shape.

Father had brought a friend—a Mr. Hoover—home to dinner. Little Betty, upon being introduced, asked disappointedly, "But Dad—where's his red, white and blue pants?"

God be thanked for books. They are the voices of the distant and the dead, and make us heirs of the spiritual life of past ages. Books are the true levelers. They give to all, who will faithfully use them, the society, the spiritual presence of the best and greatest of our race. No matter how poor I am, no matter though the prosperous of my own time will not enter my obscure dwelling, if the sacred writers will enter and take up their abode under my roof, if Milton will cross my threshold to sing

to me of Paradise, and Shakespeare will open to me the worlds of imagination and the workings of the human heart, and Franklin will enrich me with his practical wisdom, I shall not pine for want of intellectual companionship, and I may become a cultivated man though excluded from what is called the best society in the place where I live.—CHANNING.

Buttered Crumbs

Crush dry bread through food chopper, sift through fine sieve. Stir crumbs into melted butter, using two tablespoonfuls of melted butter to six of crumbs. Butter crumbs are used in preparing escalloped dishes, in breading meats or for thickening sauces. A supply of them can be kept on hand if kept in closed jar.

Bean Salad

1 pint cooked red or white beans
1 cupful chopped celery
1 tart apple
1 slice onion, finely chopped

Mix all together and moisten with a cooked salad dressing. This may sound like an odd mixture, but try it and see if you do not like it.

Peanut Brittle

1/2 cupful granulated sugar
1/2 cupful hot water
1/2 cupful peanuts

Add water to sugar and stir until it dissolves. Remove spoon and boil rapidly until golden brown. Place chopped nuts on inverted pan and pour liquid over them; shape with knife and when slightly cool cut in bars.

Peerless Baked Apple

Choose large firm apples; wash, wipe, pare, remove cores; fill with chopped nuts or jelly, 1 teaspoonful sugar, a little cinnamon. Sprinkle sugar over ap-

ON THE TRAINING OF A FATHER

FATHERS are quite as hard to train as boys, and from experience all along the line, I have come to the conclusion that fathers and boys alike will mostly go their own way, in the long run getting "what is coming to them." But it is in the power of the father to help a boy to realize his best instead of his worst tendencies and possibilities. To this end, a father should be sympathetic and patient, helping the development of whatever natural taste or genius a boy may have. Virtue is never negative and a boy is held from idleness or vice by giving him something better to work at. If a boy has a real love for some study or for some worthy line of work, encourage that. It marks the way out from temptation. A boy needs in his development sympathy rather than financial help. His ideals need strengthening, not his purse. To have money to burn will ruin all those who burn it. It is hard to raise a boy who is rich and knows that whatever he wants is his for the asking. He is likely to be content with what money can buy, and it cannot buy very much that is worth having. It can help in many things, but a mere aid is not the thing itself.

The father can promote the plain virtues of sobriety, honesty, tolerance, and kindness. The most effective way of teaching these virtues is for him to illustrate them in himself—to show how righteousness looks when it is lived. Occasionally a father successfully proves his point by becoming the awful example. But that is not the best way, and right living can be most effectively taught, not by precept but by practice. And remember always that right living is a positive thing. It is not secured by inhibitions. "Don't, don't, don't," never leads to anything worth while. Don't say to boys: "Keep off the grass. Keep out of the dirt. Keep away from the slums." Rather indicate places it is better to go: "This way to citizenship; this way to science, to art, to a worthy profession."

It is worth while to remember that the boy is the germ of what the man is to be. You cannot change his nature much, but you can develop the best in him till it overshadows the worst. The life of a man at forty will be what was in his heart at twenty-one.

And a father may say to his boys something like this, which in one way or another I have said to thousands of boys in this and other countries:

"Your first duty in life is toward your 'afterself.' So live that your afterself—the man you ought to be—may in his time be possible and actual.

"Far away in the years he is waiting his turn. His body, his brain, his soul, are in your boyish hands. He cannot help himself.

