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$1.00 A YEAR


# KANSAS FARMER.

**Established in 1863.**

Published every Thursday by the
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E. B. COWGILL.....President
J. B. MCAFEE.....Vice President
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I. D. GRAHAM.....Associate Editor
H. A. HEATH.....Advertising Manager

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**KANSAS FARMER CO.,**
**116 West Sixth Ave., Topeka, Kans.**


It should not be forgotten that whatever the season early plowing is best for wheat.

According to the most reliable reports the Kansas corn crop of 1902 has reached the stage when it is safe to reckon on a large yield.

Enough water has run out of Kansas in her swollen streams during the last forty days to have made sure the crops of next season could the moisture have been retained in the soils upon which it fell. Perhaps by some improved processes another generation will learn to husband the wealth of water where bestowed.

The anxiety that was felt not long since least the rains would not continue long enough to insure a full crop of corn suggests that the discoverer of some modified system of planting and cultivating corn, whereby the cultivation may be readily continued after the corn has reached its full height thereby preventing the excessive evaporation which sometimes takes place will confer a boon upon the entire corn-growing fraternity.

## KANSAS FARMER'S NEW WALL ATLAS.

**The KANSAS FARMER has arranged with the leading publisher of maps and atlases to prepare especially for us a new Wall Atlas, showing colored reference maps of Kansas, Oklahoma, Indian Territory, the United States and the World with the 1900 census.**

**The size of our new Wall Atlas is 22 by 28 inches. The outside map shows the flags of the United States, as well as the flags of all nations. In addition thereto is given a list of tables, an exhibit of the products and their values of the United States and the world. One of the maps shows all States, Territories and possessions of the greater United States and facts as to their capitals and the first settlements and in relation to their general government, areas, population, and legislature.**

**The atlas also gives the growth of our country, showing the population of all towns by States, of 3,000 and over for the census years of 1880, 1890, and 1900.**

**This grand new census edition atlas also shows for every country on earth, the government, chief executive, area in square miles, population, capital and its population. This excellent educational work should be in every home. It sells for one dollar.**

**Every one of our old subscribers who will send us two new subscribers at 50 cents each for the remainder of the year, will receive a copy of this splendid new Wall Atlas postage prepaid.**

## ENTERING UPON FARMING.

A young married man of limited means, an architect by profession, wishes to become a farmer and asks for advice as to the best means of reaching his ambition.

Our inquirer should realize that in changing from one profession to another there is inevitably a heavy loss incident to such shifting. As a rule one should stay by the vocation in life wrich he has chosen, for in all legitimate lines there is room at the top, and one is reasonably certain of reaching a competency at least and an honorable position if he will but push on faithfully and energetically. But ill-health or other reasons sometimes force a change. Our correspondent asks if there is not some book which he can read to help him in the proposed change. Books and papers count for little in a case like this and are often liable to be really injurious because of false ideas and standards which they may set up in the mind of the reader. When one who knows nothing about agriculture begins to study books and papers bearing on that subject he is likely to develop the sentimental side without properly realizing the practical character of the vocation.

If our inquirer, after seriously pondering the matter, concludes that he still desires to become a farmer, let him select as well as he can that special branch of agriculture which by nature or inclination he seems best fitted to follow. Supposing he chooses animal husbandry and in that division takes up dairying, beef production, mutton or pork raising as his leading line. Instead of investing his little earnings at once and starting out with his intellectual facilities as soft and untrained as are his hands let him choose rather to place himself with some one of experience and practical hard sense. Go at once to the farm of a successful stock raiser and find employment with him under such terms as are mutually satisfactory. There keep both hands and head busy with what goes on from day to day. Such a novice should hold in high regard the practical experience of a successful farmer or stockman. In studying the methods by which success is attained and advancement made the novice will undergo a training which can be secured in no other way so successfully and so cheaply. He will learn from the very beginning to do the right things at the right time and in the right way. What has cost his employer years of experience will come to him in the natural line of his everyday training without particular difficulty.

Two or three years of such experience will settle the fact of prime inportance whether or not he really wishes to follow agriculture as a vocation. If still satisfied he can embark in business for himself or as a partner with some one who furnishes the capital or become a manager or director of the affairs of men who are always seeking this sort of foremen or superintendents for their farms or estates. The inclination of our inquirer will be, however, to ignore such a rational procedure as this and to short-cut his operations by investing his little savings in land and trying his hand at farming. With books and papers as his guides he will do all sorts of blundering and make many mistakes which are costly and often fatal. Profits figured out on paper and made to appear reasonable from what the books and papers say will not be forthcoming and a thousand ills and accidents will arise where least expected. It seems to imitate them or duplicate what they accomplish. Our city friends longing for country life are apt to exalt the sentimental side and to give far too little weight to experience in that training which comes from close application and silent patient study incident to success. In such cases as these the best plan by all means is to learn as much as possible from association with successful men and to realize that books and papers are more helpful to those who are grounded in successful practice than to those who are inexperienced.

## KANSAS GREAT EXPERIMENT STATION IN THE SHORT GRASS COUNTRY.

The largest experiment station in the world—acreage alone considered—is at Hays City, Kansas. It will be financially profitable to Kansas to make this station the largest in point of experiments carried on and results attained.

One day last week Secretary Coburn, who is a regent of the Agricultural College and therefore interested officially as well as patriotically in the development of this station, invited the writer to accompany him on a trip to the new experiment station. The Union Pacific Railroad landed us at Hays City at little before breakfast time. J. G. Haney, superintendent of the station, took the party in charge. The station grounds comprise 3,400 acres of the choicest land of the short-grass country adjacent to the thriving city of 2,000 inhabitants. After breakfast, Hon. John Schlyer—who represented Ellis County in the last legislature and is conceded to have a sure thing of succeeding himself if he so desires—joined the party in a drive over the "reservation."

The old Fort Hays military reservation came into possession of the experiment station and the normal school authorities late last spring. The station work was placed in charge of Professor Haney and operations commenced with as much vigor as the limited funds available would permit. About 500 acres of the new prairie was broken, six miles of fence constructed, and crops planted as follows:

| | Acres. |
|---|---|
| Cane sowed thickly | 5 |
| Cane and Kafir sowed thickly | 5 |
| Kafir sowed thickly | 11 |
| Barley | 25 |
| 5 varieties of Macaroni wheat | 15 |
| 3 varieties of cane in rows 30 inches | 6 |
| Millet | 8 |
| Kafir-corn in rows 30 inches | 70 |
| Corn | 13 |
| Soy-beans in rows 30 inches | 15 |
| Cow-peas in rows 30 inches | 6 |
| Cow-peas sowed for hay | 7½ |
| Bromus inermis | 4½ |
| In a long bend of creek: | |
| Alfalfa | 22 |
| 2 varieties of millet | 2 |
| Kansas stock melons and other melons | 10 |
| Peanuts and Garvansas | ½ |
| Total | 235 |

In addition to the above there has been planted a grass garden containing 31 varieties of grass in plats, most of which are 14 by 24 feet. In each plat, 36 hills are planted, 1 foot apart each way, except in the alfalfa and Bromus inermis, of which there are 240 hills in each. This is for the purpose of observing individual plants, and possibly the selection of superior individuals, as each hill will be thinned to one stock. Also about three-fourths of an acre is set to trees and shrubs sent out by the Agricultural College.

On the old garrison garden patch has been planted one acre of potatoes, half of which is mulched, a smaller area to Jerusalem artichokes, three varieties of cow-peas, three of soy-beans, four of corn, cane, Kafir, rape, pencillaria, and a vegetable garden which belongs to the Normal School people.

The following inventory shows a rather meager equipment for a 3,400-acre experimental farm:

Two disk harrows, two drag harrows,

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one packer, one roller (use donated by Topeka Foundary), one two-horse weeder (use donated by Janesville Mfg. Co.), one 13-hole press disk drill, one stirring plow, one breaking plow, one horse and saddle, one cultivator, one lister, fair assortment of small tools.

Of course it would not have been possible to produce what the visitors saw with this equipment alone. Much of the work was hired by the piece at satisfactory prices.

The drive brought the party to the creek, the most noticeable features of which are its deep banks and its fringes of native timber. The arboretum was reached soon after crossing the creek. While trees of last spring's planting do not make much of a showing of timber in July yet the manifest disposition to live and grow makes it unsafe to say that the short-grass country will not produce timber. Just behind the arboretum the field of hog melons was reached. The millet—common, Siberian, and broom-corn—are making a growth which justifies their planting and gives promise of value to the Western stockman.

One of the most interesting and important features of the station is the grass garden in which thirty kinds of native and other grasses are being tested. It has been well said that if this experiment station shall introduce one kind of grass adapted to such use on the Western plains, as is made of timothy and clover for the East, the station will have paid for itself, no matter what it shall cost. It has been observed by all growers of alfalfa that there is more than one kind of this plant. The seed is almost universally mixed. The differences are chiefly in vigor and rapidity of growth. In the grass garden the alfalfa plants are so set that the peculiarities of each can be observed, and seed will be saved from such as manifest characteristics best suited to withstand the vicissitudes of western Kansas.

That alfalfa, even without improvement, or further selection of seed than has already been made, is the most valuable plant yet grown in western Kansas, as is proven by the experience of such stockmen as have cultivated it. Mr. Elic Phillip, a neighboring farmer, has 150 acres of alfalfa and were he not an energetic farmer would be overwhelmed with the work of putting up the hay. As it is he has a good summer's job for himself and a good deal of help. But the alfalfa at the station, of which there are twenty-two acres, the sowing of which was completed on the 29th of May, presents the most uniform stand ever seen by the writer. The prairie sod was broken in the usual way. Disc harrows were given an opportunity to do all they could for the seed bed. The sub-surface packer was used, after which the alfalfa seed was drilled in at the rate of fifteen pounds per acre. The first cutting of hay was in progress at the time of the visit. The contract was let to a neighboring stockman who was putting the whole crop in stack for two-thirds of the product. What Prof. Henry will get out of the subsequent crops this season can only be conjectured.

Whether the station will be able to make improvements in the production or to introduce cultivation of the native buffalo and grama grasses can only be told after the experiments shall have been made. The growth of cow-peas, soy-beans, Kafir-corn, and sorghum give promise of bountiful results from these crops for ordinary seasons and suggests that with improvement which it is hoped may be made, they will become reliable for any season. It has been generally conceded that this station is too far west for uniform crops of Indian corn. The station crop, however, is looking exceedingly well. This season may be exceptional, however, as there have been no hot winds to blast the tassels. But why shall not the efforts of the plant-breeders be rewarded by the production of a strain of corn whose blossoms will not be more sensitive to hot winds than are those of Kafir-corn or sorghum. The corn plant lends itself readily to modification under skillful management and it is not too much to expect that through the efforts of the new station the western limits of the corn belts will be carried several degrees nearer the Rocky Mountains.

The gift of this magnificent tract of land with all of the buildings of the former military post constituted a worthy donation of the general government for the establishment of a great experiment station. In assuming the control of this station the State of Kansas has taken no small responsibility. Experiments can here be made on whatever scale may be desired. Some crops may be produced in large quantities but if the station shall work the greatest profit to the State of Kansas, the money received for the crops produced will probably never equal the expense for the experimental work every year. If this station shall be able to add one bushel an acre to the average production of wheat in this State the increased value of that crop will be some $3,000,000 or $4,000,000 annually. Possible increases in the value of the corn crop present no less stupendous values. The advantages to be derived from the grass experiments will probabjy equal those of either of these leading cereals.

These points will need to come before the next legislature and it is hoped that the station will be liberally dealt with.

Kansas has been exceedingly fortunate in the selection of the manager of this station. Prof. Haney belongs to that class of young Kansans who are sought for positions of importance the world over. He is a Kansas form product of the most vigorous sort. He is well equipped by education and experience for the work. He inspires confidence in those around him and is in every way one of those men at whose hands good works are apt to be accomplished.

