

# KANSAS FARMER

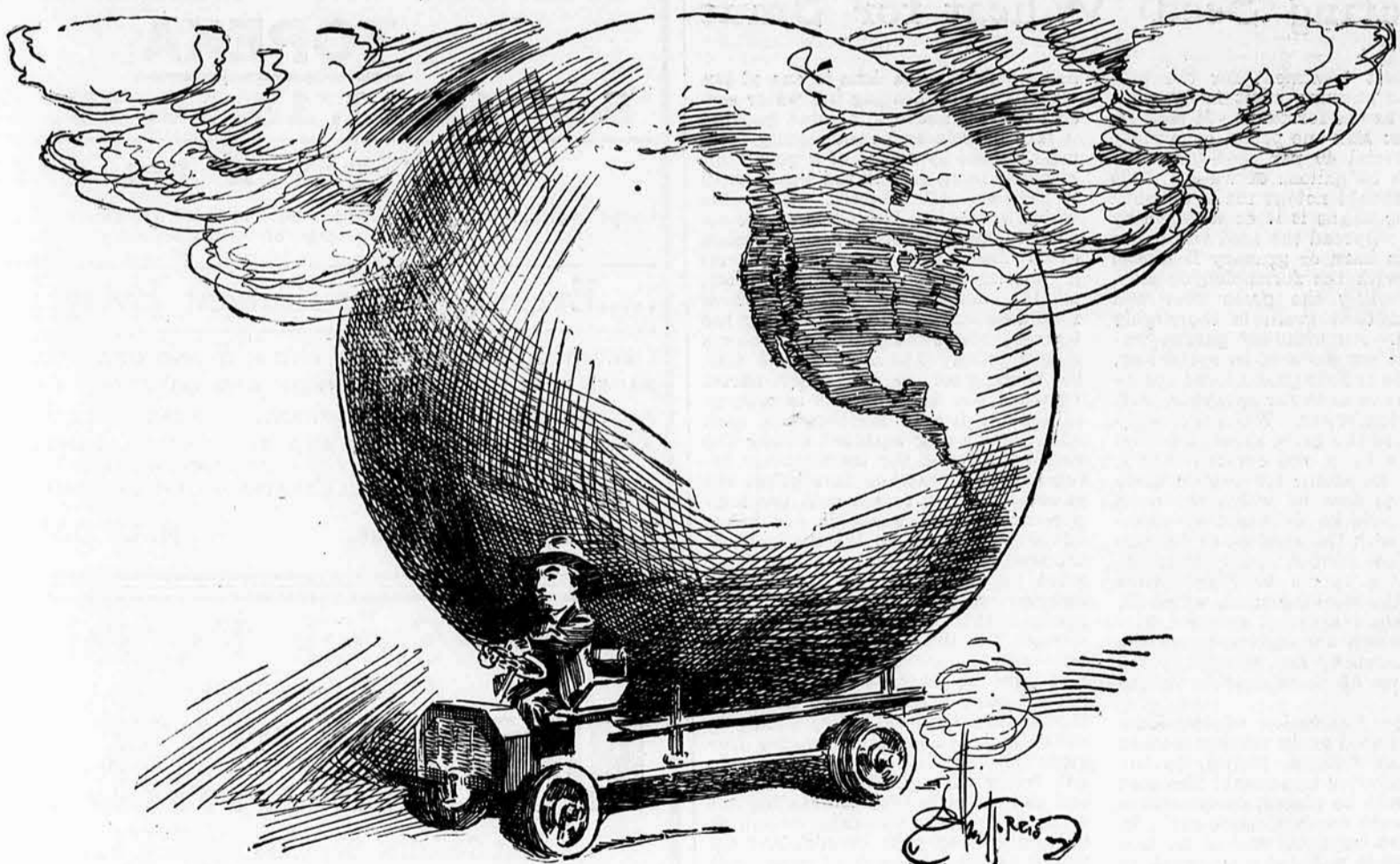
FOR THE IMPROVEMENT

OF THE FARM AND HOME

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**W**HETHER prince or plebeian, rich or poor, saint or sinner, the Queen upon her throne or the maiden in the dairy, all must depend upon a common source for food and raiment—agriculture. It was thus from the beginning; from the forbidden fruit in the garden of Eden to the soil product of 1911; from the time of the airy costume of Eve to the more pretentious apparel of her sisters of the present age. Obviously, then, as population increases and the food supply becomes a more vital question, agriculture will command increasing attention and respect, and the husbandman attain an importance among his fellows amounting almost to solitude.

—Jacob C. Mohler.



*The Burden Of The Farmer*

## Preparation of Soil For Wheat

By J. E. PAYNE, Fort Morgan, Colorado.

In Kansas preparation for wheat means preparation for winter wheat.

At harvest time there is usually some moisture left in the soil, but if the stubble ground is left undisturbed after the wheat is cut, the intense heat in the dead stubble will soon draw the water out of the soil until it will be too dry to plow well, or to plow at all, with any comfort to man or beast. And the hard surface will shed the rain almost as well as the roof of a house, thus losing much of the moisture which falls.

But if the ground is disked as soon as the wheat is harvested, much of the stubble will be turned under. By thus reducing the radiating surface the heat generated near the surface of the soil will be lessened. This, in turn, will reduce evaporation. (If one thermometer is put at surface of the ground in undisked soil and another is placed in a similar position in disked soil, the one placed in the undisked stubble will show several degrees more heat than the one in the disked stubble.) The disked land will be in condition, also, to take in a larger per cent of any rain which falls than the undisked land.

The beneficial results of disking immediately after harvest have been repeatedly demonstrated by farmers on a large scale. The increase in the yield of wheat has in every case been enough to pay several times the cost of disking. In some cases the crop has been doubled and in many cases the difference has amounted to the difference between financial success and positive failure. If a heavy rain comes after the ground is disked it should be harrowed as soon as it is dry enough to work, but if a crust is formed which the harrow will not break, it should be disked again. But usually the harrow will break any crust which forms.

Plowing for winter wheat should be done as early in the summer as

possible. If it can be done in July and the ground is then in proper condition so that it can be packed, the plowing may safely be seven or eight inches deep. It will then have time to settle, or it may be firmed by disking and harrowing so as to make a perfect seed bed. But if the plowing cannot be done until just before seeding, it will be impossible to make a good seed bed if the ground is plowed deep. At this time the ground should not be plowed more than four inches deep.

After plowing the ground should be harrowed as fast as plowed. If a harrow attachment cannot be used, harrow before dinner what has been plowed before noon and before night what has been plowed after noon. Then, after all the field has been plowed, go over all of it with a disk harrow. After this the ground should be harrowed after each rain which amounts to one-half inch or more, until planting time. If it is not then firm enough for sowing wheat, it should be harrowed until the horses will barely make shallow tracks as they walk over the plowed ground.

If the wheat ground is prepared evenly, as described above, it will pay to plant high-priced seed in it. With perfect seed and a perfect seed bed less seed may be sown. Also the grain can be planted at the same depth and will germinate at the same time. This will enable it to ripen at the same time, thus avoiding immature, shrunken grains which are prominent in grain which has grown in poorly prepared seed beds.

This will make a difference in the quality of grain grown, for a few immature kernels in your wheat will cut down its value to the miller. The miller can pay the best price for only perfect wheat, and perfect wheat can be grown only under conditions which keep the wheat plants healthy and at their best from seed-time to harvest.

## Treating Seed Wheat for Smut

"The best treatment for the prevention of stinking smut is by what is known as the formaldehyde method, as follows: Mix one pound (one pint) of commercial 40 per cent formaldehyde with 50 gallons of water. This solution should not be made up until needed for use, as it loses strength by standing. Spread the seed wheat out on a clean barn or granary floor and sprinkle with the formaldehyde solution, shoveling the grain over and over until each grain is thoroughly moistened. An ordinary garden watering can can be used in sprinkling, but a three or four gallon hand sprayer, such as is used for spraying fruit trees, is even better. When thoroughly moistened the grain should be shoveled into a heap and covered with a canvas or tarpaulin for two or three hours. The floor on which the work is done should be sterilized by washing down with the solution of formaldehyde. The method just described will kill the spores or reproductive bodies of the stinking smut, which fill the swollen, blackened, smutted kernels and which are scattered over the grain in handling and storage by the breaking up of these kernels in the separator.