"What will you leave for him?

"Will it be a body unspoiled by lust or dissipation; a mind trained to think and act; a nervous system true as a dial in its response to the truth about you? Will you, boy, let him come as a man among men in his time?

"Or will you throw away his inheritance before he has had the chance to touch it? Will you turn over to him a brain distorted, a mind diseased; a will untrained to action; a spinal cord grown through and through with the devil grass we call wild oats?

"Will you let him come, taking your place, gaining through your experience, happy in your friendships, hallowed through your joys, building on them his own?

"Or will you fling it all away, decreeing, wanton-like, that the man you might have been shall never be?

"This is your problem in life—the problem vastly more important to you than any or all others. How will you meet it, as man or as a fool? It is your problem today and every day, and the hour of your choice is the crisis in your history."—DAVID STARR JORDAN for U. S. Bureau of Education.

ples, put them in shallow pan, cover with water and bake till tender.

Mexican Frijoles

2 cupfuls pinto beans that have been well cooked and seasoned
2 tablespoonfuls tomato pulp
2 red pimientos, cut fine
1/2 cupful grated California or Oregon cheese
Salt to taste
Dash of cayenne.

The cheese may be replaced by one cupful of soup stock. If high seasoning is liked one tablespoonful of Worcestershire sauce may be added. Heat the beans in a double boiler or fry them in bacon fat. Then add the other ingredients and simmer slowly thirty minutes, or if cheese is used just long enough to melt the cheese. Long cooking will make it tough. This dish is usually served with rice.

FASHION DEPARTMENT

Price of All Patterns, 10 Cents



No. 3027-3004—Costume for Home or Business: Waist 3027 cut in seven sizes—34, 36, 38, 40, 42, 44 and 46 inches bust measure. Size 38 will require 3 1/2 yards of 27-inch material. Skirt 3004 cut in seven sizes—22, 24, 26, 28, 30, 32 and 34 inches waist measure. Size 24 will require 2 1/2 yards of 48-inch material. The width at lower edge of skirt, with plaits extended, is 2 1/2 yards. Two separate patterns, 10 cents for each. No. 3029—Girl's Dress: Cut in four sizes—8, 10, 12 and 14 years. Size 10 will require four yards of 36-inch material. No. 3021—A Smart Coat: Cut in six sizes—34, 36, 38, 40, 42 and 44 inches bust measure. Size 38 will require 6 1/2 yards of 52-inch material. No. 3009—Girl's Dress: Cut in four sizes—4, 6, 8 and 10 years. Size 8 will require 2 1/2 yards of 36-inch material.

PATTERN NOTES

For home or street wear the costume made by combining Waist 3027 and Skirt 3004 is very acceptable. The waist would be good in linen, madras, crepe, washable satin, or flannel. The skirt is just the thing for plaid and check suiting, for serge, corduroy, gabardine, or voile.

For the little girls' dress 3009, gingham, lawn, percale, gabardine, serge, silk or velvet may be used. The pockets and belt may be omitted. The sleeve in wrist length is good for cool days, while the short sleeve is a graceful and comfortable style.

Linen, gingham, percale, seersucker, serge, poplin and voile are suitable for No. 3029. The dress slips on over the head, but skirt and waist may be finished separately. The sleeve in wrist length has a band cuff. In shorter length it is finished with a shaped cuff, turned back on the sleeve.

The coat shown has good style lines and is not difficult to make. Wool, velvet, plush and other pile fabrics, two-toned combinations, double faced chevrons, corduroy, polo cloth, and tweeds are suitable materials. The belt may be omitted.

The first census of the United States was taken in 1790, during the administration of George Washington. It related solely to population.

HOLSTEIN CATTLE.**Persistence in Production**

Is one of the most desirable qualities a dairy animal can have. Vanderkamp Segs Pontiac is our herd sire. His dam is one of less than twenty cows in the world to produce over thirty pounds of butter in four consecutive lactation periods. Twenty-three of his nearest dams average over twenty-seven pounds of butter in seven days. We have several young bulls to offer, sired by this remarkable bull. Prices, \$100 and up.