The attitude of the citizens of Hays City and Ellis County towards the station is one to be heartily commended. What the station has had to buy at Hays City has been sold at cost and there is on every hand a lacking of the disposition manifested in some quarters where public institutions are located to profit at the expense of the State.

The visitors dropped in for a few moments at the summer Normal School which is conducted in one of the old buildings of the military station, as a branch of the State Normal at Emporia. Fifty-eight students were found under the instruction of three teachers with Prof. W. S. Picken as dean. The school is evidently not only prospering but appreciated.

## $3.00 FOR $1.25.

The KANSAS FARMER'S New Wall Atlas has proved itself so popular that we have decided to offer it to every one of our old subscribers on the following terms: To each old subscriber who will renew his subscription and send in the name of a new subscriber at the same time, accompanied by $1.25 in cash, we will send a year's subscription to the KANSAS FARMER to both himself and the new subscriber and a copy of the new Wall Atlas as a complimentary gift for his enterprise. This new Wall Atlas sells for $1 and with the two yearly subscriptions to the KANSAS FARMER, makes the unprecedented offer of $3 in value for $1.25. The KANSAS FARMER is a text book on the agriculture of Kansas and the Southwest which no farmer can afford to be without and we make this offer to enable each one of our subscribers to help his neighbor to success by giving him a trial subscription for this great live stock and agricultural journal.

## THE FAIR SEASON.

September brings the shows. In fact August now ushers in the autumnal circuit of the National agricultural exhibitions. For weeks past breeders, importers, and fitters have been girding up the loins of their champions to meet the shock of the show-yard war. Stowed away from the heat and insect pests the candidates for highest honors throughout one of the most memorable show seasons America has ever anticipated now await the call to court. The fitter who has not brought his show stock up near to the right edge by August 1 is a laggard in his business. Blue and purple ribbon bearers are not made up in a month. The form of the champions for 1902 is at this writing virtually made. A bit of finish, a month of attention to exterior polish, and the game is on. Does it pay?

Is it profitable to exhibit at the shows? This is a query that has puzzled many an owner of pedigreed live stock in the past and which is likely to trouble the proprietors of good herds, studs and flocks for generations to come. What is the judgment of those who have been prominent at the leading American fairs in recent years? What does experience teach upon this point.

It is true that there are some conspicuous examples in agricultural history of outstanding successes won without the aid of show-yard fame, but these are the exceptions not the rule. The test of actual competition is one which, successfully withstood, is bound to bring business. Furthermore, it tends to keep in the breeder's eye primary essentials which are apt to be lost sight of by those who have not learned by actual experience what is required in the winning of championships. The show-yard sets the pace. The more perfect the animals there presented the greater the stimulus to the interests involved. By show-yard achievement "fashions" are created; by show-yard defeats "fashions" are modified and overturned. Minister and Sweepstakes were the Shorthorn Beau Brummels of their time until a Baron Booth of Lancaster swept through the Western shows. Heavy-headed, rough-horned, light quartered Herefords of the old style were well enough to draw before judges before Lord Wilton blood and modern skill added finish, front and rear, to the burley bodies of England's grand old grazing breed.

Granted that justice not infrequently miscarries at individual shows; that errors are committed at the time in placing prizes, the one fact that looms up like a mountain peak out of this whole show business is this: that in the long run outstanding merit is rewarded and pulpable mediocrity is punished. Therefore the influence of the show-yard upon the breeds at large is wholesome. The show-yard sets up ideals to be sought. The show-yard exalts the good and condemns the bad irrespective of theories or breeding; regardless of lines of descent. Blue-blooded inferiority with a pedigree twelve miles long dares not meet physical perfection, however derived, before the bench of judges extending this year from Sedalia in the West and Syracuse in the East all the way down the circuits to the Chicago International in December. The show levels all ranks. It is the realm where quality counts for more than foot-notes. It is the apothesis of individuality and as such an effective countercheck upon those fads and follies that find exemplification about every auction sale. The show is the supreme test of policies and systems of breeding. It crowns the producer of the best and points the way to progress. It reflects contemporary judgment as to types and as such presents an invaluable object lesson to all sorts and conditions of men interested in the betterment of our domestic animals.

The show pays doubly. It pays the exhibitor and it pays the visitor. The exhibitors for 1902 are now ready. The visitors will come in multitudes. We are about to enjoy the greatest demonstration of the year in stock breeding circles. Let the managements see to it that nothing that will contribute to the comfort and safety of both man and beast upon these greatest occasions is left undone.

## TO STUDY CORN-BREEDING.

A large number of KANSAS FARMER readers will be interested to know that Prof. W. H. Olin has gone to Urbana, Ill., to study corn-breeding. This profession is becoming of much practical importance to corn-growers. It will be remembered that he resigned his position as principal of the Ottawa, Kans., public schools last fall and took advanced work at the Kansas State Agricultural College, of which institution he is a graduate. Mr. Olin has been breeding corn in an experimental way for twelve years and has raised the protein content of his corn to 14 per cent, the average being about 10 per cent. After studying under Professor Shamel, Mr. Olin intends to take field work on the 4,000 acre corn-breeding establishment owned by Funk Brothers, and get expert training under Professor Holden, who has charge of the seed-breeding on this farm.

In regard to the opportunity for positions in this line of work, it might be well to say that of the three young men that have completed the entire work at the Illinois Agricultural College this year, each received a position at a salary of more than $2,500 a year, while two more positions were unfilled because of lack of men with such training. Having the energy and ability, Professor Olin has splendid opportunities before him and his progress will be watched with eagerness by his KANSAS FARMER friends.

## SOW ALFALFA.

The advantages of the alfalfa crop were so manifest in 1901 that much attention was directed to increasing the acreage last fall and last spring. Other forage is growing so abundantly this season that the preponderance in favor of alfalfa is less manifest now than a year ago. Nevertheless, alfalfa is the most profitable crop for the stock farmer to grow when the season is favorable, while its off-year productiveness makes it an evener of prosperity. The best advice the KANSAS FARMER can give is to sow more alfalfa until at least half of the cultivated acres in every section of the State shall be producing this reliable and valuable crop. In the latitude of Topeka the third crop is rapidly nearing the stage for cutting. Such alfalfa should yield five cuttings for the season.

Although the KANSAS FARMER last season printed directions for preparation of soil and for seeding based on the experiences of the best farmers, a good deal of alfalfa sown last fall failed to live through the winter. Not a little of the failure was due to late sowing. If it be possible to impress those who will sow this season with the importance of immediately preparing the ground and of sowing by the middle of August, many failures will be averted.

To prepare the soil, plow, going over each day's work with the sub-surface packer before leaving the field. If no packer is at hand then use the harrow sufficiently to close all large openings under the furrows. After every rain pack again. Do not try to crush all of the clods, but try to leave them on the surface. If at the middle of August there is moisture enough in the soil to sprout the seed, sow it. The quantity of seed used varies from twelve to thirty pounds to an acre. If the seed is evenly distributed and half of it grows twelve pounds will produce more plants than can grow on an acre. But get a good stand at first sowing. It is

very difficult to mend a poor stand. If the middle of August finds the soil too dry to insure growth, defer sowing until the moisture comes, keeping the soil harrowed so as to keep down weeds and to break any crust that may be formed after light showers. There is a good deal of risk in sowing later than the middle of September, so that if the soil continues too dry until that date it may be better to defer sowing the alfalfa until next spring.

The farmer who has not experienced the value of alfalfa will do well to sow a little patch for trial. Get ten pounds of seed and sow on half an acre.

Alfalfa comes up under favorable conditions almost as quickly as do radishes. But it is at first a tender plant. Do not let an animal graze a bite of it until you have mowed it four times. Some say it is scarcely safe to allow a hog or a sheep to look through the fence at it at any time during the first year of its existence. With favorable weather the August sown alfalfa will make a considerable growth before freezing weather. But don't pasture it. Mowing it will not hurt it, but pasturing must be forbidden.

Sow a little alfalfa whether the neighbors do or do not sow.

### RUSSIAN THISTLE NOT COMMENDED.

From the fact that the Kansas Board of Agriculture has issued a pamphlet, giving information as to the use made by some farmers in western Kansas of the Russian thistle as a forage plant, the idea has obtained among certain editors that Secretary Coburn is not unfriendly to the propagation of these thistles. If these editors had carefully read what he really said they would know that instead of being favorable to the thistles he urges a ceaseless warfare for their extermination, maintaining that they are one of the worst weed pests yet introduced in the State. Other editors have gotten the idea that the repart was devoted to the Canada thistle, and that it is being exploited as a forage plant. The Canada thistle is not referred to in the report, and is a plant as different from the Russian tumbleweed, or so-called thistle, as day is different from night.

Instead of being kindly toward the thistles the Board of Agriculture is anxious that everything possible shall be done to prevent the present growth from ripening seed, which they will do in a short time, and believes that every citizen should do his full duty wherever these plants are growing by making a special effort for their eradication. For this they must either be dug up by the roots or cut off at the surface of the ground with some instrument like a hoe. The cutting bar of a mowing machine can be set low enough to cut off the lower branches, and these, after mowing, will ripen enough seed to seed the entire region where matured. Mr. Coburn thinks the Russian thistle comes pretty nearly being the devil's own invention, although he frankly confesses that as compared with the Canada thistle it is but a mild evil, as it is an annual and propagated from seed, while the other reproduces itself from its roots as well as from seed and spreads from year to year. Where growing on any considerable scale the descruction of Canada thistle is virtually out of the question.

### THE WORLD'S FAIR RECOGNIZES KANSAS.

The management of the Louisiana Purchase Exposition Company who expect to hold a million dollar live stock show in connection with the World's Fair in 1904, have selected U. S. Senator W. A. Harris of Kansas as Special Commissioner to visit Europe in behalf of a show of stock by foreign countries. No better selection could have been made in America for this important mission. The World's Fair management's fine discretion in this selection will meet with universal approval and congratulations are in order.

This appointment serves to call attention to the fact that when the world requires special talent of a high order to fill an important place of responsibility, Kansas, of a necessity, is always considered and recognized.

To the KANSAS FARMER, Secretary Coburn of the State Board of Agriculture says:

"That was a very sensible stroke of business done by the St. Louis Exposition management when it secured Senator Harris to visit Great Britain and France in the interest of its live-stock department. No more suitable man could be found for such a mission, and it is most fortunate that he was in position to serve.

"If the exposition people are going to do business all the way through on the plan of having its different departments in the hands of strong, capable men of recognized high character, instead of schemers, men with a 'pull,' those who 'had to have something,' or others wormed in through the machinations of certain interests with large axes to grind, the enterprise can be made the brilliant success the country hopes for. The intention at large is that it shall be strictly representative; it can not be made so except by representative men. That such a man as Colonel Harris is in its service is a most encouraging augury."

### STATE FINE STOCK SHOWS.

Breeders of fine stock have reason for congratulation and encouragement on account of the enterprising advance movement of the fair managements of the county and district fairs of Kansas, this year. A great many county fairs have increased their premiums for live stock from 25 to 100 per cent. Quite a number are offering some very large specials.

In addition to the splendid county fairs in prospect for the present season there will be a great circuit of fairs of State importance, beginning with Topeka, September 8-13, O. P. Updegraff, secretary. The Central Kansas Fair Association will be held at Hutchinson, September 15-19, Ed. M. Moore, secretary, and the week following the Wichita and Southwestern Exposition and Live Stock Sale will be held at Wichita, September 22-27 inclusive, H. L. Resing, secretary.

These three big associations are offering $20,000 in the aggregate for fine stock premiums and speed purses. The "big three" will constitute the great State battleground for breeders in 1902. It is hoped that breeders will make a special effort to take in the entire circuit, and make a creditable show, and at the same time blaze the way for a great Kansas display at the World's Fair at St. Louis in 1904.