"For the destruction of the loose smut in infected grain another method is used, as follows, known as the Jensen hot-water treatment: The seed wheat should be placed, in quantities not to exceed one-half peck each, in loose burlap bags and soaked for five or six hours in water at a temperature of from 63 to 72 degrees Fahrenheit. For this purpose a 50-gallon coal oil barrel is convenient, the sack of grain being hung from a stick laid across the top of the barrel. Meanwhile water should be heated in quantity sufficient to fill two additional barrels with from 20 to 40 gallons of hot water, according to the quantity of seed to be treated. The water for these barrels should be gotten to a temperature of 129 degrees Fahren-

heit. This may be done in one of two ways; first, by heating the water several degrees above this point, pouring it into barrels and then testing from time to time by means of a good thermometer hung deep in the water, until it registers 129 degrees. When the water in the two barrels is at the required temperature, the sack of soaked grain from the cold water barrel is immersed for one minute in one of the hot water barrels (which should be marked No. 1) to bring the temperature of the grain up to the required point. The sack should then be transferred to the other barrel (marked No. 2), where it is allowed to remain for 10 minutes, the sack and water being agitated during the entire time, and the thermometer being carefully watched throughout the entire operation to see that the temperature of the water is not below 124 degrees or above 131 degrees. If the temperature falls more hot water must be added, or the time of immersion must be somewhat lengthened. If the temperature is above 129 degrees the time of immersion must be somewhat shortened. At no time must the temperature exceed 131 degrees. Seed wheat treated as above should then be dried by spreading it out on a clean floor and shoveling over repeatedly until it is dry enough to run freely through the drill. A second and better method of handling hot water is to keep two tanks, boilers or galvanized iron tubs of sufficient capacity to hold the sack of grain well submerged, constantly at a temperature of 129 degrees, over a stove or gasoline burner, the latter being preferable because it is easier to regulate the heat. Care must be taken not to get the temperature too high in the bottom of the tank next the fire.

"The planting of about one-fourth more seed is advisable to replace any seeds of low vitality which have been injured in the treatment."—Kansas Experiment Station.

# Ohio Ensilage Cutter

## WHY THE KANSAS FARMER GOT ONE

[Extract from a very interesting conversation between Kansas Farmer and Mr. Earlycorn.]  
MR. EARLYCORN: I see you have an Ohio ensilage cutter. What do you think of it by this time?

KANSAS FARMER: Beats anything I ever saw. Simply can't get the corn into it as fast as it will cut it. And besides that it cuts it.

MR. EARLYCORN: But don't you have to feed it slowly to keep it from clogging?

KANSAS FARMER: No, that's another of the beauties of the OHIO. If the proper power is applied, it's impossible to feed too fast. The blower is attached to the same shafts as the knives, thus preventing waste of power and insuring that ensilage will be blown into the silo as fast as it is cut. It will blow ensilage into a 5-foot silo as fast as it can be cut.

MR. EARLYCORN: Why did you pick the OHIO ENSILAGE CUTTER?

KANSAS FARMER: I got it on trial. Why don't you know the OHIO is the unquestioned standard of ensilage cutters? It is used by knowing farmers of the United States, Canada, South America, Europe and Australia, and by experimental stations and other government institutions throughout the world. Any farmer or agricultural expert who has seen this cutter would not think of using anything but the OHIO.

MR. EARLYCORN: But tell me about this trial offer.

KANSAS FARMER: Why, when I was ready to buy a cutter I simply wrote to H. C. Hargrove, Des Moines, Ia. He wrote back: "Don't send me any money nor even your note. I will send the Ohio Cutter on free trial. If it does not do more and better work than any machine of its kind you send it right back at my expense." That was enough for me. I knew Mr. Hargrove would do anything he promised because I had had previous dealings with him. You know I bought my Indiana silo from Mr. Hargrove and it certainly has been everything and more than he claimed it to be.

MR. EARLYCORN: I'd like to know more about this OHIO CUTTER. How can I do this?

KANSAS FARMER: That's the easiest thing in the world, Mr. Earlycorn. Just

### Write for Mr. H. C. Hargrove's Free Book

It will tell you all about the Ohio Cutter and the Indiana Silo, two of the best money makers I know of.

MR. EARLYCORN: But won't writing to Mr. Hargrove oblige me to buy?

KANSAS FARMER: Not a bit of it. Mr. Hargrove will be glad to send you his free book whether you buy or not. Don't under any circumstances consider buying a cutter until you have investigated the Ohio.

MR. EARLYCORN: I believe I'll write for that free book tonight. What is Mr. Hargrove's address?

KANSAS FARMER: You or any of your neighbors who want this book can get it free by sending a post card to

**H. C. HARGROVE**  
251 Walnut St., Des Moines, Ia.

He is the General Sales Agent for Ohio Cutters and Indiana Silos in all territory west of the Mississippi River.



## Kansas State Fair

### TOPEKA

Sept. 11, 12, 13, 14, 15, 1911

EVERY DAY A BIG DAY

Large Agricultural Department. Hundreds of Horses, Cattle, Swine, Sheep. Acres of Red Machinery.

.....Evening Entertainment Every Night.

LIBERTATI'S MILITARY BAND AND 20 GRAND OPERA SINGERS.  
PAIN'S "LAST DAYS OF POMPEII" AND GORGEOUS FIREWORKS.  
PATTERSON'S CARNIVAL COMPANY. GREAT FREE ATTRACTIONS.  
A WEEK OF INSTRUCTION AND RECREATION — SHOULD BE JOYED BY EVERY KANSAS CITIZEN.  
SEMI-CENTENNIAL CELEBRATION, TOPEKA, SAME DATES.

T. A. BORMAN, Pres.

H. L. COOK, Sec'y

## Live Stock Exhibitors

It Will Pay You to Show at the

# MISSOURI STATE FAIR

At Sedalia, Sept. 30 to Oct. 6, 1911

Send for Premium List.

John T. Stinson, Sec'y

## WHITE PLYMOUTH ROCKS

Best All Purpose Fowl in Existence.

GOOD TO LAY, GOOD TO EAT, AND GOOD TO LOOK AT.  
White P. Rocks hold the record for egg laying over all other breeds. 289 eggs each year for eight pullets is the record, which has never been approached by any other variety. I have bred W. P. Rocks exclusively for 20 years and have some fine specimens of the breed. I sell eggs at "live and let live" prices, \$2 per 15, \$5 per 45 and I pay expressage to any express office in the United States.  
THOMAS OWEN Sta. B, TOPEKA, KA.

# KANSAS FARMER

## EDITORIAL

### WHEAT GROWERS WASTE MOISTURE.

The average grower of winter wheat in Kansas is utilizing less than one-third of the moisture that falls in his fields.

In humid sections each inch of rainfall that goes into the soil and is absorbed by the plant results in a yield of five bushels of wheat per acre. After evaporation from the plants, under climatic conditions in the arid regions, reduces this to a yield of three bushels per acre for each inch of rainfall passing through the plant. This does not take into account the run-off or the surface evaporation, but takes into consideration only the moisture absorbed by the plant.

At the Hays experiment station A. M. Ten Eyck secured a yield of 10 bushels per acre from a rainfall of 5 inches, which is at the rate of 2 bushels of wheat for each inch of moisture. This included the run-off and evaporation.

Kansas has an average yield of 13 bushels per acre; Oklahoma 15 and Nebraska 16 bushels. Figured on the basis of scant rainfall at three bushels of wheat per inch of rainfall, the Kansas grower has utilized each year through his plants 4.67 inches of moisture, the Oklahoman 5 inches and the Nebraskan 5.34 inches.

Based on Prof. Ten Eyck's experiment of two bushels for each inch of moisture, the average Kansas grower utilized altogether for his wheat 4.67 inches of rainfall a year, the Oklahoman grower 7.5 inches and the Nebraskan grower 8 inches.

In eastern Kansas the average rainfall is 40 inches; central Kansas 25 to 30 inches; western Kansas 20 inches, showing that the average wheat grower is utilizing not over one-third of available moisture.

One of the leading wheat grower counties of western Kansas the average wheat yield for 20 years has been seven bushels per acre each year. A statement was made at the Western Kansas Dry Farming conference at Hays in June by Director H. Webster, of the Kansas Experiment Station. This indicates an average use of only 3.5 inches of rainfall a year. The average annual rainfall for the particular county mentioned is 23.5 inches. Utilization of only 14 per cent of the available moisture is pretty low efficiency in farming.

Although moisture is lost from the fields after harvest to produce an average yield of wheat. Shallow plowing, so common in preparing the ground, provides storage for only a small portion of the rainfall and in the spring there is great loss of moisture because the fields are not harrowed or packed.

Ordinary practical methods of saving the rainfall if used by the average Kansas wheat farmer would double the yield of wheat in a single season.

The Kansas Farmer his week contains information of tremendous value to the wheat grower. The articles Prof. Ten Eyck are of special importance. The wheat yield of Kansas is very much too low per acre. The principal cause is the result of poor methods of soil tillage, poor sowing methods and poor preparation of the seed bed and poor seed. The great trouble lies in the effort to grow too many acres, resulting in a light crop often total failure. Corn growing methods have improved the past 10 years. Not so in growing wheat.