Collins Farm Co., Sabetha, Kas.

PRACTICALLY PURE BRED HOLSTEIN CALVES

Six to eight weeks old, nicely marked and excellent individuals, from registered sires and choice heavy milking cows, \$30 each. We pay express.

CLOVER VALLEY HOLSTEIN FARM WHITEWATER, WISCONSIN.

BRAEBURN HOLSTEINS

Looking for a bull? I can generally offer you choice of half a dozen, by two different sires. That saves time and travel.

H. B. COWLES Topeka, Kansas
608 Kansas Avenue

HOLSTEIN BULLS

For Sale—Six Choice Bulls, six months to yearlings, one out of a 25-pound cow and one from 21-pound cow, one from 17-pound two-year-old, priced to sell. Come and see them. Also a few registered Duroc gilts priced right. Ben Schneider, Nortonville, Kan.

BUTTER-BRED HOLSTEINS

TEN COWS AND HEIFERS—SOME JUST fresh. Three young bulls ready for light service, 32 to 35 lb. breeding.
J. P. MAST SCRANTON, KANSAS

DUROC JERSEYS.**For Sale—Fifteen Spring Boars**

And one Fall Yearling of the best of breeding, priced to sell. Satisfaction guaranteed.
Louis Mc Collam, Kincaid, Kan.

PETFORD'S DUROCS

FOR SALE—Fifty spring pigs by the grand champion Model Ally, Illustration Orion 3d and General Pathfinder, out of my best herd sows. These boars are good and priced to sell. Send for catalog. Bred sow sale February 14.

JOHN W. PETFORD, Saffordville, Kansas

REPLEGUE'S DUROCS

I have a few good spring boars from \$40 to \$60 if taken soon. These boars are sired by John's Combination 2nd 238229 and B. C. Colonel 281657, and out of good sows. These boars are immunized against cholera by the double treatment and I'll guarantee satisfaction. S. B. REPLEGUE, Cottonwood Falls, Kan.

HAMPSHIRE HOGS

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

SPOTTED POLAND CHINAS.

SPOTTED POLANDS.
Last call for early boars. Order gilts early.
T. T. Langford & Sons, Jamesport, Mo.

Home Tanning of Skins

When it is desired to preserve the skins of wild animals which have been shot or trapped, these may be tanned either with the hair on or off, as desired. Hair can be removed from hides by soaking them in tepid water made alkaline by lye or lime. The following recipe for a tanning liquor is furnished by the Biological Survey of the United States Department of Agriculture: To each gallon of water add one quart of salt and one-half ounce of sulphuric acid. This mixture should not be kept in a metal container. Thin skins are tanned by this liquor in one day; heavy skins must remain in it longer. They may remain in it indefinitely without harm.

When removed from this liquor, the skins are washed several times in soapy water, wrung as dry as possible, and rubbed on the flesh side with a cake of hard soap. They are then folded in the middle, hung lengthwise over a line, hair side out, and left to dry. When both surfaces are barely dry, and the interior is still moist, they are laid over a smooth rounded board and scraped on the flesh side with the edge of a worn flat file, or a similar blunt-edged tool. In this way an inner layer is removed and the skins become nearly white in color. They are then stretched, rubbed, and twisted until quite dry. If parts of a skin are still hard and stiff, the soaping, drying, and stretching process is repeated until the entire skin is soft. Fresh butter, or other animal fat, worked into skins while they are warm, and then worked out again in dry hardwood sawdust, or extracted by a hasty bath in gasoline, increases their softness.

RED POLLED CATTLE.**RED POLLED CATTLE**

For Sale—One 2-year-old herd bull, two yearling heifers and a few cows. Come and see my herd.