Harvesting Beardless wheat on the farm of J. M. Maher.

## Agricultural Matters.

### Beardless Winter Wheat.

Most farmers throughout the great winter wheat producing belt of Nebraska, Kansas, and Oklahoma, have come to realize that winter wheat growing is no longer an experiment but a valuable and judicious branch of farming. It divides the work so that less help is required. It also gives the farmer a chance to change his ground from continuous raising of corn. Maturing early it gives the farmer a chance to realize on his crop before his corn and other crops are ready for market. Another feature, if the grain is removed from the ground as soon as it is harvested a good forage crop can be raised on the same ground without injury to the soil. I have grown as high as four tons of sugar-cane after a crop of winter wheat had been harvested. Millet or Kafir-corn will do as well if properly put in. Most farmers have come to the conclusion that but one variety of winter wheat can be successfully grown in this winter wheat belt on account of the scarcity of moisture or lack of winter covering of snow during the hard freezing winter. The variety seemingly best adapted to those conditions is the Turkey Red or bearded wheat. Now most farmers who are familiar with Turkey Red wheat know that if conditions are unfavorable, and even two-thirds of the plants winter-kill, there remains enough plants to make a fair stand, whereas, if the entire amount grows without hinderance the stand is too thick. Different methods are resorted to. Pasturing during the fall and winter or harrowing a portion of the plants out in the spring will sometimes thin out too heavy a stand. For about five years I have been experimenting with winter wheat under various conditions and I find that when the seed-bed is properly prepared and the seed deposited deep enough, you not only lessen the chances of your wheat being winter-killed but you increase the yield of your wheat, also as your grain becomes deeper rooted it withstands the dry and hot winds and thereby fills out better instead of being dried up, as is sometimes the case. I have been growing successfully two beardless varieties of winter wheat, my yield being from thirty-four to forty bushels per acre, and although I have grown it continuously, I have the first acre to winter-kill. One of those varieties, the Big Frame, has been tested with over 200 varieties at the experimental station at Lincoln, Neb. Professor Lyons, chief of that bureau, says while the other varieties more or less winter-killed, this wheat, Big Frame, and the Turkey Red stood without any loss. Professor Lyons says the Big Frame winter wheat is, if anything, more hardy than the Turkey Red. My other variety of winter wheat is an early variety, maturing from a week to ten days earlier than other wheat. This wheat is called Early May winter wheat. It is also a beardless wheat. It also yields abundantly, this year going forty bushels, machine measure, per acre Both of those varieties of wheat have large heads from five to six inches long and containing from forty-five to fifty-three grains in each head. Both of those varieties of wheat are no experiment as I have grown them continuously without any loss. The straw is straight and stands up well, is easily banded, can be shocked easily, and so as to withstand wind or storms. If it is properly shocked will stand any amount of rain without spoiling. This has been demonstrated with my wheat this season. This wheat being beardless makes the straw valuable for feeding purposes, no loss occurring as in the case with bearded wheat.

J. M. MAHER.

Fremont, Neb.

### The Amount of Water Used in Irrigation.

The Office of Experiment Stations, United States Department of Agriculture, has just issued an interesting and valuable report of its irrigation investigations for 1901. It is handsomely illustrated by twenty-five plates and twenty-nine text figures. In it are given the results of the year's measurements and studies of a large number of leading irrigation experts of the arid regions, acting under the direction of Elwood Mead, Chief of Irrigation Investigations, among whom are: A. F. Doremus, State engineer of Utah; D. W. Ross, State engineer of Idaho; Prof. O. V. P. Stout, of the University of Nebraska; Prof. J. M. Wilson, of the University of California; Prof. O. L. Waller, of Washington; Prof. Samuel Fortier, of Montana; Prof. J. C. Nagle, of College Station, Texas; and W. H. Code, of Arizona, recently appointed Inspector of Irrigation Surveys in the Interior Department, all of whom are resident agents of these investigations in their espective States.

All have made a careful and painstaking investigation and, although they deal with phases of irrigation typical of their own State, the conclusions of all are exceeding interesting and will be carefully studied by the Western farmer and all interested in the development to be inaugurated under National aid.

Mr. D. W. Ross, State engineer of Idaho, calls attention to the increased duty on water, which is being brought about by a modification of water right contracts. Mr. Ross has given considerable attention to this reform, and, owing to his efforts and others connected with this investigation, canal companies are submitting contracts in which the water is measured to the farmer and he pays only for what he uses, in place of the earlier contracts where he was charged for the acres irrigated. In this way the farmer is led to economize because he gets the benefit of his savings. Changes of this kind have increased the need for more accurate methods of measuring water, hence the designing of cheap, efficient water registers has been given much attention by this branch of the Department, and a number of new patterns have been invented and are now being furnished to irrigators by some of the leading instrument makers of the country at very reasonable prices.

The duty on water is the leading subject dealt with in all the reports although each paper discusses the local practice of the region where the measurements were made. These are reviewed in the discussion of the amount of water needed to irrigate an acre of land, by Clarer [illegible], Assistant Chief of the [illegible]gations. It shows that the averag[illegible] depth of water being app[illegible] to irrigate fields is more than four feet, being 4.35 feet in 1899, 4.15 feet in 1900, and 4.60 feet in 1901. Measurements like these are necessary in order to determine how much land can be irrigated from the reservoirs which the Government is to build, and also what will be the value of the water stored in them. Without this information, serious errors might be made as they have been made in the past, either because of allowing more water than was needed or in attempting to irrigate too many acres.

The report is in four parts, any of which can be had by applying to the Director of the Office of Experiment Stations, United States Department of Agriculture.

### Cheat in Timothy.

EDITOR KANSAS FARMER:—Through your valuable paper I would like to ask how to get rid of cheat in a timothy meadow. The cheat has been gaining every year for the past four years, until this year there are large patches that are all cheat. To cut it before it goes to seed will not kill the cheat for it will grow up from old stubs. Some old farmers say it will die out of its own accord, but this does not appear creditable. I hope some good farmer will give me a plan to save my meadow without plowing it up. Will disking injure the old roots of a meadow? On many of our meadows the timothy seed is ripe. If disking one and one-half or two inches deep would not hurt the old sod, would it not be a good way to increase the stand of grass for next year, as a great deal of seed will fall off in putting up hay?

M. M. GALLAGHER.

Leavenworth, Leavenworth County.

It is hoped that Mr. Gallagher will try disking and report results to the KANSAS FARMER. Any reader who has had experience along this line will confer a favor by giving it in full for publication.

### OPTIMISM.

Have you found your life distasteful?
My life did and does, smack sweet.
I find earth not gray, but rosy;
Heaven not grim, but fair of hue.
Do I stoop? I pick a posy.
Do I stand and stare? All's blue.

—Robert Browning.


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# Horticulture.

### Thoroughbred Seeds.

The discussion of thoroughbred seed corn which has been active for the past year or two in this section of country, and the breeding of seed wheat which has been conducted for several years in North Dakota and Minnesota will make the folowing report on the station for plant breeding at Svalof, Sweden, by David G. Fairchild, Agricultural Explorer of the U. S. Department of Agriculture, of unusual interest to Americans as showing the extent of agricultural progress in other countries. This station is so unique and promises so much for the agriculture of Sweden that it is worthy the serious consideration of American agriculturists.

The object of the station is the development by systematic breeding and selection of new, better, and more productive varieties of agricultural plants. So far, it has confined its attention to the improvement of wheat, oats, rye, barley, peas, and vetches.

"The institution is the outcome of private enterprise and owes its origin to the farsightedness and liberality of B. Welinder, a wealthy landowner of the province of Schonen. Mr. Welinder became convinced, through his travels in Germany and England, of the importance to agriculture of cultivating the best varieties of cereals; and in 1884, or thereabouts, he imported into South Sweden and grew on his own estate a number of different foreign varieties of grain. Among this number was the Scottish variety of wheat known as Square Head.

"Mr. Welinder distributed seed of this sort among his neighbors, who discovered upon growing it that with the same amount of labor they were harvesting nearly 2,000 kilogrammes per hectare of this new variety, instead of of 1,200 kilogrammes, the ordinary yield of wheat.

SWEDISH SEED-BREEDING ASSOCIATION.

"The success of this introduction, together with other arguments, induced Mr. Welinder to form in 1886 the South Swedish Society for the Breeding and Seelection of Seeds. In this he was heartily seconded by Freiherr F. G. Gyllenkrook and other large landowners of the province of Schonen. The object of this society was to raise the standard o[illegible]ulture through the introduction a[illegible]ation of better varieties of grain and forage plants. In connection with the society, a[illegible] the breeding station which was the outcome of it, there was established in 1891 a seed company, which at present is capitalized at $100,000. This company is a business concern for the purpose of growing in large quantities and distributing advantageously and economically seeds of the cereals and fodder plants which have been originated or tested by the breeding station and proved of special agricultural value. In the early years of the breeding society the attempt was made to combine these two related objects, but it was found that too much time of the plant breeders was absorbed in the purely business transactions of selling and shipping seed.

"The efforts of Mr. Welinder and his associates soon attracted attention in other parts of Sweden and resulted in the formation of the General Swedish Breeding Society, which later, by absorption of smaller institutions in middle Sweden, became the Swedish Seed Breeding Association.

"Although owing its origin to private initiative, the association has received since 1891 an annual government appropriation, which now amouts to 18,000 crowns, or nearly $5,000. This sum, together with 700 or 800 membership fees, subscriptions from various Swedish agricultural societies, receipts from the sale of grains from the experimental plats, etc., makes the total fund for maintenance of the institution nearly 53,000 crowns, or $14,300.

"Until recently the business relations between the association and the company have been somewhat complicated. Seeds of new varieties originated by the breeding station have been appraised by a joint committee and sold outright to the company. Under the present arrangement the association receives a royalty of 1 per cent of the gross receipts of the company on the sales of seed originated by the breeding station.

"Although it was not expected in the formation of the company that any profit would result in the first few years from the sales of seed, the books already show a small credit balance, and it seems assured that from a business standpoint the company will be a success.

FIRST YEARS WERE UNPROFITABLE.

"From 1886 to 1892, unproductive methods of selection were employed and not a single really superior variety of grain was developed. Since 1892, when Director N. H. Nilsson introduced an original method of selection which has proved very important, several new and valuable sorts have been distributed on a large scale and many more promising ones are on trial. As it requires about five years to grow a sufficiently large quantity of the seed to justify putting it on the market, it was not until 1897 that the company could really begin to get any benefit from the work of the plant breeders.

METHOD OF DISTRIBUTION.

"Upon receiving seed of a new and thoroughly tested variety from the breeding station, the company sows it at once on its own land. which is adjacent to the grounds of the station; and when a sufficiently large quantity has been harvested, the company distributes to corespondents under the simple agreement that the latter shall sell the whole crop harvested from this seed to the company, receiving for their extra pains a price somewhat in advance of the market price for ordinary grains. No special precautions are considered necessary to prevent the grower from stealing a small quantity for his own use and subsequent sale. So much depends upon the inspection of the growing grain and harvested product and the certificate furnished by the breeding station that Swedish farmers evidently prefer to pay the extra price charged for the certified seed.

"Throughout both Sweden and Finland the Svalof varieities of grain are spoken of in the highest terms. As far north as the sixty-sixth parallel they yield better returns than native sorts whenever the season is sufficiently long. In short seasons, when the frosts come unusually early, the southern varieities do not ripen. It could not be expected that sorts from southern Sweden would prove well adapted in this respect to the northernmost localities.

The seed company carries in stock a limited number of standard seed varieties that have not been bred at the Svalof station. These are, however, all subjected to inspection by the experts of the station, and every sack of seed sold by the company bears the stamp of the latter and contains a certificate as to its purity. All pedigreed grains which are purchased by the company from its correspondents must, before purchase, be inspected in the field and officially recommended by an expert of the breeding station.