An exchange, a widely read farm paper, says farmers should not patronize demonstration and institute operations by railroads and that institutes financed by bankers or corporations should not be attended. The reason given is because farmers are indebted to this "money influence," will hesitate to stand for their interests against such "influence." Isn't that a narrow and extremely contracted and nonsensical view? No sane man will share the opinion with the paper expressing it.

With which is combined FARMER'S ADVOCATE, established 1877.  
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**ADVERTISING RATES**—25 cents per agate line—14 lines to the inch. No medical nor questionably worded advertising accepted. Forms close Monday noon.

**PUBLISHERS' GUARANTEE TO SUBSCRIBERS**—KANSAS FARMER aims to publish advertisements of reliable persons and firms only, and we will make good to any paid-up subscriber any loss he may suffer through fraudulent dealing on the part of any of our advertisers, provided complaint is made to us within thirty days after the transaction, and it is shown that the subscriber, in writing to the advertiser, plainly stated: "I read your advertisement in KANSAS FARMER." We do not, however, undertake to settle, or be responsible for the debts of bankrupts, or for petty and trifling disputes between a subscriber and an advertiser, although we extend our good offices to that end.

**PICTURES**—Good photographs, drawings and plans are especially solicited. Senders' names should always be written on the back of each picture. KANSAS FARMER can not be held responsible for any picture submitted, except under special written agreement.

**CONTRIBUTIONS**—KANSAS FARMER is always glad to have correspondence on all farm, live stock or household subjects. Your name should be signed to all communications and they should always be addressed to

KANSAS FARMER COMPANY, TOPEKA, KANSAS.

### SET ASIDE ACRE FOR BOYS.

The farm home establishment is becoming more and more complex. One thing after another is being added to it, writes L. H. Bailey, in the Orange Judd Farmer. The farmstead comprises not only the ordinary barns and residences, but new kinds of poultry houses, windmills, dairy rooms, gasoline engines, sewing machines, rural delivery boxes, water works, lawns and flower gardens, ice houses and many other extensions and attachments are being gradually incorporated into the scheme. All these conditions tend to make the home more effective to broaden the operations of the farm people and to relate the establishment to the larger affairs of the neighborhood and the world. Many other things will be added to the farm home, because this home must concentrate into itself all the essential enterprises making for a better country life. Into the growing conception of the farmstead I desire to project another unit. On every farm there should be a piece of land definitely set aside for the children and the young folks, to be used in the developing of the intellectual interest in the farm and in country life. It is the responsibility of every parent to train the children. This responsibility cannot be delegated wholly to the school or to any other agency. If the farm family must take a real part in the educational development of its children it must then have some kind of an establishment for the purpose. This establishment should be incorporated into the school system of the district.

On every farm there should be a school garden or child garden, in which the children may make their tests, grow their plants and work out the school problems. It is impracticable in most cases to have school gardens or test plots on the rural school grounds. Such gardens should be at the home, and the children should be encouraged to take the school thought home with them and to plant it in the garden.

A list of these home gardens should be in the school house. The teacher should ask for reports from the children. She should set problems to be worked out in the gardens, and the areas should in all ways be regarded as the connecting physical link between the home and the school.

This child lot might be a half acre, or an acre, near the house and the barns, permanently set aside for the purpose, and be made just as much a part of the farm establishment as a milk house, a carriage shed, a clothes yard, a chicken yard or any other side lot of the farm. In this test area many kinds of demonstrations could be made. Here new varieties of fruits, vegetables and flowers could be tried, fertilizer tests could be made, different ways of planting, different methods of tilling, and of handling crops could be undertaken, the attractive-

wild plants of the farm could here be collected, bird houses could be erected. This area could become in time one of the most attractive places on the farm, particularly if it were enclosed with a hedge or a wall of attractive native and other bushes, and if it were to lead down to a brook or to contain a spring, or to have a little pond.

### WHEAT GROWING.

The one-crop idea in wheat has been the same drawback to the plains states as has exclusive cotton growing to the south. Grown under proper conditions wheat is the most profitable plains crop, often bringing in, in a single season, more than the land on which it is grown is valued at. But years of failure come when whole communities of wheat growers are without income.

Exclusive wheat growing is demoralizing. Three months in the year cover the time required for growing, harvesting and marketing a wheat crop, leaving the grower practically nine months for other work. In spite of this, the farm of the average exclusive wheat grower is nearly always without a garden and other improvements, while his neighbor who is dairying and has to work seven days a week every week in the year usually has his farm and buildings in excellent condition, surrounded by vegetable and flower gardens and lawn.

More and better wheat should be grown in Kansas and adjoining states, but it should be done on a smaller acreage. The nine months which so many exclusive wheat growers pass by with little practical activity should be devoted to growing feed crops and the production of pigs, beef and dairy cattle that will not only add to the profits of the farmer, but will insure manure and rotation of crops, resulting in doubling his wheat yield and improving the quality of the wheat.

Since the world's fair, Chicago, 1893, at which fair a mammoth cheese was exhibited, almost every state of pretensions in a dairy way has endeavored to produce a larger than "ever before shown," and now comes Wisconsin which at the national Dairy Show in Chicago this fall will exhibit a cheese weighing 12,000 pounds. It will require all the milk from 6,500 cows for one day and it is estimated it will take sixty-five tons or 160,000 pounds of milk and cream to make the cheese. The work will be done by eighteen expert cheese makers and twenty-five helpers on a specially constructed flat car. If Wisconsin gets value received from an advertising standpoint the expenditure is justified. The cheese itself has no value.

A five-acre potato patch irrigated by gasoline power, this year would have entirely paid for the irrigating machinery—and then some.

### INCREASE IN FERTILITY DECREASES NECESSARY MOISTURE.

One of the most important recent discoveries in the handling of crops and especially of grain is that in reference to the relation of soil fertility and moisture. Experiments have brought proof that the quantity of water required to produce a bushel of grain becomes smaller as the fertility of the soil increases. It requires twice as much water to produce a bushel of grain on an infertile soil as it does on fertile soil in good tilth. Tests showing this result have been made both in Europe and America. In every case the more fertile soil, either through tillage or the use of manure or of commercial fertilizers, the less the amount of water necessary for the production of each bushel of grain.

The greater portion of the plant food in the soil is inert until by deep plowing, thorough tillage and early preparation it is made available to the plants. Such treatment holds moisture deeper in the soil, the air and the gases work on the inert earth and the moisture helps dissolve the plant food, increasing the number and action of bacteria in the soil, these bacteria manufacturing plant food from the earth particles.

A wheat grower who gives his fields the minimum amount of tillage, only disking his land, does little toward making the fertility available and 2,000 pounds of water or more may be required in his fields for each pound of wheat harvested. The grower who follows the plan of shallow plowing secures some increase in fertility, but not enough to use the moisture to the best advantage.

Early preparation of land, deep plowing and constant cultivation until it is in good tilth, with spring harrowing, makes the soil so fertile that only about one-half as much moisture is required to produce a bushel of grain as is required with slight preparation. Intensive tillage secures double the service from the rainfall.

Commercial fertilizers and manure, after becoming thoroughly incorporated in the soil, have the same effect. Rotation with legumes and summer fallowing similarly increase the grain producing effect of the rainfall. This is the surest way to double or treble the yield per acre.

Judge Pollock of the United States District Court has held that the Kansas Feeding Stuffs law, requiring manufacturers to pay an annual license of \$50 for each brand of condimental feeds coming within the scope of the law, is unconstitutional and void. The law still provides that manufacturers must submit to the director of the Kansas Experiment Station a statement of the contents in such feeds and the experiment station will continue to make analyses as heretofore and thus amply protect the user. The dealer who has hesitated to handle these feeds because of his fear of prosecution on account of the manufacturer not having paid the annual license, now need have no fear from this cause.

The report of the Kansas State Board of Agriculture for the quarter ending March, 1911, is being distributed. In workmanship the quarterly is uniform with those published for 10 years and in contents the quarterly is as valuable as any of the board's preceding publications. The first part contains the addresses, papers and discussions before the board's fortieth annual meeting, held last January, and the second part is mainly a compilation of the most recent experiments in pig feeding, steer growing and cattle fattening. This quarterly should be in every farm library.

Figures made by an exchange are to the effect that it costs the annual salary of a first-class professor of agriculture to run a battleship one day. Granting that the figures are correct, does it not seem foolish to continue the extravagance and almost reckless waste? More agricultural education and less battleships would seem a sane slogan for the American farmer.