J. H. FERGUSON - GYPSUM, KANSAS

FORT LARNED RANCH

200 Head of Registered Red Polled Cattle. A number of choice one and two-year-old bulls and heifers from one to three years old.
E. E. FRIZELL & SONS, FRIZELL, KAN.

RED POLLS, BOTH SEXES, BEST OF BREEDING.
Charles Morrison & Son, Phillipsburg, Kan.

POLAND CHINAS**Poland China Boars**

FOR SALE—A few extra good spring boars, and will offer a few spring gilts. Will sell open or breed them for spring litter. Write or come and see us.

Hill & King

Phone Rural 8104 F5 Route 28, Topeka, Kan.

Barnsdale Polands

For Sale—Poland China gilts bred to Wonder Price and Jumbo Uhlman. Also a few choice spring boars, priced reasonable. Write or come and see my herd.

R. L. Barnes, Grenola, Kansas

DEMING RANCH**POLANDS**

The blood that breeds on hogs that make good. Strong in the blood of Big Bob Jumbo. For sale, a lot of early boars. Come and see us.

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

BOARS FOR SALE AT PRIVATE TREATY
Choice grandsons of Caldwell's Big Bob (grand champion of world) sired by Black Bob Wonder and by King Bob. Piggied in March, April and May. Immunized.
W. C. HALL, COFFEYVILLE, KANSAS

MYERS' POLAND CHINAS

Large spring pigs in pairs or trios, priced to sell. Write your wants. Annual fall sale October 14.

H. E. MYERS - GARDNER, KANSAS

POLAND CHINA BOARS

Sired by Buster Price out of King Joe's Lady 4th. Herd prospects. Come and see my herd.

H. O. MOTT, WHITE CITY, KAN.

PIONEER HERD POLANDS

Black Buster and Columbus Wonder at Head of Our Herd

Two great sons of Giant Buster and Big Bob Wonder. For sale, a few choice gilts bred for September litters. Annual bred sow sale February 12, 1920.

F. Olivier & Sons DANVILLE - KANSAS

HORSES AND MULES.**PERCHERON HORSES**

For Sale—Three 3-year-old mares, two 2-year-olds, three aged mares with spring colts. Two yearling stallions priced to sell.
L. E. FIFE, NEWTON, KANSAS

Percherons--Belgians--Shires
My stallions have been again awarded premier honors at the State Fairs. Show horses and real herd-heads for sale. **FRED CHANDLER, Rte. 7, Chariton, Iowa.** Above Kansas City.

BREEDERS' DIRECTORY

ANGUS CATTLE.
Geo. Dietrich, Carbondale, Kansas.
RED POLLED CATTLE
Mahlon Groenmiller, Pomona, Kansas.

AYRSHIRE CATTLE.**AYRSHIRE BULLS**

FOR SALE—A son of the Illinois State Record Ayrshire cow. The University of Illinois offers a young bull, out of Bluebell of the Plains, 724 pounds fat, state record Ayrshire cow, sired by Cavalier's Leader of Spring City, 2nd National Dairy Show, 1913. Also other bull calves by the same sire and from half sisters to this cow all with large A. R. records.

UNIVERSITY OF ILLINOIS
Dept. of Dairy Husbandry, Urbana, Illinois

AUCTIONEERS.

LIVE STOCK AUCTIONEER—Fifteen years' experience. Wire for date.
JOHN D. SNYDER, HUTCHINSON, KAN.

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Please Mention Kansas Farmer

100 Head Shorthorn Cattle**40 Head Registered Poland China Sows**

At Robison, Kans., Jan. 8, 1920

I AM CLOSING OUT MY CATTLE AND HOGS

WILL SELL AT AUCTION 100 HEAD CATTLE

Forty-eight head are registered Shorthorns, cows and heifers. Forty head registered Poland China sows, all bred to B. Buster, son of A. Buster. Four large heavy bone jacks, one imported nine-year-old Percheron stallion, one seven-year-old road horse, 250 Barred Rock chickens. Write for descriptive folder.