"The breeding station at Svalof is housed in a modern laboratory of attractive exterior and conveniently arranged interior, and is surrounded by a small, neatly kept park. The experimental plats, of which there are more than 2,000, are scattered among the larger fields of pedigreed grain and cover in all about twenty-five acres.

"Special stress is laid by Dr. Nilsson upon the fact that all of his experimental plats are under as nearly as possible natural conditons, and to insure still further accuracy, each variety is tested on not less than three different plats.

TWO LINES OF WORK.

"The work of the station naturally runs along two lines, i. e., the search for mother plants for starting new varieties, and the elimination of all but the very best of the varieties started.

"All selection of mother plants is based upon (1) the general qualities of the plant itself, (2) its ability to produce plants of high average quality, and (3) its ability to produce plants of nearly absolute uniformity in botanical characters.

"As soon as one of the plats seems to warrant it, i. e., when its uniformity of type and general excellence of yield have been demonstrated, a number of the best yielding plants, excepting of course the single best one, are chosen to plant an increase plat. From the seed obtained from this increase plat, providing the uniformity of type and general excellence still holds good, the variety test plats are planted. Here is applied the third and final test, and all but the one or two very best are eliminated. The variety or varieties that hold out through all this process of selection are increased for distribution. The method of selection outlined has been in use at Svalof since 1892.

LESSON OF EARLY YEARS.

"Although directly productive of no novelties, the early years of activity were not lost, for they resulted in the discovery of numerous valuable methods and instruments for correctly appraising the practical value of certain characters of cereal and fodder plants. They made it possible for the investigator to express, often in statistical form, the value of a variety of grain.

"The amateur plant-breeder is often blinded to the real problem at issue by the ease with which a host of new forms can be produced by cross fertilization. He learns later, as Dr. Nilsson says, that it is easy to produce new varieties, but far more difficult to determine which of their characteristics are worth reproducing, or can be reproduced. When Dr. Nilsson hit upon the idea of conducting all experiments from the standpoint of a single plant, he was able with the experience of former years to correctly and quickly decide the value of such new varieties as he observed and selected from his fields. He was able by the same means to select from each following generation the desirable type for propagation.

"The discovery of certain easily observable seed characters on the grains of barley made it possible to group the many varieties of each subspecies into four tolerably distinct strains, and to analyze quickly large quantities of seed of a given sort in order to determine its purity as a variety (Sortenreinheit). The botanical arrangement of the oat inflorescence, i. e., the number of flowers per spikelet, etc., have made a tolerable classification of the varieties of this plant possible, and the breeder can detect at a glance in his experimental plants the presence of a valuable botanical variation.

"These purely botanical characters have correlated with them valuable economic ones, and it has been one of the services of the Svalof Station to point out some of these correlations and to emphasize the importance of this principle. For example, it has been found that the close headed wheats have the strongest straw, and the three-flowered spikelets of the oat bear the largest grains.

BOTANICAL VARIETIES.

"Too much stress can not be laid, according to Dr. Nilsson, upon the value of a pure botanical variety. In the production of a barley for brewing purposes uniformity of germination is of prime importance, and at the Swedish Brewers' Exposition at Malmo, in 1898, the varieties of barley which took the prizes were all botanically pure or nearly so. Such sorts as were mixtures of several strains were invariably of inferior quality. It can be easily understood that grains which are descended from a common parent will show a greater uniformity, even in length of time required to germinate, than those from different parentage.

"Dr. Nilsson finds that none of the existing races of cereals now sold by seedsmen are pure, but rather mixtures of many different strains which he is able to separate and identify. He holds that when a race has been produced which is botanically pure a remarkable uniformity results. The writer saw fourteen acres of a new variety of wheat, not yet on the market, which had for several years been subjected to the most careful selection. Every plant in the field was the offspring of the same ancestral plant which Dr. Nilsson had discovered some four or five years before. The uniformity of color and evenness of growth were most remarkable. Two bands of dark green along the margin of the field could be seen for hundreds of yards, and were as distinct as if painted above a chalk line. Upon closer observation they proved to be formed by the dark green upper nodes of the individual plants, which were of such uniform height that the nodes stood at the same level.

NEW VARIETIES.

"It is easy enough, in Dr. Nilsson's opinion, to secure variable varieties and curious sports by crossing; but it is very difficult, once the strain is disturbed by cross breeding, to secure uniformity. At present he finds so many variations in his experimental fields without recourse to hand crossing, and he has been so successful in rendering the best of these uniform, that he has not paid much attention to the matter of artificial cross-fertilization. He admits, however, that crossing must be judiciously resorted to for the production of quite new varieties of superlative excellence.

PEDIGREED SORTS.

"Not content merely with the production of a new variety, the station continues work upon sorts already put on the market by the company. Every year a new representative plant is selected from the trial plats, the seed from it is sown, and the machinery set in motion for its multiplication. The Svalof Princess barley of 1898 is not the same nor as well bred as that of the same pedigree, but originated in 1900. The system of records and methods of systematically studying each of the characters of these pedigreed sorts are among the most interesting features of the station. The field and record books, and the system of numbers emboyed to keep track of these almost countless variations, are the result of years of experience. Extensive herbaria and photographs assist in rendering the short descriptions of the various sorts intelligible, and in looking over these one is impressed with the thorough manner in which this kind of experimental work is systematized.

PARAPHERNALIA OF THE LABORATORY.

"The station laboratory is a machine shop of specialized contrivances. Among these may be enumerated counting cases for quickly registering the grains per spikelet, specialized racks upon which the pedigreed grain is hung, tables of peculiar construction, racks and trays of convenient form, self-sorting balances, special pincers for cutting the

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Dr. B. J. Kendall Co.
Enosburg Falls, Vt.

grains of barley in two in order to examine their flour texture, abacuslike and ordinary counting machines for diminishing the labor of calculation, ingenious shaking sieves for grading and registering quickly large quantities of grain, marking boards to guide the plat planters in planting the seed, and calipers for registering the relative compactness of the wheat head.

"Dr. Nilsson has two scientific assistants, Dr. H. Tedin and Mr. P. Bolin. The former is at work upon the improvement of forage plants, with which he has already had excellent results, while the latter has made a specialty of barley, and his Princess variety is rapidly superceding other sorts through southern Sweden. It is an essential of success in plant-breeding that the breeder shall become so intimately acquainted with the plants he is breeding that he learns which among the host of characters constantly developed are of significance for his purpose; and the organization and specialized scope of the Svalof Station foster this intimate acquaintance.

"Among the valuable varieties already produced by this remarkable breeding station are the Grenadier wheat, which is not yet on the market, but has yielded over seventy bushels per acre where ordinary kinds gave only thirty-five bushels; the Princess barley just mentioned, which took twenty out of twenty-eight prizes offered by the Brewers' Association at a recent exposition in Malmo, Sweden, and a variety of vetch (Vicia sativa) quite proof against the mildew (Peronospora) which has for several years almost completely destroyed the fields of this fodder plant at Svalof. This vetch was found by Dr. Nilsson in a field which has been devastated by the disease. It was noticeably free from the malady, and its progeny now form a race which is quite immune to the Peronospora. Considering the short time that has elapsed since the proper method was discovered for the improvement of plants, and that the staff of the station includes only three breeders, these are certainly most worthy results. What might be done if this work were prosecuted on a large scale does not require much imagination to discern."—Nebraska Farmer.

### Nebraska State Fair, 1902.

Prompted by the extraordinary agricultural promise in Nebraska, for the year 1902, the management of the State Fair, to be held at Lincoln, September 1-5, is anxious to demonstrate that no other State in the Union can excel us in all staple products. To this end, all means at command will be used to present such an exhibition as has never before been made. Those who miss seeing it will make the mistake of their lives. Go, and make the great holiday and sight seeing of 1902 an event long to be remembered. See that the wife and children, sweethearts, cousins, sisters, aunts and everybody else share with you this great show.

### Ford County Potatoes.

The Dodge City Globe-Republican: Tip Shane, southwest of town is showing potatoes this season that would drive the Kaw Valley potato kings out of business, if he would show all the Ford county formers how it was done. A sample basket taken from his potatoes, grown on the hills of Ford county were brought to town Tuesday. They were large and solid and as handsome looking as it is possible for a potato to be. They would take a prize at any county fair that could be held down in the Kaw Valley.

### Wants to Save Both Seed and Fodder.

EDITOR KANSAS FARMER:—Will some of your readers please give, through the KANSAS FARMER, their plan of saving Kafir-corn and sorghum seed, when both seed and fodder are wanted.

L. N. BROWN.

Coldwater, Comanche County.

**If you have no appetite for your meals something is wrong with your digestion, liver, or bowels. Prickly Ash Bitters cleanses and strengthens the stomach, purifies the bowels and creates appetite vigor, and cheerfulness.**

# The Stock Interest.

### THOROUGHBRED STOCK SALES.

*Dates claimed only for sales which are advertized or are to be advertized in this paper.*

August 1, 1902—American Berkshire Association, at Kansas City, Mo.

August 8, 1902—Combination sale of Berkshires, at Kansas City, Mo. Chas. F. Mills, Mgr.

August 13, 1902—American Berkshire Association, at Kansas City, Mo.

August 22, 1902—Harry Sneed, Smithton, Mo., and McFarland Bros., Beaman, Mo., Duroc-Jersey hogs at State Fair, Sedalia, Mo.

September 2, 1902—L. M. Monsees & Sons, registered saddle horses, mules, and registered Poland-Chinas, at Smithton, Mo.

September 8-13, 1902—Kansas State Exposition, Topeka, O. P. Updegraff, Secretary.

September 10-12, 1902—Mid-Missouri Combination Sale of Angus, Galloways, Shorthorns, and Herefords, in connection with the North Missouri Fair, Chillicothe, Mo.

October 1, 1902—Wm. Plummer, Poland-Chinas, Barclay, Kans.

October 7-8, 1902—J. S. McIntosh, Kansas City, Mo., Shorthorns.

October 18, 1902—J. W. Dawdy, Abingdon, Ill., and D. L. Dawdy, Arrington, Kans., at Galesburg, Ill., Shorthorns.

October 20, 1902—E. E. Axline, Poland-Chinas, Oak Grove, Mo.

October 21 and 22, 1902—Herefords at Kansas City, Mo., under auspices of American Hereford Cattle Breeders' Association. (Week of American Royal.)

October 22-23, 1902—Combination sale of Berkshires, at Kansas City, Mo. (Week of American Royla.)

October 23, 1902—J. B. Davis, Duroc-Jersey, Fairview, Kans.

October 20-25, 1902—American Royal Swin sale Berkshires, and Poland-Chinas, Kansas City Stock Yards.

October 31, 1902—J. C. Hall, Hallsville, Boone Co., Mo., at Centralia, Mo., Shorthorns.

November 1, 1902—H. M. Kirkpatrick, Farm sale of Poland-Chinas, Wolcott, Kans.

November 3, 1902—Peter Blocher, Richland, Shawnee County, Kans., Duroc-Jersey swine.

November 6, 1902—Thos. Andrews & Son, Cambridge, Neb., Shorthorns.

November 7, 1902—Manwaring Bros., Lawrence Kans., Berkshires.

November 10, 1902—Bransteller, Robinson & Wright, Shorthorns, Vandalia, Mo.

November 13, 1902—Geo. W. Berry, North Topeka, Manager. Combination sale of Berkshires. Manhatten, Kans.

November 18-19, 1902—Marshall County Hereford Breeders' Association Sale, Blue Rapids, Kans.

November 28-29, 1902—W. P. Harned, Vermont, Mo., and F. M. Marshall, Blackwater, Mo., at Kansas City, Mo., Godoy Shorthorns.

December 4 and 5, 1902—Herefords at Chicago, Ill., under auspices of American Hereford Cattle Breeders' Association. (During week of International Cattle Show.)