# VALUE OF SHOW RING

"What is the use of showing your stock?" is a common question asked any breeder of good live stock who makes any pretense of fitting and showing. The questioner sees and thinks of the time, care and feed used to make the show animals appear in presentable condition. Perhaps some farmer will tell you that he is unable to give such feed and attention to his stock as yours receive. He further adds that if he were fool enough to "monkey" with them that way his stock would be better than yours. A quite general ignorance of the principles and practices of the show ring has led to much unmerited condemnation of the practice.

Some of the purposes of the show ring are: educating the people, advertising, the fixing of breed standards and ideals, to give all possible incentives to improve the present productions.

The first reason, that of educating the people, is the fundamental purpose of all fairs. It matters not whether the fair be small or a national live stock show, the purpose remains the same. Amusement is combined with or furnished aside from the educational features. These fairs show the people what is possible by intelligent breeding, feeding and handling of live stock. The fair or live stock show brings some recognition and appreciation of the work of the live stock breeder from all classes of people.

Advertising is the immediate and often the only reason for the appearance of a large number of showmen. The show ring is more effective and far reaching than any other method of advertising. It not only reaches the people who attend that particular show, but, through the reports given in the live stock press, it is much more effective than the paid advertising. A man buying a bull, a boar, a ram or a stallion from a breeder whose stock has won, will repeat the story of those winnings for his own and for that breeder's benefit. The people who attend the show will by word of mouth, often be the effective means of increasing the popularity and sales of a herd or flock. The breeder himself, by his attendance at these fairs, comes in close touch with the needs and wants of his customers. He may be able to arouse interest and procure an outlet for his surplus that will materially increase his income.

The mission of the live stock show

## Herdsman Declares It Pays To Exhibit Live Stock At Fairs

By THOMAS E. CLARKE, Medora, Kansas

in fixing breed types is appreciated by everyone who has given the matter any study. Before the day of the big stock yard shows, The American Royal and The International, several different types abounded in each of

the different breeds. This was especially true among the beef breeds of cattle and hogs. Now, with only two or three exceptions, the same general type prevails in each breed. These shows are responsible for this uni-

formity of breed character more than any other factor. So potent has this influence become that now any farmer or stockman can get nearly as good an idea of breed character at his own county fair as he would by inspecting the entries at the larger shows. In this respect the live stock is very useful and effectual in fixing and advancing the ideals toward which all live stock breeders are working.

The incentive given the exhibitor and spectator to try to excel in the future is one of the great values of the show ring. Everyone's stock looks good at home. A comparison of our own animals with others will give us a much more accurate estimate of their real excellence. Should we win one blue ribbon this year we will be content with no less than a championship next year. If our beast is not so high we note his defects and resolve to correct them in subsequent entries. Maybe the interested spectator at the edge of the ring will propose to bring out some of those good specimens he has at home. The feeder at the ringside has visions of market toppers such as those cows or sows in the ring could produce. Even the small boy, at the fair with his father for the first time, will dream of the time when his bull or his boar will be a winner. The herdsman thinks not now of the unceasing care and the painstaking work that have been his lot. He only rejoices that his charges are placed among the best.

In answer to the argument that feeding for show is conducive to infertility, I can say from some observation and considerable inquiry that this is the case only in rare instances. We occasionally note that some show cow or sow breeds only once or twice or not at all. No account is given of the working cows and sows that are in every herd, who breed only once or twice and then must be butchered. I believe I am safe in saying that the percentage of infertility is no greater among show stuff than it is among those receiving common care. The present tendency of discouraging excessive fitting will also reduce this evil considerably.

It is not my purpose to give an exhaustive study of the value of the show ring. I only hope to show to the farmer and breeder that the fitting and showing of all classes of pure bred live stock do a great and lasting good. The show ring benefits the herd, it benefits the breeder and it benefits the people at large.

## IMMATURE CORN MAKES GOOD SILAGE

O. E. Reed, Professor of Dairying, Kansas State Agricultural College, writes:

"Many fields of corn have been seriously damaged by the present drouth. The corn that has been tasseled and is about to fire will make very little, if any, grain this season. If this is cut for fodder the quality will be very poor and it will hardly be worth feeding; but it may be put into a silo with very good results. Such silage will not have the feeding quality as the silage made from corn that is fully matured, but the stock will eat it and do well on it. In comparing silage made from such corn with fodder made from the same corn, we have a fairly good feed in the silage as against a very poor feed in the fodder. This silage fed with hay or straw makes a good wintering ration for cattle.

"When siloing the short, immature corn it is best to let it stand until nearly dry before putting it into the silo; that is, the leaves should be nearly dry but the stalk should be filled with sap. If the corn is put into the silo while in a very green and sappy condition the silage will get very sour before it is fed out. Silage will not make as good feed or be as palatable to the stock if it is allowed to become too sour.

"If the present corn crop is not sufficient for filling the silo, one can plant kafir, milo or ninety-day corn and, provided that we get any rain at all, these crops will mature for silage before frost. Corn or kafir can be listed in fields that have been in oats or wheat, and if sufficient rain falls to germinate the seeds, silo crops can almost be insured."

Prof. A. L. Haecker, Nebraska Experiment Station, says:

"From such information as I have, such drouth impaired corn is a little higher in protein but lower in carbohydrates than the mature plant. The plant in the young stage, or immature stage, has more protein but less carbohydrates. The starches and sugars are stored up during the latter part of the growth. With this in view, it is fair to assume that the feeding value of such forage will be perhaps lower in carbohydrates but higher in proteins, and therefore, nearer a balanced ration than they would be otherwise. Taken all in all, it would be fair to assume that this forage while being less in tonnage, would be almost as valuable, ton for ton, or pound for pound, as mature crops."

## THE CHINCH BUG

Begin Now Destruction Of Next Year's Big Crop—Clean Up The Farm

In a circular issued by the Kansas State Experiment station in the fall of 1910 the chinch bug received attention at the hands of T. J. Headlee, entomologist and zoologist as follows:

"Again the chinch bugs have established winter quarters in clump forming grasses. They may be found more or less under all sorts of cover, but the threatening bunch of them has gathered in the bunch grass. Those parts of the state greatly troubled with chinch bugs have much of this grass, and the problem of chinch bug destruction during the dormant season involves the destruction of it and other grasses of similar habit. Of the clump forming grasses the species commonly known as bunch grass (*Andropogon scoparius*) is most sought after by these bugs."

"The farmer must know for himself whether he has chinch bugs in his grass lands. This he can determine by parting the stems close to the place from which they start. Ordinarily a mulch of soil and decayed grass will have gathered at the base of the stems. He should look carefully in this and should not give up the search at once, because the bugs play possum and are not easily seen until they move. If the bugs are abundant they will be revealed by this search. In case more careful looking is required to observe them, take a clump of the bunch grass, root and all, and pick it to pieces over a large sheet of white paper or cloth, watching for the bugs. If they are present in any numbers worth considering this should reveal them.

"Fire at once occurs to one as the most practical and efficient agent for the destruction of the bugs. Obvi-

ously fire must destroy the bugs in one or both of two ways; First by burning them and, second, by destroying their cover and leaving them exposed to the rigors of winter. The first method requires either that sufficient heat shall be generated to effect their destruction, or that they shall be actually partly or completely consumed by the fire. The first requires an unusually hot prairie fire, such as might result from the consumption of a very heavy cover. The second requires very close burning—consumption of the stems to within about half an inch of the crown. Little harm seems to be done to the bugs by ordinary prairie fires, which do not burn closer than one inch from the crown.

"The prime requisite, then, in firing the infested clumps of grass is to so handle the fire as to make it burn close to the crown from which the stubble grows. The type of firing which gives this desirable result appears to vary with weather conditions and must be selected by the individual farmer at the time of treatment."

Tests made by the station show that close burning destroys practically 100 per cent of the bugs.

The circular goes on to say: "There may well be a question in the minds of some as to whether close burning will not injure pasture lands and meadows. Most farmers with whom we have worked believe that it will not

seriously harm the grass or decrease the yield, especially when done only once in several years.

"Neglect to destroy these bugs, and with winter, spring and summer favorable to them, wheat, corn, cane and kafir will suffer severely and will, in many cases, be completely destroyed."

"Another matter that calls for consideration is the widespread and erroneous belief that if the chinch bugs become dangerous next year, they can, regardless of weather conditions, be controlled by the introduction of a fungous disease among them. Our investigations show that this fungus (*Sporotricum globuliferum*) though present among the bugs, will not always control them. In June of 1909 fields in Harvey and Sumner counties were examined and wherever chinch bugs were found there also the fungus was present. During July the station had an agent in the field in Sumner county collecting chinch bugs that had died of this fungous disease. When, on October 1, we resumed our study of the chinch in the field in this county, we found scattered over the fields of corn and kafir corn bugs dead and whitened with this 'chinch bug fungus.' In many places, even as late as November 15, in their winter quarters in the same county, bugs in small numbers were dying of this disease. Here, then, is a case in which the bugs were more abundant and did more damage than in any other section of the state in spite of the fact

that the disease was present among them continually throughout the season. If weather conditions had been favorable to the disease, it would doubtless have controlled the pest, but as matters went it did not do so and no amount of official introduction of the fungus in this instance could have brought relief from the ravages of these insects. During October and November we made repeated attempts to introduce the disease artificially among the bugs massed together in clumps of bunch grass by placing in their midst bugs whitened with the spores of the fungus. But in every instance we secured only negative results."