W. F. Cleppe, Robison, Kansas

34 Miles West of St. Joseph, Mo., on Grand Island Railway

FOR SALE--Shorthorn Cattle, Percheron Horses**SIXTY-TWO HEAD SHORTHORN CATTLE**

Fifty Cows and Heifers, Yearlings to Mature Cows. Twelve Young Bulls, Scotch and Scotch Topped.

Will price one or whole herd, white, red and roan. Also a few Percheron mares and young stallions for sale. Farm two miles from Meriden and ten miles northeast of Topeka. Come and see our herd.

ADAM BECKER & SON - MERIDEN, KANSAS

Kansas Shorthorn Breeders' Association

PARK E. SALTER, Pres.

Wichita, Kan.

G. A. LAUDE, Sec'y.

Mumboldt, Kan.

SHORTHORN CATTLE

For Sale—A few young bulls and a few choice spring boars and gilts. We hold February bred sow sale and annual Shorthorn sale in June, 1920. Write us your wants.

C. S. NEVIUS & SON - CHILES, KANSAS

WANT SHORTHORNS THAT COMBINE BEEF AND MILK

We receive many inquiries for Shorthorns that combine beef and milk. We urge that all who are hand-milking Shorthorn cows join the Milking Shorthorn Cattle Club of America, J. L. Torrey, Secretary, 13 Dexter Park Avenue, Chicago. Grass-fat Shorthorn steers have topped the Chicago market. In the Record of Merit there are listed 830 Shorthorn cows of all ages whose records average over 8,000 pounds of milk annually. Send for literature.

AMERICAN SHORTHORN BREEDERS' ASS'N
13 Dexter Park Avenue Chicago, Illinois

PEARL SHORTHORNS

Bulls, Scotch and Scotch topped, six to 18 months, for sale. Reds and roans. Can ship over Rock Island, Santa Fe, Missouri Pacific and Union Pacific.

G. W. TAYLOR, ABILENE, KANS.
DICKINSON COUNTY.

ALL SCOTCH SHORTHORNS

Herd headed by Walnut Type, a grand son of White Hall Sultan, and Silver Plate, a son of Imp. Bapton Corporal. A few young bulls for sale. **Robert Russell, Muscotah, Ks.**

SHORTHORNS FOR SALE

My herd bull, White Goods Model, and 12 of his get, whites and roans, ages 8 to 18 months. **H. W. ESTES, Sitka, Kansas.**

MARKS LODGE

Shorthorn Cattle. Reds Exclusively. Fifty cows and calves—Lancaster, Diamond and Scotchman dams. Clipper Dale 652041 and Butterfly Lad 448517, herd bulls. A few Diamond bull calves and tried cows for sale at this time. Milk and beef prospects. **M. F. MARKS, Valley Falls, Kansas.**

CHESTER WHITE HOGS**Chester White Boars**

Twenty Large Spring Boars ready for service, price \$40, \$50 and \$60. Write at once if you mean business. My annual bred sow sale January 19, 1920. Send for catalog.

Henry Murr, Tonganoxie, Kan.

SHORTHORN CATTLE

Herd Bull, Sultan Seal.

175 in herd, Scotch and Scotch-topped. For Sale—Ten choice bulls, yearlings to 18 months. A few choice heifers and bred cows, priced reasonable. Come and see our herd.

Barrett & Land

Overbrook - Osage County - Kansas

SHORTHORN CATTLE.

Herd Bull, Nell's Goods by Silk Goods by Choice Goods. For Sale—A few young bulls, reds and roans. Come and see my herd.
FRANK GRAGG - DENISON, KANSAS

Snowdon Herd Shorthorns

For Sale—One herd bull and eight young bulls. Reds and roans. Priced reasonable. Write or come.

D. N. PRICE - BAILEYVILLE, KANSAS

SCOTCH SHORTHORN BULLS

FOR SALE.

Lavender King and Red Stamp

IN SERVICE.