December 8-9, 1902—J. E. Logan and Benton Gabbert & Sons, Kansas City, Mo., Herefords.

December 16, 1902—Gifford Bros., Manhattan, Kans., Shorthorns.

December 19, 1902—Hanna & Co., Howard, Kans., Percheron horses, at Kansas City.

January 12-17, 1903—C. W. Armour and Jas. A. Funkhouser, Herefords, at Kansas City, Mo.

January 28-29, 1903—C. A. Jamison, Peoria, Ill., Shorthorns, at Chicago.

February 17, 1903—Geo. F. Kellerman, Shorthorns, Kansas City, Mo.

## The Production and Judging of Swine —The Fat Hog.

EXTRACTS FROM A LECTURE DELIVERED BY W. O. KENNEDY, VICE-DIRECTOR OF IOWA EXPERIMENT STATION AND PROFESSOR OF ANIMAL HUSBANDRY, IOWA AGRICULTURAL COLLEGE, BEFORE GRADUATE SCHOOL OF AGRICULTURE, COLUMBUS, OHIO.

A famous agriculturist, when asked what in his opinion was the first and most important requisite in the successful production of swine, said: "A knowledge of what constitutes the perfect hog and the practical application of the same in the swine herd." No man ever gave utterance to a truer statement. A thorough knowledge of the underlying principles relating to the breeding and feeding of our domesticated animals is also indispensable. No man can afford to underestimate the value of the same. They are, however, ever, but the means to an end. The success of the sculpturist and the painter is guided solely by the height of his ideal and the nearness to which he approaches the same. Just so with the breeder of live stock, his success will be determined largely by his standard of excellence and the nearness to which he approaches the same in his breeding herd.

The ultimate end of the hog is the block. Thus the perfect or ideal hog is the one which most nearly meets the demands of the consumer. The butcher's preference is almost solely controlled by the demands of the market. All markets do not demand the same kind of hogs. In some the bacon hog, so named because of its long deep side, is preferred; while in others the fat or lard hog is the most popular, especially where the demand is for hams, broad loins and fat backs. Thus in forming an opinion as to the best type of swine to breed, it is well to keep the requirements of these two markets in mind. They have established for us two very distinct market classes of hogs, the fat hog and the bacon hog.

THE FAT HOG.

For the present we will confine our attention to the leading features of the fat hog, as the bacon hog will be taken up more fully later on. The fat hog of to-day is undergoing a change of form. The chubby broad-backed hog, once so popular, is losing prestige. More length of body and depth of side are being demanded of him. The wise breeder will weigh these two points carefully when selecting new stock.

As previously stated the butchers' preference should be adhered to very closely. The profits in the production of hogs largely lies in successfully catering to the butcher. There are some other points, however, which must be considered in this connection. The evidences of constitution and vigor are points on which the butcher can not realize profit. To the feeder and breeder, however, they are of the utmost importance. No man can afford to underestimate the value of constitution and vigor in the hog. They are the best specimens as yet discovered to ward off the ravages of hog cholera.

In the judging of any class of live stock, system is indispensable. Thus in studying the form of the fat hog it is of vital importance that a logical method be employed. The more important points should be given most attention, thus might well come in for first consideration.

Following the order of the score card used for student work they might be discussed as follows:

FORM.

Under form we include the top and lower lines, the width, depth, length, and lowness to the ground. The hogs that make the greatest gain at an early age and meet the demands of the butcher best are lowest, deep, and wide. They are compactly built, deep chested, medium length of body, well sprung in the ribs, possess straight top and bottom lines, and stand squarely on short, straight, strong legs. The weight of the hog might also be considered in this connection. This is a variable point. It changes from time to time depending on the demand for lard and so on. When lard is low in price the 200-lb. hog may be in favor, while in a short period of time the 400-lb. hog will be topping the market. Generally speaking, however, the hog weighing from 250 to 325 pounds will be found the most profitable to handle. Up to this weight gains can be made more economically than at heavier weights, a point which every feeder must consider.

QUALITY AND CONDITION.

Quality is indicated by the hair, bone, and nature of flesh. The hair should be fine, straight, thick, and lie close to the body. Coarse, wiry, swirly hair is not desired, as it is usually associated with coarseness of frame and undesirable feeding qualities. The bone should be medium fine; enough bone to carry the body is all that is desired. Coarseness of bone is discriminated against by the butchers; it is an indication of a tendency to dress out a large percentage of offal. The flesh should be free from lumps or wrinkles, both of which are very undesirable. The indications of good condition are a deep even covering of firm flesh, especialy over the back loin, hams, and sides, as they are the regions where the valuable cuts are found.

HEAD.

A short, broad head, especially wide between the eyes and the ears, is usually associated with width and compactness of body throughout, and is an indication of an aptitude to fatten readily. A snout of medium length is desirable.

EYES.

The eyes should be clear, large, wide apart, and free from wrinkles or folds of fat which often causes blindness.

EARS.

A small, fine ear indicates refinement throughout, thus is desirable. The carriage of the ear will depend upon the parentage of the hog, being erect in the Berkshire, half drooping in the Poland-China and almost wholly drooping in the Duroc Jersey and most of the large white hogs.

JOWL.

A broad, neat, smooth, firm jowl is desirable. Flabbiness of jowl due to an excess of fat in this region is very objectionable.

NECK.

The neck should be short, thick, and deep. It should blend smoothly into the shoulder vein and shoulder without any depression.

SHOULDER AND SHOULDER VEIN.

The shoulder vein is that portion just in front of the shoulder where the neck joins the shoulder. Fullness in this part is very desirable, as it usually results in a smoothly covered, wide shoulder. The shoulder should be broad, deep, and compact on top. Prominent shoulder blades and a slackness between the same are very objectionable.

FRONT LEGS AND FEET.

The legs should be short, straight, strong and squarely placed under the

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The safest, Best BLISTER ever used. Takes the place of all linaments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. *Impossible to produce scar or blemish* Every bottle sold is warranted to give satisfaction Price $1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars.
THE LAWRENCE-WILLIAMS CO., Cleveland, O.

WORK THE HORSE IF NECESSARY
**BALMOLINE**
NATURE'S WONDERFUL HEALING SALVE.

CURES SORE SHOULDERS, COLLAR GALLS, SCRATCHES, CRACKED HEELS, SITFASTS, CHAFES, ROPE BURNS, WIRE CUTS, SORE TEATS, OLD STANDING SORES AND ALL FLESH WOUNDS ON MAN OR BEAST
PREVENTS FLIES, MAGGOTS, SCREW WORMS AND PROUD FLESH.—ALL DEALERS
25 and 50 Cents
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D. H. DeHUY, PH. C., STATION A, DENVER, COLORADO.
ENDORSED BY HORSEMEN EVERYWHERE

Sunny Slope Farm.
Emporia, Kans., July 19, 1900.
Dr. B. H. DeHuy, Denver, Colo.
My Dear Sir:—I have used two boxes of your Balmoline on my horses for sore shoulders and sore necks and must say that I find it a very satisfactory remedy. It has healed them faster than any remedy I have ever used. At the same time we were working our horses all the time. Yours truly,
C. A. STANNARD.

The Original Hog Dip.
**MOORE'S HOG-REMEDY**
MOORE'S DIPPING TANK
**Used on Outside and Inside of Hogs**
Kills lice and fever germs, removes worms, cures mange, canker and cough; aids digestion, promotes healthy growth, and
**Prevents Disease, at Small Cost.**
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**LUMP JAW**
Easily and thoroughly cured. New, common-sense method, not expensive. No cure, no pay. FREE. A practical, illustrated treatise on the absolute cure of Lump Jaw, free if you ask for Pamphlet No. 246. Fleming Bros., chemists, Union Stock Yards, Chicago, Ill.

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A positive and thorough cure easily accomplished. Latest scientific treatment, inexpensive and harmless. NO CURE, NO PAY. Our method fully explained on receipt of postal.
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The greatest and most successful Institute for Diseases of Men. Consultation free at office or by letter. BOOK printed in English, German and Swedish, Explaining Health and Happiness sent sealed in plain envelope for four cents in stamps. All letters answered in plain envelope. Varicocele cured in five days. Call or address
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body. The pasterns must be short, straight, strong and the hog should stand well up on his toes. Many hogs are "knock-kneed," that is, the knees come too close together. This is very objectionable in any class of hogs, but more especialy in young animals as it gets worse with age. Too much stress can not be laid upon the set and strength of the legs.

CHEST.

This is a point which the butcher pays little or no attention to, but it is of vital importance to the breeder. Width and depth of chest give stamina and constitution to the hog. The floor of the chest should be wide and close to the ground. There should be no falling away in the lower part giving a "tacked in" appearance in the fore flank.

SIDES.

The sides should be deep, long, evenly fleshed, carry width well down and free from wrinkles. In many instances the hog with a broad back due to a well sprung rib is sadly deficient in depth of body and width of same in the lower parts. In other words too many wide backed hogs are wedge shaped from above downwards. It is not only desirable to have a broad back. It should be associated with good length of rib, giving a deep side with as much width at the bottom as there is on top. Length of side is also very desirable even in the fat hog on account of the increasing demand for lean meat. Any indication of wrinkles or creases in the flesh behind the shoulder or any place along the side is very objectionable.. They denote uneven fattening and flesh of poor quality. The sides of a good fat hog are even with a line from his shoulder to his ham. There should be no depression between the same. Some hogs show a depression due to an abnormal development of shoulder or ham.

BACK.

The back should be straight, broad and evenly covered with flesh. Viewing the hog from the side the back should be straight in aged animals and slightly arched in all young stock. With advanced age the back is almost sure to settle, thus the straight-backed young animal usually develops into a sway-backed aged animal. Width of back is very essential. Many hogs are so sharp in the back that they are designated as "sun fished." When fat they should possess an even covering of firm thick flesh.

LOIN.

The loin should be wide and evenly covered with firm thick flesh.

HIND FLANK.

The hind flank should be deep and on a line with the belly. A well let down hind flank is usualy associated with a well developed ham. A full and pendant hind flank is an indication of readiness for market.

HIPS.

The hips should be wide apart, low, and smoothly covered with flesh.

RUMP.

The rump should be long, smooth, and carrying width well back to tail head. There should be but very little depression or faling off from the hip joints to the tail head. Most hogs are inclined to drop off some, but straightness in this region is desirable. In the eyes of many people, a drooping rump in a hog is not considered to be objectionable. This must be due to the fact that they are more accustomed to seeing hogs of that formation than those straight or nearly so. More width of rump is found where the animal approaches straightness than is usually found in the animal possessing drooping quarters. The length of quarter to a certain extent seems to be governed by the same rule. Another very common objection, in fact one of the most serious faults to be found in the hog is crooked hind legs and sprawly pasterns. The careful observer of animal form will soon notice that crooked hocks are nearly associated with drooping rump. Seldom, if ever, is the crooked hock found in the animal possessing a straight rump. Recognizing these points is it not advisable for us to pay more attention to the breeding of hogs with straight rumps?

HAMS.

In viewing the ham from the side it should possess much width, or be long in the quarter. From behind it should be wide, plump, and well carried down to the hocks. A great many hogs having good width of ham are very deficient in the way it is carried down to the hocks. This is an important point.

HIND LEGS AND FEET.

The hind legs should be well set, straight, short, and thoroughly supported below the hocks. Too much stress can not be laid on the conformation of the hind legs and feet. Here is one of the very weakest points in our fat hog. Many hogs have excellent form but poor feet and legs, thus are compelled to go go begging on the market as cripples. The legs should be short, pasterns short and strong, and the hog should walk on his toes not on his dew-claws.