Chickens Clear Fields of Grasshoppers.

Prof. Headlee, of Kansas Experiment Station, has received this letter from P. A. Wright, Nekoma, Kan.: "We have a neighbor who has 200 chickens. He put a wagon box on wheels and hauled the half grown chickens to the field and let them out. They stay close to the sled on account of water and shade. In a few days you would be surprised to see the results. They will jump out of the wagon box in the morning and will be spread over one acre of ground in a minute, and the way business will pick up is a caution. Then they all come in at nine o'clock for water. If it is cool, they will be ready for another hunt by ten, but if very hot they will lay off till five. I believe if all would do this, it would be good bye grasshopper. I just wish you could see them perform. It is a sight I got rid of mine two years ago by buying 100 turkeys and doubled my money."

# RESULTS OF TILLAGE

## Greatest Possibilities of Conservation Lie In Conserving Soils Moisture

The two pictures with this article tell the whole story much more forcibly than any words. The corn shown in adjoining fields and planted on the same day and each field was in the hands of farmers considered equally good. The planting was done the same day, all conditions of growth considered equal.

On about August 1, the field showing least growth showed no moisture to a depth of three feet, while the field showing larger growth had plenty of moisture under the surface and was fairly well eared. The smaller corn is practically a failure and the fodder placed in a silo will give its only value.

The difference is the result of tillage. The good field was so cultivated that the moisture was retained and did not evaporate during the six weeks of dry weather. The secret of moisture conservation lies in the cultivation of the surface to the extent almost of a dust mulch.

Further ideas regarding the advantages of good tillage are given by W. C. Palmer, of North Dakota experiment station, who says the more nearly constant the moisture content of a soil can be kept the more available plant food it will have.

The moisture is all the time exerting a solvent action, bringing plant

food into a form that the plant can use. It, however, does something else fully as important and that is to make it possible for germs to live. These germs work on the insoluble plant food and make it available. The importance of this work is usually underestimated. When the soil becomes dry the solvent action of the water ceases and the germs become inactive; many of them die. Thus the two principal agencies that make plant food available are cut off at once. The effect that drying has on bacteria is well illustrated in drying fruit or hay to make it keep. The killing of the germs is a good deal like allowing the live stock to die from thirst or hunger. It will take some time to restock the farm again, and likewise it will take some time for the germs to increase so as to do the work needed to produce a big crop. A big crop can not be produced without them.

The greatest damage is usually done after harvest. The soil is compact, the crop is removed and the rain scant. The land should be disked as soon as cut, in fact follow the binder with the disc, which loosens the surface soil and kills weeds that take large amounts of moisture. This will save a good deal of moisture. Organic matter is also necessary for the germs to do well. It furnishes



them food and enables the soil to hold Deep plowing is one of the most effective ways of keeping a good moisture content in the soil. It also gives the germs more space to work in, as they live principally in the soil turned with the plow.

and the more live stock kept on a farm the more germs there will be in the soil due to rotating crops and applying manure. Don't neglect the soil germs even if they are small. There are so many of them, and they are working for you just as much as your horse or your cow.

The germs are a sort of live stock

# SUMMER FALLOWING

## Valuable Suggestions To The Wheat Grower By Prof. A. M. Ten Eyck

I am one of the unfortunates, being the owner of a half section in the western part of Thomas County, near Brewster. Crops have burned up completely this year and they were nearly a failure in 1910. I have always wanted the tenent to summer fallow but it is very difficult to get anyone to do it. However, I now have a man willing to do it and willing to learn and I am seeking the best instruction I can find for our mutual benefit. Was very much interested in KANSAS FARMER reports of the meeting in your city on the 7th and 8th inst., and I enclose money order for \$1.00 for membership in the Kansas Dry Farming Association.

We had 160 acres on which wheat collapsed about July 5, and another 100 acres which was in Milo which lasted a few days longer but is now a failure. The 100 acres has been cultivated so that we still have a little moisture and we want to summer fallow along the best known lines, the 260 acres now under the plow. Thursday my tenent and I tried to persuade several farmers out there to summer fallow this summer as they have very little other work to do and will be able to give the system a thorough trying out.—W. L. Harrison, Leavenworth, Kan.

I am mailing you pamphlet on Dry Farming. In an extremely dry year like this all methods fail. Our wheat on summer fallow turned out to be only a little better than wheat after wheat. Early in the season, however, there was a marked difference in favor of the wheat on summer fallow but the extremely hot dry weather of early June blasted the heads and caused the grain to shrink and the wheat dried up instead of maturing.

A comparison of different methods of summer fallow favored June plowing with sufficient surface cultivation to destroy weeds and maintain a soil mulch. The plan was to cultivate when necessary to destroy weeds and after each heavy rain which is sufficient to pack and puddle the surface soil, causing a crust when the surface is dried out.

The cultivation should be given before the crust forms. It is usually not advisable to surface till the land when it is very dry since it pulverizes the soil into dust and leaves a surface which does not receive water well and which is inclined to puddle with heavy rains and bake very quickly af-

ter drying. We use different implements in cultivating, the disc, common harrow and Acme harrow, or the common straight-toothed harrow may be used when there is not many weeds but prefer to ride the harrow so as to make the cultivation deep. The slicking effect of light harrowing is undesirable since it leaves the soil finely pulverized at the surface and in condition to shed heavy rains. For later cultivation toward seeding time we often use the Acme harrow or the straight toothed harrow may be used. The disc harrow at this time is apt to loosen the soil too deep. The ideal seed-bed should be mellow and loose to the depth of 2 or 3 inches or about as deep as the wheat is planted. Below this depth the soil should be well pulverized, firmed and settled, the furrow slice making a good connection with the sub-soil.

If plowing for summer fallow it is advisable to plow rather deep if the soil is in favorable condition. We plan to plow 6 or 8 inches deep. Our plows have disc harrow attachments which disc the ground immediately behind the plow. This saves the extra disking or harrowing which otherwise should be given within a few hours after plowing. We do not usually use the subsurface packer after plowing for summer fallow but depend on the rains and later cultivation to pulverize and pack the seed-bed. In a very dry season, or on loose, light soil which does not pack easily, or often when the soil is plowed too dry and cloddy, it may often be advisable to use the subsurface packer immediately after plowing. Continue the cultivation, disc or Acme at intervals, as directed above.

The ground which is to be summer fallowed may be disked occasionally during the spring, or, in the judgment of the writer, a preferable plan is to grow some crop for green manure and plow it under early in June. We are testing this plan at this Station and hope to have some results for publication next season. Crops which we are testing for green manure are sand vetch, sweet clover and field peas. The first two should be sown early in

the fall and may furnish some early spring pasture. Field peas should be seeded early in the spring. It is practicable also to sow rye or early spring grains as green manuring crops, but there is a strong objection to the use of rye for this purpose when the plan is to follow with wheat.

Early plowing for wheat approaches a summer fallow and unless the soil remains too dry, farmers should be able to plow much earlier than usual this year. After plowing, whether the plowing be in June, July or August sufficient cultivation should be given to put the soil in good seed-bed condition. In case the ground becomes too dry before plowing it will be advisable to disc such land thus putting the surface in better condition to receive water and conserving, perhaps some little moisture which may yet be in the sub-soil, at least the disking will have the effect of putting the soil in better condition for plowing. Or, in case plowing cannot be done, further disking and harrowing may put the land in good seed-bed condition.

In the judgment of the writer it is not always advisable to plow western land every year in preparing the seed-bed for wheat. In dry seasons the preparation of the seed-bed by disking may give better results than plowing. The writer desires to warn our western farmers against very deep plowing too frequently, especially in those sections of the state where the soil is light and inclined to drift badly with the heavy wind.

The wheat farming problem in western Kansas is a difficult one and cannot be successfully solved by following any set rule or method every year. The farmer should understand the principle of seed-bed preparation and soil moisture conservation and then practice the methods which in his judgment will most economically secure the best results.—A. M. TenEyck.

### LISTING WHEAT GROUND.

I have been reading Mr. Ten Eyck's article on wheat culture in your June issue, in which he spoke of a new method being used in Kansas for preparing a seed-bed by listing the ground

and then working down by disking and harrowing.