HARRY T. FORBES, R. 8, Topeka, Kansas

SHORTHORN CATTLE

For Sale—Ten bulls, serviceable age. Twenty females from heifers and mature cows with calves at foot. Priced reasonable. Come and see me.

J. R. ELY - MARION, KANSAS

SHORTHORN BULLS

For Sale—Six Pure Scotch Bulls. Four are sired by Prince Valentine 4th, one Queen Beauty, two Butterflies, one Cumberland, one tracing to Lady Susan. The dams of these bulls are all on my farm, also three Scotch-topped bulls 10 to 15 months old. Come and see our herd.

A. L. & D. HARRIS, OSAGE CITY, KANSAS

SHORTHORN CATTLE

For Sale—Five young Scotch bulls and ten head of females, bred or calves at foot.

H. H. HOLMES, R. F. D. 28, Topeka, Kan.

SHROPSHIRE SHEEP

Black-faced big, hardy bucks, lively rustlers, and right ready for business. Registered Shropshires. Crated or in car-lots. Everyday prices.
HOWARD CHANDLER, Chariton, Iowa.



Prospects for Poultry Keepers

With eggs selling for more than a dollar a dozen in New York before the first of November, and with prices of corn and other poultry feeds on the downward trend prospects certainly look bright for the poultry keepers who will have eggs for sale this winter. The fact that the price of eggs is soaring while the prices of hogs, cattle and most other farm products are suffering a serious slump should cause many farmers to develop a more wholesome respect for the farm hen, and should create a greater interest in the methods of increasing the winter production of their flocks. From present indications poultry keepers are entering upon the most profitable era which they have ever experienced. Wise flock owners will give their birds the very best of care this season and reap handsome profits for their reward.

To get winter eggs the first essential is good laying stock. Well-matured, early-hatched pullets are the best winter layers and every flock should contain a good per cent of birds of this type. The old hens should have been thoroughly culled to remove the hens which were naturally low producers. In this connection it might be well to emphasize the uselessness of keeping late-hatched or poorly developed pullets. If for any reason any pullets are not large enough to start laying soon after November 1 the sensible thing to do is to dispose of them and give all possible care to the birds that are left. The size of the flock is no sure index of the number of winter eggs which will be produced on any farm. It happens every year that some flocks of ten or twelve birds given proper care will lay more eggs during November, December and January than other flocks of two hundred immature, poorly housed and half-starved fowls.

A great many farm poultry keepers in their enthusiasm for making money attempt to keep twice as many birds as they have room for and by overcrowding almost entirely cut off the production of winter eggs. The number of birds to be kept during the winter should be carefully limited by the size of the poultry house. Each bird should have about three square feet of floor space in the house. No more than 75 hens should be kept in a house which is ten feet wide and twenty feet long. It is not at all uncommon to find 200 birds crowded into a house of this size. If the flock is too large for the house either more houses should be built or part of the birds should be sent to market before cold weather sets in.

Get rid of the rubbish in the garden. Clean up. Debris of any kind harbors both insect and fungus foes.



A Sample of the Magnificent Array of Two-Year-Old Heifers—Seventy-Eight in Number

INTRODUCTORY SALE**MOSES BROS. & CLAYTON ANXIETY HEREFORDS**

120 BRED FEMALES—78 TWO-YEAR-OLD HEIFERS—42 COWS 3 TO 7 YEARS OLD

Tuesday, Dec. 2, Great Bend, Kansas

THE 78 TWO-YEAR-OLD HEIFERS ARE THE PICK OF THE 1917 CALF CROP FROM
A HERD THAT NUMBERS OVER 800 HEAD

And they are a bunch of which any breeder, anywhere, could be proud. They have size, bone and substance, with lots of style and character. The type that develop into great producers with sufficient milking qualities to raise and develop their calves properly. Their heads and beautifully drooped horns are truly feminine and distinctly Anxiety in caste. The forty-two young cows furnish great material for foundation stock of quality.