The above remarks are descriptive of a fat hog without any reference whatever to breed. A hog is good of his breed first as he approaches the above description and secondly as he aproaches the color markings, formation of head, ear, etc., peculiar to the breed to which he belongs. Each association has adopted a scale of points giving in detail the characteristics and peculiarities of its breed. The same can be had by applying to the secretary of any of the associations, therefore are omitted on this ocasion. In selecting swine for breeding purposes in addition to the requisites demanded by the market and the characteristics of the breed, the question of such characteristics must be duly considered. The boar for instance must show marked evidence of masculinity. These are more noticeable in the head, neck and shoulders than in the other parts of the body. The head may be inclined to coarseness, the neck full, somewhat arched and in the case of mature animals a well developed shield is usually seen. The forequarters are usually slightly heavier than the hind quarters. The sow should not show any indications of masculinity as indicated by coarseness of head, neck or shoulders. She should be rather long in the body to insure good breeding qualities.

## Gossip About Stock.

The statistician of the Agricultural Department at Washington has been notified by the director general for statistics of British India, that the Indian wheat crop is 11 per cent less than that of 1901, and is eight per cent less than the average for the past ten years. The reported yield for this year is 224,335,328 bushels, or 28,251,440 bushels less than it was last year.

It is an agreeable surprise to visit the breeding establishment of Mr. C. B. Scott, Carbondale, Kans., and see pigs sired by the great herd boar Kansas Chief, turning rape, blue-grass, apples, shorts, skim-milk, and a variety of feeds into bone and muscle. The little fellows are not fat but are developing into hogs with strong constitutions and great capacity. They have the run of a large field, hence they should develop into wonderful breeders.

Harry E. Lunt, proprietor of Shady Lane Stock Farm, claims the date of November 14, 1902, for his next public sale of Poland-China hogs. Mr. Lunt reports them doing nicely, and his show herd will soon be in formidable condition for open competition with the world. He expects to make a display of his Poland-Chinas at the leading fairs this fall. On August 14, 1902, he will hold a public sale of Shorthorn cattle and hogs, to make room for young stock .

Arrangements have now been made whereby the inspection of breeding stock in England, which is intended for shipment to America, may be examined and passed by a qualified veterinarian of either that country, Canada or the United States. While this will serve to make matters much simpler and more convenient for both breeders and buyers it may be noted in passing that we are not buying much breeding stock from England at this time. We have the best in the world right here now.

A press dispatch from Wichita says that Frank Rockefeller, the Standard Oil magnate, has ordered his land agent in western Kansas to buy at once as much land surrounding his Belvidere, Kans., ranch as possible. It is understood that Mr. Rockefeller will go into the general cattle buying and shipping business in addition to his fancy breeding. At present he has one of the finest Shorthorn and Hereford cattle ranches in America. It is at Belvidere in the short-grass country and has been well improved.

Reports from the ranges indicate that the grass cattle are coming into market a week or ten days ahead of time, as compared with other years, and that they are coming in considerable numbers. This may result in a temporary depression in the price of cattle and of beef, but with the recent action of the Oklahoma and Texas growers in deciding to hold their stock, and with the bumper corn crop which will soon be available for feeding in Kansas and Oklahoma the chances are that the depression wil be but slight and it may even fail to reach the consumer.

Breeders and intending buyers of Duroc-Jersey swine will be interested in the combination sale to be held at the State fair grounds, Sedalia, Mo., August 22, 1902. See advertisement on page 777. This sale is held during the week of the Missouri State Fair, at which time reduced rates will be in force on all the Missouri railroads for the week. Visitors to the sale will have an opportunity to see the fine stock show as well as to buy stock offered from the leading breeders of that State. Be sure and send for catalogue which is now ready, which will give detailed information about the offering.

McLaughlin Brothers, the great importers and breeders of French Coach and Percheron horses at Columbus, Ohio, and Kansas City, Missouri, write us as follows: "The Minnetonka arrived in New York about noon yesterday. Our horses were unloaded from her and placed in a special train furnished by the Adams Express Co., yesterday afternoon. This train arrived safely in Columbus this afternoon and our horses are all unloaded and safely in our stables. This is an extraordinary lot of horses and we are indeed fortunate to have them all safe at home."

The largest importation of 1902 arrived at ur stables July 22, in perfect health.

Among our Percheron stallions is every first prize winner at the Great Annual Show of France and every first prize winner, except one, at the great show of the "Societie Hippique Percheronne" of France. They won in all eighty prizes at the leading stallion shows of France.

The best Percheron stallions; the best French Coach stallions that leave France come to our stables.

McLaughlin Bros., Columbus, Ohio.

Branches, Emmetsburg, Iowa; Kansas City, Mo.

The large demand for the book, "Piggie's Troubles," has caused another edition to be printed. Much valuable information is contained, giving symptoms and cures for many of the diseases to which the hog is heir, such as cholera, hog-lice, mange, fly and magots, granular eruption, nettlerash, eczema, surfeit, sore tails, thumps, canker, paralysis, rickits, scours, infectious arthritis, worms, abortion, garget, castration, and other things hog owners ought to know. Every reader of this paper may receive a copy free by addressing the Zenner Disinfectant Company, Manufacturers of Zenoleum, 61 Bates St., Detroit, Mich.

Among the Kansas breeders that have reported that they expect to attend the leading stock shows of the State and county fairs are, Harry E. Lunt, Burden, poland-Chinas; J. W. & J. C. Robison, Towanda, Percherons; J. F. Stoddard, Burden, Shorthorns; T. K. Tomson & Son, Dover, Shorthorns; Steele Bros., Belvoir, Herefords. There are many other breeders who have not yet reported who will please do so as we are anxious that Kansas shall lay the foundation this year for a good show of fine stock at the World's Fair in 1904, when Kansas breeders' are expected to get their due share of the $1,000,000 fund of prizes, which are to be awarded at the World's Fair.

The boll-weevil is giving the cotton planters of Texas and Oklahoma considerable trouble. This pest has been under investigation by the entomologists of the Department of Agriculture. Mr. C. L. Marlett, who is a graduate of the Kansas Agricultural College and is the entomologist in charge at Washington, reports that they have now passed the experimental stage and are giving their new remedy for the boll-weevil a thorough test with very satisfactory results. He says that if they do not succeed in entirely eradicating the weevil they will at least succeed in saving a large portion of the cotton infected by it. In pursuit of further information concerning this pest, two experts have been commissioned to go to old Mexico and study the weevil in its native state.

At the International Live Stock Show held in Chicago in December last, the Iowa Experiment Station made an exhibit of thirty-seven useful products derived from the corn plant. Among these were oil and oil cake, which are the by-products from the manufacture of corn into glucose or grape sugar. This oil is used in the manufacture of paints, leather dressing, soap, and also as a rubber substitute. Corn oil cage after the oil is pressed out is valuable as an animal food, and is the basis of certain stock foods. It is stated that the demand for these by-products has grown from 2,646,560 gallons of oil in 1898, when it was first mentioned in the exports, to 4,808,545 gallons in 1901. These exports are sent almost entirely to Europe where Belgium takes about one-half of the oil and France the principal part of the oil cake, which now amounts to about 5,000,000 pounds per year.

Breeders that are looking for bargains will always attend a dispersion sale, for it is there the pick of the "she stuff" can always be purchased. Such an opportunity may soon be offered by Louis Hothan, of Carbondale, Kans. Owing to the size of his combined herd of Shorthorn and Hereford cattle, he has at last decided to close out his entire herd of Shorthorn cattle and devote his attention to the Herefords. At present he has nine head of one and two-year old bulls, and fifty cows from two to ten years of age. These cows have twenty-five calves at side, sired by the grand bull, Royal Bates 123625, the biggest Shorthorn bull in Kansas. Most of the cows are safe in calf to Red Rover, Captain of Mayflower or Royal Bates. Breeders desiring to get their choice of the herd before the cattle are catalogued for sale should write, or better, call and see Mr. Hothan.

On Thursday, August 14, the well known and eminently successful Shorthorn breeder and exhibitor, Mr. George Bothwell of Nettleton, Missouri, will conduct a sale of his favorites at the stock yards at South St. Joseph, Missouri. This sale will consist of fifty-nine females and twelve bulls, all selected with care from the herds of Geo. Bothwell, Nettleton, Mo.; Sam K. Roberts, Pleasant Green, Mo.; Thos. A. Walls, Jameson, Mo.; Geo. Manvile, Dearborn, Mo.; A. D. McKee, Polo, Mo.; H. C. Zimmerman, Polo; D. Cresswell, Braymer, Mo.; E. Upp, Braymer, Mo.; W. H. Trenchard, Carrollton, Mo.; Geo. C. Goodbar, Gallatin, Mo.; J. V. Goodbar, Gallatin, Mo.; Geo. Spiey, Jamesport, Mo.; W. L. Miller, Jamesport, Mo.; and L. C. Lanson, Clarks, Nebraska. The consignment to this sale is a very meritorious one and will offer a grand opportunity for the farmer as well as the professional breeder to buy good cattle at reasonable prices. The name of Geo. Bothwell is sufficient guarantee that the sale will be conducted honestly. See advertisement and write for catalague.

G. K. Smith of Lincoln, Kans., whose advertising card appears on page 789 writes that his cattle are doing well. That the good old mothers of the herd that looked at him with such reproving eyes during the short feed season of last year are now luxuriating in grass up to their knees. The crop of calves by the double standard Poled Durham herd bull Nip are proving all that was expected of them. Nip is by Guynne King and he by Sharon King. He is out of Goodhope Girl and is strong in Polled blood. Mr. Smith now has for sale a number of young Shorthorn bulls and has decided to offer his yearling Polled Durham bull by Milo out of Lincona, for sale. He is of a low, blocky type, so much sought for by breeders and is "all bull." He is old enough for light service this fall and will be a snap for the one who gets him. Mr. Smith reports corn in an excellent condition with a great abundance of forage in sight for the fall. Write to Mr. Smith about these Polled Durhams and feel sure you are getting something good.

Geo. E. Rickers Riverside Hereford ranch has won the credit of doing a good lot of missionary work among the farmers and breeders of the North and West by holding a series of Hereford sales at various points. While these sales were not satisfactory from a money point of view, they have undoubtedly served a missionary purpose in a distribution of good seed which will result in ample returns not only to their herd but to the breed generally in future years. he summary of these sales is as follows:

Summary at Watertown, S. D.

| | | | |
|---|---|---|---|
| 11 | bulls brought.... | $875; | average... 79 54 |
| 20 | cows brought.... | $1,765; | average... 88 25 |
| 31 | head brought.... | $2,640; | average... $85 18 |

Summary at Pipestone, Minn.

| | | | |
|---|---|---|---|
| 20 | heifers brought... | $2,150; | average... $107 50 |
| 15 | bulls brought..... | 1,310; | average... 87 33 |
| 35 | head brought..... | $3,460; | average... 98 86 |

Summary at Yankton, S. D.

| | | | |
|---|---|---|---|
| 14 | heifers brought.. | $1,385; | average... $98 93 |
| 20 | bulls brought..... | 1,870; | average... 93 50 |
| 24 | head brought.... | $3,255; | average... $95 73 |

During the heavy rains of the present season there have been some reports of the destruction of corn and other crops caused by the overflow of ponds and rivers. This suggests that some provision should be made for using this land instead of letting it grow up to weeds, which may require years to eradicate. We think it wise to put this flooded land into some kind of a crop, even if no great results be obtained from it other than the preven-


# DECEMBER THIRD

## A Date that Will Never be Forgotten by One Woman.

"I will never forget the third day of December, 1897, as long as I live," said Mrs. H. A. Fletcher, of No. 232 West Hancock Street, Manchester, N. H., to a reporter recently.

"For on that day," she continued, "I received a shock of an apopleptic character. It was so severe that the sight of my right eye was affected, causing me to see objects double. I was confined to my bed about four weeks, at one time being told by the doctor that I could not get well. When I could leave my bed I was in such a nervous state that I could not sleep at night. I would get up and sit on a chair until completely tired out and then go back to bed and sleep from exhaustion."