Now I want to ask if that method will do in this section, to use on oats ground that was corn ground last year but on account of drouth will not do to cut. If so, when would you advise listing? When to follow with the disking? Will the same be true of wheat land this year. My method was to plow the oats ground as soon as rain fell and then disk and harrow and plow wheat land in same way as soon as wheat is moved from field. Plowing to a depth of five inches.—F. C. JONES, Washington, Kan.

The testing of the listing method for preparing the seed-bed for wheat at the Experiment at Manhattan has not shown that this new method was equal to early plowing. I am mailing you circular No. 2, being the report of several methods of preparing the seed-bed for wheat including listing. This report refers to two years' work, the crops of 1908-1909. You will observe that the August plowing gave a yield of over 10 bushels more per acre than the early listing. The plowing and listing compare as follows: Early plowing, average yield for two years 37.43 bushels per acre; early listing, average yield for two years 27.5 bushels per acre. The early listing, however, was superior to early disking and to late plowing.

As a rule I would prefer to plow the oats ground which you describe rather than to list it in preparing the seed-bed for wheat. There is some advantage in turning the vegetable matter under so as to furnish some green manure. There may be much in listing in preparing land for wheat when the farmer has more than he can plow at the proper time, since the listing may be done faster than plowing. Also, I believe the method may have more advantage in our Western drier climate where the soil dries out quickly and often becomes too dry to plow well before the farmer has finished plowing. Also, the lister furrows catch the rain and store it in the sub-soil which is likewise an important factor in the drier areas of the State.

We have found that the disc lister cultivator is superior to the disc harrow for refilling the furrows. One cultivation with the disc lister cultivator and one or two harrowings with the straight tooth harrow will usually put a listed seed-bed in fairly good condition for sowing.

# Latest Improvement on Grain Drills

This new Van Brunt Forward Seed Delivery plants every seed at equal depth and covers every seed so it is sure to grow if it has a germ of life. The seed discharge is within the circumference of the discs so



it plants seed in the bottom of the furrow before dirt falls back from discs. It beats the dirt.



## VAN BRUNT

### SINGLE DISC DRILLS

cover the seed with soil instead of simply mixing the seed with dirt. This means that the stalks will grow uniformly and that all the grain ripens at the same time, increasing the quality of crops. Stalks will be stronger and better rooted to withstand heavy winds and beating rains.

The Van Brunt is the lightest draft disc drill ever built. No Van Brunt has ever sagged in the middle. The dust-proof disc bearings run in oil bath and need oiling only once a season. Gumbo, mud or trash will not clog a Van Brunt Drill.

For wheat in fall—oats in spring. The Van Brunt will make a big saving in seed and the improved seed delivery will plant every seed so it will grow—no ground will stand idle because the seed was killed by frost, sun or eaten by birds. The feeds are instantly adjustable for wheat, oats, flax, alfalfa, grass seed, corn, beans, etc.

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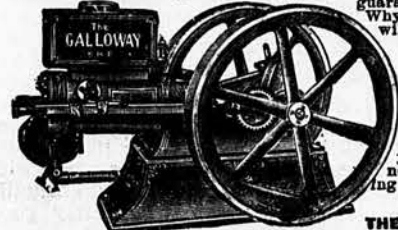
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# THE FARM



Notice that the land which was well manured has not only withstood the dry weather but has remained in good tilth and required very much less moisture with which to grow a crop.

There may be some good in a dry spell after all. It affords an excellent opportunity to get rid of weeds and when these are once thoroughly eradicated it will require less work to keep them down.

Cow peas are among the best of farm crops for Kansas. They produce a good quality of grain, a highly nutritious hay and they enrich the soil. They were once very popular in some sections where they are seldom seen now. Inquiry as to why this is so brings the answer that "it is too much work to harvest them."

#### Alfalfa South of the House.

Kansas farmers have learned one fact that is well worth knowing. In addition to the planting of windbreaks for the protection of the orchards and buildings they have learned to plant alfalfa on considerable areas south of the house.

Corn shuts off the breeze, wheat or oats leave a stubble which greatly increases the temperature after harvest, but alfalfa will easily cool the atmosphere about the house by 8 or 10 degrees if a considerable acreage is grown to the south or southwest so that the wind may lose its heat in blowing over it.

The writer lives on the south side of the road and the country south and west of his house is largely in alfalfa. He is not bothered with dust and the air always seems cooler than at the neighbor's across the way, who gets a plentiful supply of dust and heat from the road.

#### Alfalfa Seed Crop.

A subscriber asks what to do with his second crop of alfalfa which was sowed last fall and which now stands about 15 inches high. He owns a good alfalfa farm and the first crop made excellent hay. He is not a resident farmer but has a superintendent who has always made his farm pay for him. His idea is that the very dry weather of the past few weeks are conducive to an excellent seed crop, and that it would pay to save this second crop for seed.

Ordinarily this might be true but an examination of the alfalfa plants in this field shows short seed pods with little prospect for a good seed crop.

With the crop standing 15 inches high, as it does at this writing, and with very few and short blossoms, the chances are that the crop will be worth much more as hay than as seed. The weather conditions are such as favor the production of a high quality of hay and one that has a much better feeding value than is found in ordinary years.

From the sample submitted from this field it would seem more profitable to cut the crop as hay than to try to make a seed crop of it.

#### Cultivation of Wheat.

It often pays well to harrow wheat in the spring when the surface is dry and crusted or cracked. Use a spike toothed harrow with the teeth slanting backwards and do your first harrowing as soon as the frost is out of the ground. This loosens up the surface, reduces evaporation, fills the cracks and keeps the air from drying out the roots. Usually it causes better stooling. The harrow produces an earth mulch which reduces evaporation from the surface, warms up the soil around the roots and induces more rapid growth. Do not harrow when the ground is mellow, as that will result in pulling out many plants. Two or three spring harrowings of winter wheat, a week apart, are usually sufficient for profitable results. If conditions of soil and moisture are both favorable, spring harrowing will not increase the yield. If the soil in spring is very mellow,

as soon as the frost is out of the ground the sub-surface packer should be used, otherwise the plants will blow out of the ground, or the soil blows badly that the roots are exposed and the plants die. Use the packer under these conditions just as soon as the ground is dry enough to work. If necessary, weight the packer, so that it will compact the soil sufficiently.

I know of wheat fields that were saved last spring by scattering thin all over the field coarse manure and old straw and immediately running over it with a sub-surface packer. This prevented blowing. If this method is followed while the wind is blowing the packer must be used while the straw is being spread. This will crush enough of the straw into the ground to anchor it and the bulk remaining above the surface prevents the wheat from blowing. If there is no sub-surface packer at hand a disk harrow will answer the purpose by setting the discs at a very slight angle and weighting the machine.

#### About Potatoes.

In speaking of the prospective potato crop of this year Prof. J. C. Cunningham of the Horticultural department of the Agricultural College stated that "the situation as to potatoes was the same last year in the north, in Minnesota and North Dakota, as it is now in Kansas. With little or no rain the yield was 40 to 60 bushels an acre. Those potatoes which we used for seed, were the best we ever had, plump, hard and crisp."

"The best plots this year are those which have been sprayed with Bordeaux and arsenate of lead. The sprays have kept away insects and fungous diseases. The Bordeaux seems to stimulate the leaves."

"Another thing that should teach a big lesson to potato growers in Kansas: The man that fall plows after the potatoes were out, is the man who will get the best crop this year. After the potatoes were dug early in July, cow peas and turnips were sowed, and plowed under about October 1 to 15. This was deep plowed, being 8 to 12 inches deep. The ground was disked and harrowed in the spring and the potatoes planted. These potatoes were cultivated at least once a week until the ground got too dry for further successful working. Land treated in this way will yield 75 bushels of potatoes the acre this fall."

"The dry weather has brought disaster to several garden crops, particularly peas and beans. Ordinarily a man is justified in expecting to get these legumes under almost any circumstances, but few gardeners will record a fair yield this year. Peas for instance, are so scarce that in Kansas City they are held at a bushel. As in the case of potato peas and beans have developed very beautiful vines and very little else. Many gardeners have abandoned the crops entirely where water is scarce."


#### Kansas Fruit Prospects.

Secretary Walter Wellhouse of the State Horticultural Society reports the fruit prospects of the state, in his June report, as follows, in comparison with those of the two preceding years:

	1911	1910	1909
Apples .....	33	57	
Pears .....	27	31	
Peaches .....	10	50	
Plums .....	36	51	
Cherries .....	68	21	
Grapes .....	69	60	
Strawberries .....	37	40	
Raspberries .....	46	39	
Blackberries .....	54	51	

By congressional districts the apple prospects are 25 per cent for the first, 44 for the second, 34 for the third, 34 for the fourth, 34 for the fifth, 35 for the sixth, 43 for the seventh and 23 per cent for the eighth district.