All are Bred to our Anxiety Herd Bulls and are Due to Calve During Next Spring

The Moses Bros. & Clayton herd started in 1898 with seventeen cows and a bull and today numbers over 800 head. The first bull was by Beau Real (by Anxiety 4th) followed by a son of Preordination by Don Carlos. Then came Beau Paragon, the sire of the noted Paragon 12th. Sons of Beau Paragon assisted by sons of noted Gudgell & Simpson bred bulls are in service today.

For Catalogs and Complete Information, address

MOSES BROS' AND CLAYTON, GREAT BEND, KANSAS

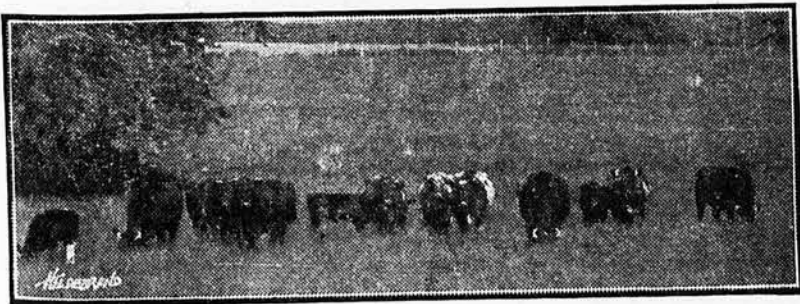


SOME OF THE CATTLE ON THE RANCH

.....HEDGEWOOD

The Greatest Offering of Cattle Ever Made by
W. A. FORSYTHE & SONS
OF GREENWOOD, MO.

At Their Sale Barns at **Pleasant Hill, Mo.**
(On the Missouri Pacific)



FRIDAY, DECEMBER 12, 1919
SOME 60 LOTS

SHORTHORNS.....

FIFTY FEMALES OF RARE QUALITY AND BREEDING—
ABOUT FIFTEEN CALVES AT FOOT

The bulls in the offering have conformation, breed character and pedigrees that make them worthy of service in the best herds of the land. A lot of the females have calves at foot or are in calf to Rosewood Radium 512686, Imp. Bapton Mariner, and the prize winning young white bull Choice Stamp 699656, a highly meritorious grandson of Fair Acres Sultan. Choice Stamp will be among the few bulls that will go in this sale.

To make this sale a memorable event in the annals of Hedgewood Shorthorns, buyers will have a chance to select many things from the very cream of the breed. This statement is amply attested by the fact that the list includes such bovine treasures as Clara Hedgewood by Imp. Bapton Mariner and out of Imp. Polinaise Clara 10th; Rosebud 8th, sire Bapton Mariner, dam Imp. Allerton Rosebud 6th; Cecelia Hedgewood, another daughter of Bapton Mariner, out of Belle Cecelia 4th; Lady Supreme 694468, the grand champion roan daughter of Sultan Supreme; Violet Hedgewood A by a son of Choice Goods; Lavender Princess by Pride of Albion; Laura 3d, a granddaughter of Villager; Nonpareil 52d, a proven producer of good things; Amy's Princess, the red show cow with four firsts and one senior championship to her credit; Rosa Cumberland, mother of a good white bull calf and daughter of Cumberland Marshal; Village Violet, a granddaughter of Villager; Fair Violet Bud 3d with a fine big heifer calf; the grand cow Rosetta of Grassland 2d, bred by Senator Wornall, sired by W. S. Marr's conqueror and out of Imp. Rosetta 12th, and many others of real note and great worth which a study of the catalog will reveal.

It will be a most unusual opportunity to get real prizes of the breed.

W. A. Forsythe & Sons, Greenwood, Mo.

When writing for catalog, please mention Kansas Farmer.