"Nothing seemed to help you?" ventured the reporter.

"Nothing that the doctor gave me did much good," replied she. "After being under his care for six weeks and not seeing any improvement, I gave up hope until my sister, Mrs. Loveland, of Everett, persuaded me to try Dr. Williams' Pink Pills for Pale People. I began taking them with the result that I experienced relief the second day. The first night after taking the pills I lay awake only a short time and the second night I rested well. From that time I slept every night and soon got well and strong.

"My niece has taken these pills for weak nerves and poor blood and found them very beneficial."

In order that there could be not doubt as to the genuineness of her statement Mrs. Fletcher made affidavit to it before William W. Forbes, a notary public, at Manchester on July 25, 1901.

Dr. Williams' Pink Pills for Pale People will not only effect a cure in cases similar to the one above but, acting directly on the blood and nerves, are an unfailing specific for such diseases as partial paralysis, St. Vitus' dance, sciatica, neuralgia, nervous headache, after-effects of the grip, palpitation of the heart, pale and sallow complexions, and all forms of weakness either male or female. Dr. Williams' Pink Pills for Pale people are sold by all dealers, or will be sent post paid on receipt of price, 50 cents a box, or six boxes for $2.50, by addressing Dr. Williams Medicine Company, Schenectady, N. Y.

**PILES** NO MONEY TILL CURED. 25 YEARS ESTABLISHED. We send FREE and postpaid a 200 page treatise on Piles, Fistula and Diseases of the Rectum; also 100 page illus. treatise on Diseases of Women. Of the thousands cured by our mild method, none paid a cent till cured—we furnish their names on application. DRS. THORNTON & MINOR, 1007 Oak St., Kansas City, Mo.

tion of a growth of weeds. It is suggested that one of the best crops to use for flooded land is Hungarian. The natural home of this crop is on moist ground and the condition of the river bottoms which have been overflowed will be such as to furnish it the best pabulum for early and satisfactory growth. If the ground is put in proper condition as early as possible and then broadcasted with Hungarian this plan ought to bring at least two cuttings before frost. There is no crop known to Western agriculture that will produce as many cuttings as Hungarian, except alfalfa. Hungarian should be cut before it goes to seed and the farmer who adopts the above recommendation will have the advantage of the crops as well as the complete eradication of weeds from his otherwise useless land.

Sometime ago the Kansas Farmer called attention to the fact that unscrupulous men were constantly springing into prominence as the inventors or manufacturers of some remedy which is guaranteed to cure or prevent diseases among live stock or the ravages of insect pests reported as the result of the investigations of experiment stations. Indeed, no sooner does an experiment station report a new insect pest or renewed ravages on the part of old ones, or the spread of any animal disease, than some faker springs up with a remedy which is guaranteed to cure. The latest thing of this kind that has come to our notice grew out of the fact that Texas fever ticks had been reported among the cattle of Oklahoma by State Veterinarian John Field. Immediately there sprang up a gang of men who traveled through the infected country in the vicinity of Waterloo and Cleveland pretending to vaccinate cattle against the Texas fever. As there is no known method by which cattle can be rendered immune from Texas fever by vaccination, these men are simply bare-faced frauds, who receive twenty-five cents per head for their so-called vaccinations. Active steps are being taken by the authorities to prevent a continuance of this practice and farmers would do well to be on the lookout for such sharpers in the future.

One of the most notable ideal stock-breeding farms in the West is that of Bill Brook, the thirteen hundred acre farm owned by H. O. Tudor, Holton, Kansas. Nature evidently was kind in the matter of rich fertile soil, abundant springs, besides the Elk Creek on the north and Bill Creek to the south. Nature evidently intended this place for the breeding and rearing of improved stock. The progress made by Mr. Tudor since he has taken charge of this place is splendid in every particular. This year there is an abundance of everything that a highly bred and valuable animal could require. Varied and abundant pastures and field crops, cool, clear water convenient everywhere, and luxuriant shade in every pasture. During the past two years all breeding animals that did not meet the standard Tudor type have been eliminated from the herd. As a consequence the large and attractive array of youngsters will make the visiting buyers more anxious to pay much more remunerative figures than Mr. Tudor has been receiving. In order to do a business, Mr. Tudor has always sold at very reasonable figures, consequently Bill Brook Shorthorns have been in lively demand and purchasers were invariably satisfied. Just at present the sale stock which will be sold at reasonable figures consists of a dozen thrifty bulls of serviceable age. Intending purchasers who wish to get full value for their money should write Mr. Tudor at once.

Last week we had occasion to call attention to the vividly colored lithographed posters, that are so generally used by State Fair Asociations to advertise these important events. We now feel that if the fake side shows, which are made so important a feature of some of them, could be eliminated, or at least suppressed into decency, these fairs would have attained the dignity, in part at least, which belongs to them of right as the representative expression of the prosperity of the principal industry of the agricultural States. We do not know whether it is imposible to eliminate these side shows, but we do know that it is possible to admit only decent ones and we know that the admission of a side show of any kind to the ground is a confession on the part of the management that something is lacking in the fair itself and that the side show is admitted to fill the gap. Very many of these side shows are the worst kind of fakes which would not be tolerated anywhere else and can serve but to demoralize those who attend them. They serve to attract only the tougher classes and those who lean that way, while their influence is a repellant one to all self-respecting citizens. It can not argue well for the future of any State fair the management of which feels obliged to admit shows of such questionable character that the visitors all leave with the feeling that they have been made the victims of a fake. The fair should be purely educational and if it is not it has no excuse for existence.

"There arrived in our stables in Columbus on July 22, not only the largest importation of French horses of the year, but the best lot of horses that were ever brought to America," says a recent letter from McLaughlin Bros., of Columbus, Ohio, and Kansas City, "and as proof of this assertion we have only to refer to the fact that at the two greatest shows in France in 1902—the great annual show or France and that of the 'Societe Hippique Percheronne'—horses purchased by us a long time previous to these shows, were awarded every first prize with a single exception. In all our horses have won over eighty prizes this year in France. At the great show of the "Societe Hippique Percheronne' at Mortagne, in July, 1902, it was the collection of stallions purchased by us from Mr. Edmund Perriot that won the grand 'Prix-ensemble.' Among our horses we have a large number of individual prize-winners; but to win the prize of having the best group of horses at the leading Percheron Horse Show of France is a reflected credit on every horse that we had on exhibition there and imported to this country. The French government officials who viewed all the prize-winners on the last day of this greatest of all stallion shows in France sent for the writer of this letter and presented him to all of the state dignitaries who were viewing the parade of prize horses, complimenting him upon the fact that he had purchased all of the best stallions in France. It has been our policy as long as we have been engaged in this business to bring to this country the best horses that we could possibly procure, but never have we had so much evidence that ours are the best, as we have for this importation that has just arrived at our stables."

In view of the constantly growing demand for Duroc-Jersey swine, it is with pleasure that we note the announcement of a combination sale of hogs of this breed to be held during the state fair at Sedalia, Missouri, on August 22 next. This sale will be made up of drafts from the Maple Hill herd of Harry Sneed, Smithton, Mo., and the Pettis County herd of McFarland Bros., Beeman, Mo. A recent visit to the herds of these breeders shows some good things. Harry Sneed was the winner of a large number of the prizes at the state fair last year with his brilliant 9265 and My Jewel 17500 and their get. My Jewel's 1901 litter took seven first premiums out of seven contests entered. Mr. Sneed was fortunate in being able to capture eight out of the nine prizes contested for at last state fair. His type of hog is notable for its great depth of body, large ham and good bone and feet, and their wonderful uniformity in color and suit of hair. With this type he has become acustomed to capturing all of the prizes and championships where his swine are shown. The other prize winners and those which stood closest to the head of the list of the exhibitors of Duroc-Jersey hogs at the Missouri State Fair, were the McFarland Bros. of Beeman, Missouri. They have at the head of their herd the champion aged boar of Missouri, Ingomar 7897 A, who is a direct descendant from the great show herd of S. E. Morton of Ohio. They will have eight of his get in their show herd this fall and an inspection is all that is needed to show the quality of their animals. There will be fifty of more of these choice Duroc-Jerseys selected from the two herds for the combination sale, and we desire to say to breeders who would add to their pleasure as well as their information that they should keep their eye on this bunch of red hogs and be ready to pick up some of them when the sale opens. The contributors to this sale are all gentlemen of the highest standing and any statement they may make in regard to their hogs may be depended upon absolutely.

### Publishers' Paragraphs.

We have received a copy of the Proceedings of the Northwest Woolgrowers' Association, held in Helena, Mont., last February. The publication contains a number of interesting and valuable papers on sheep-growing and grains and grasses in the Northwest. A copy will be sent free to any one sending their address to Charles D. Greenfield, Helena, Mont.

The Special Want Column in the Kansas Farmer always contains a number of newsy and important bargains. Among those published this week is a chance to secure a scholarship in one of the best high grade ladies' colleges in the country in exchange for a pair of driving horses. This institution is an old one and bears a splendid reputation.

Ex-Secretary of State Wm. Higgins has for a number of years been located near or in the Indian Territory, and has secured the exclusive sale of 6,000 acres of the inherited Indian lands, some of which contains very valuable timber and all of the various tracts are first-class farming land, some of which is already in cultivation. This land consists of 80, 160, and 200 acre tracts and is convenient to railroads. This is undoubtedly the best bargain in agricultural lands anywhere in the Southwest.

The special round trip excursion tickets announced from Chicago to New York City, Atlantic City and other New Jersey Sea Coast resorts on July 31st, August 7th and 14th, 1902, via the New York, Chicago & St. Louis Railroad Co., under the headings of "$18.00 to New York City and Atlantic City and Return," and "New York and Atlantic City at $18.00 For the Round Trip," by the Nickel Plate Road, July 17th and 31st and August 7th and 14th, with return limits of 12 days, is hereby withdrawn and the rates abrogated.

Elkton, S. D., March 7th, 1902.
Dr. B. J. Kendall Co., Enosburg Falls, Vt.
Gentlemen: Please send me a copy of your "Treatise on the Horse and his Diseases." My father cured two spavins, one on each of his horses, and used only three bottles of Kendall's Spavin Cure. I know just what your remedy is. Two of my neighbors used the Spavin Cure for curb and they have cured them completely. The legs are left in good clean shape and there is no sign of any spavin or curb. I am using one of the horses on my farm today and you could not tell that he ever had a spavin.
Very truly yours,
GEORGE SEARS.

How much a title still counts for in this democratic country may be guessed at from the increased demand for Conan Doyle's latest novel, "The Hound of the Baskerville's," since the author was knighted. The public libraries in New York report the novel at the top of the list in the number of demands. This would not in itself prove that any interest in the author's new title had influence in the matter, but the fact seems conclusive when it is known that about half of those inquiring about the novel asked for "the new book by Sir Arthur Conan Doyle." "The Hound of the Baskerville's," was shown on the general list of reports from booksellers in all parts of the country to be the best selling book last month. Since the revival of Sherlock Holmes, his creator has had many letters demanding further exploits and suggesting the nature of them. Several of the cases suggested are actual murder mysteries of past years which still remain unsolved. Some of Dr. Doyle's correspondents (presumably of the gentler sex) call loudly for a love story of which Sherlock Holmes shall be the hero. It is said, however, that the distinguished author thoroughly distrusts his ability to handle love interest, and prefers to deal with models of a different kind.