**Wheat and Clover**

Many farmers stick to wheat raising mainly because clover follows it in the rotation. But why not get the best possible out of both crops? No crop returns better profit for the right fertilizer than wheat.

What is the right fertilizer? That depends on the soil and on what fertilizer you have used on it. The longer you have used phosphate the sooner it will pay you to balance it with

# POTASH

Insist on your wheat fertilizer containing 6 to 8 per cent. of Potash. **Potash Pays** on both wheat and clover.

If your dealer does not carry Potash, write us for prices, naming quantity needed, and ask for our free books, "Fall Fertilizers" and "Home Mixing." They will show you how to save money and increase profits.

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# LIVE STOCK



**Stringy Milk.**

I have a Jersey cow 6 or 7 years old that gives stringy or ropey milk. Is it garget and what is the remedy? The milk is all bad.

Ans.—Yes, it is a result of garget and the condition of her blood. Take three ounces of potassium iodide and add water to it sufficient to make twelve ounces and give a tablespoonful in a half a teacup of water twice a day.

**Sore on Boar's Side.**

I bought a Duroc Jersey boar from a man in Illinois and when he arrived I noticed he had a sore on his side. At first this appeared to be a wart but later a hole appeared. The sore never healed and sometimes breaks and runs. I have fed him well and taken first class care of him but he never has any ambition and never notices a sow.—J. C. S., Vinita, Okla.

Ans.—The boar is no doubt injured in some way. From the symptoms given would advise employing a qualified veterinarian to examine thoroughly and treat accordingly.

**Value of Pure-Bred Hog.**

Judge E. E. Axline of Oak Grove, Mo., is one of the most successful swine breeders ever produced by that state. In a recent article he says that the value of pure-bred hogs depends largely on the care and attention given them. Care and attention pay well when given to any kind of live stock, and if we have pure-breds we naturally feel more interest in them and will take better care of them than if they were grades of inferior quality.

Pure-breds breed even, are more uniform in color, have more style and finish. They feed quicker, mature and develop earlier, with less fat than most grades. This makes them more profitable for the farmer and feeder to grow and feed and, of course, they are better sellers.

As a breeder for more than 20 years I have found that it pays to breed pure-breds, and as a farmer and feeder for over 30 years I know it pays well to raise the best for feeding purposes.

A carload of pure-breds of any breed of a uniform style and color will always command a premium on the market. Pure-bred dams are generally of a quiet and gentle disposition and can be easily handled at farrowing time, which is a great help in raising litters, especially when farrowed in bad weather, in winter or early spring, when it is essential that the young pigs be looked after.

Pure-breds of the best quality are ready for market at any age. A pure-bred of 100 to 150 pounds will often sell for more per pound than a heavier and older hog.

If disease should get in your feed lot, or even in your immediate neighborhood, your pure-breds are ready to go to market at any age, and they will always sell higher than grades of any breed of the same weight.

It pays well to breed, feed and sell pure-breds of the very best quality of any breed in preferences to grades.

**Your Horse's Pedigree.**

Under the laws of Kansas stallions which stand for public service must be passed upon for soundness and pedigree by the Live Stock Registry Board which is composed of Dean Ed. H. Webster, chairman; Dr. F. S. Schoenleber, veterinarian; and Dr. C. W. McCampbell, secretary. All of these officers have their headquarters at the Agricultural College, Manhattan, Kan., where they may be addressed.

The following list of associations, societies and companies are the only ones that are recognized by law as having authority to issue pedigrees. If your stallion is not recorded in one of these he is not considered a pure bred, and will receive a certificate as

being only a grade animal, provided he is sound and entitled to any certificate.

The recognized register companies and their secretaries are as follows:

- Arabian Horse Club of America, H. E. Bush-Brown, Newburg, N. J.
- Cleveland Bay Society of America, R. P. Stericker, West Orange, N. J.
- American Clydesdale Breeders' Association, R. B. Ogilvie, Union Stock Yards, Chicago, Ill.
- French Coach Horse Register Co., Chas. C. Glenn, Columbus, Ohio.
- French Coach Horse Society of America, Duncan E. Willett, Oak Park, Ill.
- German Hanoverian and Oldenburger Coach Horse Society of America, F. Crouch, Lafayette, Ind.
- National French Draft Horse Association, C. E. Stubbs, Fairfield, Iowa.
- National Register of Belgian Draft Horses, J. D. Conner, Jr., Wabash, Ind.
- American Hackney Horse Society, Gurney C. Gue, 308 West 97th St., New York City.
- Morgan Register, T. E. Boyce, Middlebury, Vt.
- Percheron Society of America, Wayne Dinsmore, Union Stock Yards, Chicago, Ill.
- Percheron Registry Co., Chas. C. Glenn, Columbus, Ohio (now merged with the Percheron Society of America).
- American Percheron Breeders and Importers Registry Co., F. A. Forney, Plainfield, Ohio.
- American Saddle Horse Register, L. B. Nall, Louisville, Ky.
- Shetland Pony Club, Julia M. Wade, Lafayette, Ind.
- American Suffolk Horse Breeders' Association, Alexander Galbraith, DeKalb, Ill.
- American Shire Horse Association, Chas. Burgess, Winona, Ill.
- American Stud Book (Thoroughbred), W. H. Rowe, 571 Fifth Ave., New York City.
- American Trotting Register, W. E. Knight, 355 Dearborn St., Chicago, Ill.
- Welsh Pony and Cob Society of America, J. W. Jones, Columbia, Tenn.

This list should be preserved as animals recorded in any other registers can only be ranked as grades in Kansas.

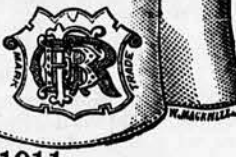
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Freight Paid

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# DAIRY



An alfalfa association has been organized by the farmers of central Illinois. The object is to learn every possible regarding the successful growing of alfalfa.

There is no other way to tell which cow in the herd is a free boarder, outside of the scales and tester. Without it the dairyman will seldom if ever succeed.—ED. TANSKY.

The heifer is the future cow, and as such she deserves attention, if a profitable animal is desired in the herd. Care must be taken to give her the right start in life. A set-back in her youth will affect her later usefulness.

The oleomargarine fraud is being hard hit. Recent indictments involve the most persistent and flagrant violators of the law, and the information leads to the belief that employees of the federal department of internal revenue have been allied with oleomargarine manufacturers in violating the law.

The late June and early July butter made, on account of short pastures, has been lighter than usual in Nebraska, Kansas, Missouri and Oklahoma. But in Illinois, Iowa, Wisconsin, Minnesota, the Dakotas, the season has been extremely favorable and the make large.

This is a year when it makes a big difference whether you are feeding and milking a cow giving 15 pounds of milk a day or one giving 30 pounds. It is a good time to look into the producing capacity of your cows and feeding the most profitable.

While we are thinking of forage crops, would it not be well to remember that July and August are in some sections of the state the best months for sowing alfalfa—the king and queen and whole royal family—of forage plant tribe. One acre of this splendid forage crop is worth two acres of clover, three acres of prairie hay and so far ahead of sorghum, alfalfa corn or corn fodder, that you can't afford to be without alfalfa.

Prepare for good stabling this winter. The less feed you have the greater the need for properly housing the cows and calves. It's always cheaper to keep the animal body warm by stabling than by allowing the animal to burn a third to a half of its feed to maintain the animal heat. Feeding in the stable also economizes in the feeding operation. Feed always cleaned up better in a manger than when placed in racks or strewn on the ground. The dairy cow will give a good return for stabling.

When feed is short is a good time to be sure that the feed used is given to a profitable animal. For instance, a cow which calved early last spring cannot be expected to give much milk this fall and winter. It will not pay to feed her heavily for milk—she had better "rough" it and the feed intended for her given to some cow which will calve this fall. Feed well those animals which can be expected to give the best return—let the others get along on a ration which will keep their "body and soul" together—that is if feed is short.

### Sweet Curdling of Milk.

I would like to know the cause of curdling from my 18 months old Jersey heifer curdling and turning to clabber while milk is still sweet.—Mrs. H. McDuff, Atchison, Kan.

This is a case of sweet curdling of milk. The trouble is probably not due to the physiological condition of the cows giving the milk, but is due to bacterial action.

There are certain types of bacteria that will cause the sweet curdling of milk. These bacteria gain entrance to the milk through the water supply or else through the dust of the air.

If the water supply on the farm is contaminated with this bacteria one should take special care to see that all milk vessels washed in this water are thoroughly sterilized before using. If the contamination comes from the dust of the air, care must be taken in the milking, and also in keeping the milk covered with a clean cloth at all times.