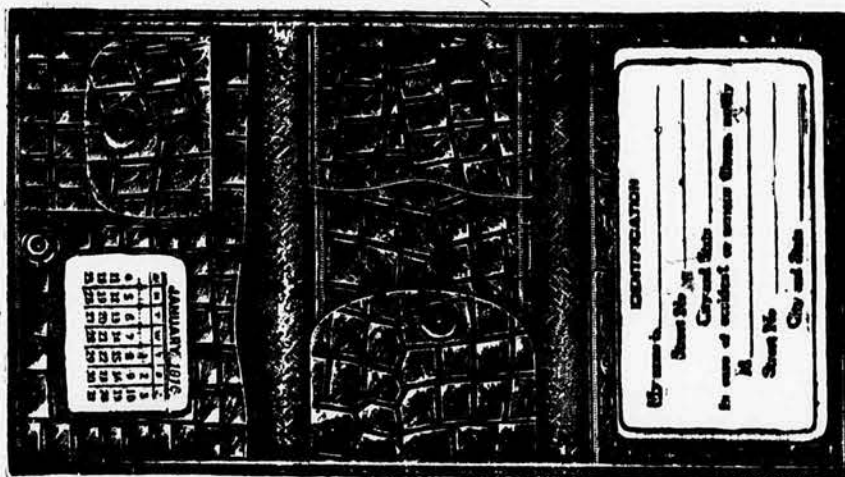
Auctioneers: P. M. GROSS and H. L. BURGESS

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GOOD FOR 10 DAYS

Renew your subscription promptly and you will make a big saving and at the same time get a valuable premium FREE. Read these special offers and send your order NOW.

SEVEN-IN-ONE BILL BOOK



This Bill Book is made of real leather. It is well sewed and of heavy material. Every man needs one. We made a fortunate purchase of these and as long as they last will send you one FREE with your subscription.

SPECIAL OFFER NO. 1.

Kansas Farmer and the Kansas City Weekly Journal, both papers one year and one Leather Bill Book, for only\$1.00

SPECIAL OFFER NO. 2.

Kansas Farmer and the Kansas City Weekly Journal, both papers three years and one Leather Bill Book.\$2.50

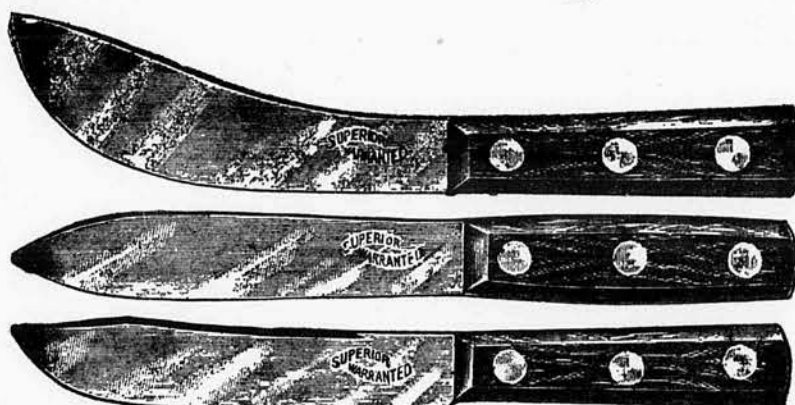
Our Superior 3-Piece Butchering Set

Contains One Each—

SKINNING KNIFF
STICKING KNIFE
(Double Edge)
BUTCHER KNIFE

All with six-inch high-grade blades, carefully tempered, ground and polished. Beech or maple handles and extra large-headed brass rivets. Fully warranted.

During the past year we have furnished these sets to thousands of farmers, with satisfaction to every one. We can make this exceptional offer only because these knives were bought in large quantities at before-the-war prices.



SPECIAL OFFER NO. 3.—Kansas Farmer and the Kansas City Weekly Journal, both papers for two years and one three-piece Butchering Set.\$2.00

ORDER BLANK.

KANSAS FARMER COMPANY, Topeka, Kansas.

Gentlemen: I accept your Special Offer No. Enclosed find \$.....in payment.

Name R. F. D.

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