The fact that the heifer's milk soured before curdling when it was placed in a separate container seems to show that the fault is not entirely with the heifer. We have had several cases of sweet curdling milk quite recently.—O. E. REED, Professor of Dairying, Kansas Experiment Station.

### Improving the Dairy Herd.

The story is told how a Mr. Kinch, a Swedish dairyman, increased the yield of his herd of cows. In 1900 he was milking seventy cows, which produced an average of 7,320 pounds of milk per cow per year. Most Kansas dairymen would consider this a very fair production. Mr. Kinch, however, was not satisfied and he began to systematically test his cows by keeping a record of the amount of milk given each day by each cow and by testing it for butterfat, and thus determining the amount of butterfat given by each cow for a year. He found that in the year 1900 each cow gave him an average of 245 pounds of butterfat. Of the seventy cows, however, he found that at the end of the first year's testing only twenty-eight were good enough to justify him in keeping them for breeding and dairy purposes. He sold the others and kept only these twenty-eight with the heifer calves. In the year 1901 these twenty-eight cows averaged him 272 pounds of butterfat per cow. In the year 1902 he had forty-six cows which averaged 317 pounds of butterfat. In the year 1903 he had fifty-five cows which averaged 350 pounds of butterfat. In 1904, he had sixty-one cows which averaged 376 pounds of butterfat; in 1905, sixty-four which averaged 399 pounds of butterfat; and in 1906 seventy-one which averaged 401 pounds of butterfat. At the end of six years he had reached his original number of cows, but each cow's milk during the year 1906 averaged 156 pounds of butterfat more than each of the cows that he was milking in the year 1900. He not only increased the production of each cow, but he decreased the cost of feed. For example, in the year 1900 he got 10.1 pounds of butterfat for each 100 feed units, while in the year 1906 he got 13.2 pounds of butter for each 100 feed units. In other words, he not only increased the production by over 6 per cent, but he reduced the cost about one-third. A Swedish feed unit is equal to 2.3 pounds of bran or eight-tenths of a pound of oil cake, or thirty-six pounds of silage, or seven-teen pounds of green clover.

What this Swedish dairyman did in these six years can be done by any Kansas farmer who will put his mind and his time to the work. All that is necessary is to first begin to weigh and test the milk of the cows you have on hand at the present time. At the end of the year or sooner you will know which of the cows are paying you for their feed and which are not. Sell the poor cows, keep the good ones, and their heifer calves, or if necessary buy a few more good ones and keep up the work of testing year after year. Within five or six years the yearly yield of the herd can be increased from one-third to two-thirds.

A high grade, guaranteed durable live rich red barn paint is sold by the Sunflower Paint & Varnish Co. of Ft. Scott, Kansas, direct to the consumer at only 85c per gallon in 5 gal. cans, freight prepaid. This is a paint proposition worth considering by every farmer. This is a reliable company and now is paint season. Try this paint.

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Tell us what you are going to build and let us figure on your bill. Write us for wholesale price list. A postal card will do. Send it now while you have this in mind.

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# HOME CIRCLE



### Ladyfinger Sandwiches.

Spread raspberry jam between the cakes. Place together. Decorate with whipped cream.

### The Nation's Playground.

"Let's see! Canon City is where we get our coal!"

Such was the remark of one of our Kansas neighbors as we were about to "burn our bridges behind us" and set our faces toward Colorado, as a possible goal for health, wealth and consequent happiness.

Whether or not the object has been attained is quite another story.

As a matter of fact, our neighbor's point of view concided with our own up to the time of personal investigation.

Howbeit, from the moment the visitor lands in this mountain town, the situation grows on him in a surprising way, and with eyes open to conviction, discoveries are made daily of the real charm of Canon City and its surroundings. If he is on a tour of pleasure, he has only to be directed to one of the many scenic drives leading out in almost every direction, which are the pride of its citizens.

In order to obtain a comprehensive idea of the beauty as well as the profit afforded by this part of the great Arkansas valley, the first trip should be taken over the "Sky Line Drive," either by auto or carriage, according to the scheduled regulations laid down by the city authorities, which are advertised in bold characters at the starting point.

This driveway, a marvel in itself, was built by convict labor a few years ago, and starting from the Penitentiary, it has been walled and graded up as smooth as a turnpike over a long stretch of hogback, some hundreds of feet, among the foothills just west of the city, which from the summit looks like any other growing town with the exception of its unique environments.

As the visitor drives slowly up, over the narrow ledge, and still up until he has an almost dizzy sensation of being suspended in mid air, he takes a deep breath and looks around.

To the north looms the dome of Mt. Pisgah over in the region of Cripple Creek, with Pike's Peak a little to the right, poking his hoary head over the lower ranges. Eastward the eye takes in a sweep of four thousand acres of green irrigated orchards on either side of the river, laid out into small ranches wherein lies the wealth of its inhabitants. Still farther toward the home land stretch many acres of desert wilds, covered with sage brush and cacti; only waiting for storage, by mechanical devices of the surplus mountain snows to cause it to "blossom as the rose."

Sheltered by the western peaks that stand sentinel at the entrance of the famous Royal Gorge, and watered by the big ditches whose intake is from the Arkansas river that flows down between, is the scene of large garden spots with glass green houses, looking like white roofing glistening in the sunshine. Red and green irregular piled slopes stretch away toward the larger Green Horn mountains toward the south, which view completes the circle of his vision as he descends to the security of the lower levels.

The "Skyline Drive" is coming to be only a gateway to the new Royal Gorge boulevard, which, under the management of the Business Men's Association, was formally dedicated on the 12th of May.

The Royal Gorge is the narrowest canon through which a railroad has ever been built.

The hanging bridge about five miles from the entrance is constructed lengthwise of the river to insure the passage of trains through the most contracted opening, and is suspended by iron arches pinned to the solid rock from side to side. The Royal Gorge Park, at the top of the wonderful scenic attraction—an area of about two by three miles, belonging

to the city, was the objective point for the opening of the new roadway.

"On to the Gorge, see it from the top" was the slogan of a multitude of visitors from Pueblo, Colorado Springs, Salida, La Junta and towns more distant, as well as a host of interested citizens.

To prevent danger of collision, in passing over some of the narrow passages, officers were stationed at intervals, to direct the line of travel in one direction until the noon hour, no one being allowed to return until after the time limit.

The first five miles after descending from the Skyline leads up the long grade that has been cut through the granite cliffs of Priest Canon, and on its way to the rim of the Gorge the road winds and doubles on itself in 199 distinct curves, passing through an elevation of 2700 feet enroute.

Each turn in the road keeps the traveler on the alert for some added scene of beauty, and he is rewarded at vantage points all along the way, by glimpses of variously formed rocky or pine covered mountain peaks with interlying green valleys, and vistas of the white Sangre de Cristo range some fifty miles away—all an indescribable panoramic scene not soon to be forgotten.

On his arrival at the top, the visitor's first impulse is to rush to the edge, and unconsciously catching hold of a friendly rock or tree to counteract a creepy feeling, he leans over and looks down into the haz depths from which massive rocky walls of various formation, spotted with green vegetation rise a sheer three thousand feet on either side, jagged and clear cut against the deep blue of a Colorado sky.

The Arkansas river brawls along, looking like a silver ribbon, the seemingly miniature railroad with toy trains frequently passing, following every bend of its course, only visible here and there where not closed in by some of the rocky projections that seem to meet midway. But his appetite at length calls him to the scene of practical operations. The autos have been "parked" on one level space and the vehicles on another. Gallons of coffee are served by the management and sandwiches to those not provided with picnic lunch, so that no teetotaler need go away thirsty or hungry.

A stand had been erected for the speakers and the program was a fine one.

Gov. Shaffroth spoke on "Colorado the Play Ground of the Nation," followed by other enthusiastic speakers interested in good roads, and a "Greater Colorado."

The drive back to town was made by the nearly two hundred autos and numerous carriages, without a hitch, many of the crowd participating in the Japanese lantern-auto parade in the evening.

The city was in festive attire for the occasion, which was followed the next day by the Flower Festival, with the most elaborate and artistic display it has ever been our good fortune to witness.

The morning parade consisted of the wee tots with their decorated doll carriages, Teddy carts, flower queens and pages, daisy floats, sunbonnet babies, parasol girls, Japanese rickshaws, boy scouts, cyclers, and other attractions with a train of followers, all making a beautiful and attractive sight that called out the most ardent enthusiasm from the crowds that thronged the streets.

The afternoon was given over to the citizens parade which represented with gorgeous effect every phase of business, educational and social life, as also the various orders and clubs.

The "Advance of Spring" was marshaled by young lady riders with decorated horses, the young men following as "Knights of the Orchards."

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Name .....

Address.....  
**TO THE DEALER:**—Coupon will be redeemed at the full retail price by your jobber. All coupons must be signed by you and returned before November 1, 1911.

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