Perhaps no series of grain drills has won its way to popular favor so rapidly as the Indiana. Certainly no series has held its own against competition as has this one. They are now manufactured in disk, hoe, and shoe pattern, with a press wheel attachment and a combined rim and fluted feed. This feed, without any change of gear, will sow one-half bushel of flax or four bushels of Texas oats to the acre, without bunching the grain. No other feed on the market can do what this combined rim and fluted feed will do. These drills are fitted with two levers which entirely prevents the lower half of the disks running deeper than the upper half on a side hill. One motion of the lever takes the pressure from the lower half and places it on the upper half of the disks and thus insures an even depth of sowing such as no other drill affords. These drills are made in all sizes from eight to twenty-two disks and are all fitted with the combined fluted and rim feed and may be fitted with the press wheel attachment. For ease of manipulation, eveness of sowing and general satisfaction to the user, no series of drills has yet equalled the Indiana. If your dealer does not carry them write to Bradley, Alderson & Co., Station A, Kansas City, who will tell you where to obtain them.


# COMBINATION SALE
OF
## 71--HIGH-CLASS SHORTHORN CATTLE--71
**12 BULLS AND 59 FEMALES.**

**At St. Joseph Stock Yards, South St. Joseph, Mo.,**

## Thursday, August 14th, 1902.

**Sale Commences at 1 O'clock.**

**CONTRIBUTORS.**

Thos. A. Walls.....Jameson, Mo.
Geo. Manville.....Dearborn, Mo.
W. D. McKee.....Polo, Mo.
H. C. Zimmerman.....Polo, Mo.
D. Cresswell.....Braymer, Mo.
W. H. Trenchard.....Carrollton, Mo.
Geo. C. Goodbar.....Gallatin, Mo.
J. V. Goodbar.....Gallatin, Mo.
Geo. Spivey.....Jamesport, Mo.
W. L. Miller.....Jamesport, Mo.
Sam W. Roberts...Pleasant Green, Mo.
E. Upp.....Braymer, Mo.
L. C. Lawson.....Clarks, Neb.
Geo. Bothwell.....Nettleton, Mo.

**There will be representative cattle from each herd.**

**Those wanting good Shorthorns can not afford to miss this sale.**

**For catalogues address**

Col. H. W. Graham,
Col. R. M. Barclay,
Col. T. C. Callahan,
Auctioneers.

**Geo. Bothwell, Mgr.**
**Nettleton, Mo.**



## COMBINATION SALE OF
# DUROC-JERSEY HOGS

**To be held at the State Fair Grounds,**

**SEDALIA, MISSOURI, AUGUST 22, 1902.**

**(At time of the State Fair)**

The offering includes 51 head of grandly bred Duroc-Jersey hogs from the Maple Hill Herd owned by Harry Sneed, Smithton, Mo., and the Pettis County Herd owned by McFarland Bros., Beaman, Mo. Sale begins at 9.30 a. m. sharp. Col. J. W. Sparks, Marshall, Mo., Auctioneer.

All Missouri railroads make reduced rates for the State Fair August 18-23. For catalogue address either of the owners. Bids by mail may be sent to Col. Sparks.



# WICHITA AND SOUTHWESTERN
## EXPOSITION AND LIVE STOCK SALES.

This great event will take place in Wichita, Kansas, September 22 to 27 inclusive, and will be hailed with satisfaction by all stockmen. Our great Live Stock Show and Sales last February surpassed everything of the kind held up to that time, making the second best record in the United States in twelve years. Breeders of live stock realized more than invoice prices and disposed of all stock brought here for sale.

As headquarters for stockmen, Wichita leads. Terms and accommodations unsurpassed. Liberal premiums on all exhibits. $5,000 purses offered for speed ring. Leading stockmen from all over Kansas, Oklahoma, Indian Territory, and Texas will be present.

If you have fine stock to show or sell, bring it to Wichita.

**L. K. RESING, Secretary.**

# The Young Folks.

**Conducted by Ruth Cowgill.**

### A MYTH (?.

(Written for the Kansas Farmer.)

In the land of Thor and Odin
Where the great sun is bewitched
Gazing at the shores and headlands;
Awe-inspired by their grandeur
Swings for days within the heavens,
Seeks no rest within the night shades
Till the dreamer drunk with seeing
Says that earth and heaven
Merge there in that mystic splendor.

In this land, a skald of old time
Rhymed a song, half fact, half fancy,
But his manhood, fearing weakness,
Hid the rhyme within his heart's home;
Turned the bolt and key upon it;
Never looked upon the treasure;
Sang instead of war and sea-kings,
Of the deeds of ancient Vikings
Who should pass to fair Valhalla
By the Rainbow Bridge of Promise,
Guided by the weird Valkyrie.

But a sea-sprite, whirling, dancing,
In the maze of Njedegorges,
Mid the waves and dancing sea-plumes,
Turned the magic key of Memory,
Slid the mighty bolt of Thinking,
Say but once the rhyme unspoken;
But the skald still thinking weakness,
Hid within its simple rhythm,
Never gave it to the hearing,
Died and never gave it utterance,
Never knew the sprite had seen it
Nor how in the arctic midnight,
It was told unto the berg-folk,
Nor how then through countless ages
In the quiet of the thought time
When the mind is rich with heart soil
When such seed will grow and blossom,
They had whispered it to mortals
Till to-day no one with memory
Can but find within it somewhere
Traces of its subtle witchery.
Sometimes dim and bleached white,
Sometimes dwarfed and grown misshapen,
But always with the thread of power,
That the old skald thought was weakness
Woven like a gold band in it.

I, too, have within me, memory
Of this quaint and simple legend:
'Twas of lovers, youth and maiden—
On a bleak night in midwinter
When the snow-king, wild with fury
Shook his feathery shield about them
Till the whole land shivering
Lay a sheet of frozen ice-floes
Each to each they told the story
Of their love and adoration.
But of the gods were they—
And by gods protected,
And great Friga watching
Saw the change within the heart land;
At the troth kiss of the lovers
Stooped she too and kissed the ice-floe
Till it smiled with bud and blossom
Sweetly swept away the storm-clouds
Till the sky shown blue and brilliant.
Sparkling brooks sprang down the crag-heads
Joying in their wealth of motion,
In their freedom from ice fetters
While sweet song-birds gayly singing
Kept time to their merry passing.
Then the ice-bound hut flew open—
In a new world walked the lover.

Gone are all the old Norse pagans
With their fears of Great Thor's hammer
Or the weir Woll of the Nastrond
Northern lights still flash their beacons
In the Dead Arch in the heavens
Sometimes too is heard the shrill call
As of trumpets from the ocean,
Which in old days staunch believers
Thought the dread but lovely maiden
The fair guardian from Valhalla,
Always feared but still loved Valkyrie.
Sounded ever when she journeyed
Down to earth to warn some traveler
That his pilgrimage was ended
And the Rainbow Bridge of Promise
Was made ready for his passing.

Gone are hut and trackless ice-floes
God protectd youth and maiden
While the water-elves and berg-folk
Only dwell and myth and legend
No more is the dancing Njedegorges
Or the peaks where storm clouds gather,
All are gone and yet methinks me
That the goddess Friga lingers
And among the gods' descendants
Ever faithful keeps her vigils.

—Elizabeth Driese.

### Miss Lindy's Mistake.

Miss Lindy sat in the parlor on the stiff horse-hair sofa, getting up now and then to peer anxiously out of the window, and then returning to her seat with a slightly worried expression. She was dressed in her best blue lawn, and she had done her hair in a girlish knot with a white rose coquettishly smiling above it She was leaving her glasses at home, for she said to herself with a blush at her giddiness that when your beau is thirty you do not want to look forty.

She went to the door that led to the kitchen.

"Ma," she said, "we'd better be sitting on the front steps. It would look more informal and I could introduce him with more ease. I'll see him when he comes up the walk and just step out and meet him."

"Law! Lindy, you didn't used to get so nervous about your beau." Her mother came out in her crisp clean calico dress and sat down upon the steps.

"Lindy you better wear your glasses like I told you or you'll be making some mistake. If you shouldn't happen to speak to Mrs. Blair or Kate Grimstock, they'd say you was stuck up about having a beau.

"Oh, I am not so blind I don't know my friends, if I am nearsighted,—oh me, there he comes. He's very bashful so you must do your best to make him comfortable."

"How do you do," she said to the man who approached. "Mr. Ramsey, this is my mother" and as an old man came out, "this is my father. What a lovely evening it is. I hope we will have a good time. All the young people are going. They are making great calculations for a fine time—perhaps we'd better start now, for it's rather late," she continued, giving him no chance to say anything in her anxiety to make him feel at ease.

The young man looked quite dazed. He opened his mouth and made a gesture which she took for an offer to carry her wrap, which she therefore graciously bestowed upon him. "Thank you" she said resuming her voluble chatter. "It is a nuisance. What a glorious night for a walk! I almost wish I had not asked the hired man to hitch up for it is not far."

As they reached the garden gate, a handsome, gentlemanly-looking man was discovered on the point of opening it, while the hired man stood outside holding the horse.

Everyone except Miss Lindy's beau looked astonished. He grinned from ear to ear.

"Pardon me Miss Lindy, it seems I have made a mistake," said the gentleman at the gate. "I thought it was tonight I had an engagement with you."

The hired man put his hand over his mouth and choked with ill-suppressed laughter. Miss Lindy blushed crimson and finding an explanation impossible turned and fled toward the house.

"Be you Mr. Ramsey?" asked Miss Lindy's supposed beau of the gentleman.

"That is my name" coldly answered the puzzled gentleman, an irritated frown gathering more and more darkly on his brow.

"Haw haw! haw haw!!" burst forth the irrepressible laughter of the hired man and the other.

"You don't look much like Les to me, but Miss Lindy is that near-sighted! Gosh, won't she feel awful when she realizes she almost ran off with Blair's hired man." And again that irrepressible "haw haw" rang out through the garden.

A smile of comprehension spread over the face of the stranger and he started briskly up the walk toward the house.

"I beg pardon," he said, appearing before Lindy's mother at the step, "Can I see Miss Lindy?"

"Why Lindy's gone to the party, I reckon. Funny you didn't see her when you came in."

The man did not wait to deny or explain; but quickly conjecturing that since she had not come to the house she must be in the garden, instituted a search, which must have resulted successfully, for an hour later they appeared at the party together looking quite radiently happy. Next morning Miss Lindy told her mother she had had a lovely time, but that next time she believed she would wear her glasses.

### A Plea for the Cottonwood Trees.

When the early settlers came to the treeless sun-scorched plains, they planted the quick-growing cottonwood around their hot, unshaded dugouts and shanties, and in a few years behold, the desert was a houseland.

Now that the slower-growing elm, box elder, and pine, are come in their staid and stupid respectability, this ungrateful people is ready to forget the service of their old-time friends and banish them. They dislike the snowy showers of cotton and the dropping of the faithful leaves which have sheltered them.

"Blow, blow, thou winter wind
Thou are not unkind
As man's ungratitude."

A cottonwood is a beautiful tree! If there were not such numbers of them, they would be prized for their beauty. They shimmer and ripple as the sun shines on their myriad glistening leaves. When not a breath of wind is stirring and all other trees stand sullenly silent in the sweltering sun, the cottonwood leaves dance gleefully, undaunted by the sultry heat.

Once upon a time there was a lonely little girl who played on a grassy lawn beneath the kindly shadow of a giant cottonwood and who in the absence of brother, sister or playmates, created a friend, dubbed "Pinns" who dwelt in the lofty tree-tops, and to whom she confided all her childish imaginings.

But one day the child came home from a trip to town, to find her beloved trees felled, to make room for other, and to her father's mind, fairer trees; and she sat down upon one of the huge fallen trunks wept for her lost "Pinns."

Since that day the child has grown to womanhood, yet still in her heart lives a loyal affection for her sturdy old friend, the cottonwood.

As TIME is the stuff Life's made of, take it from an

**Elgin Watch**

the timekeeper of a lifetime—the world's standard pocket timepiece. Sold everywhere; fully guaranteed. Booklet free.

ELGIN NATIONAL WATCH CO.,
ELGIN, ILLINOIS.

## FOR THE LITTLE ONES

### FOOL YOUNGENS.

Me an' Bert an' Minnie-Belle
Knows a joke, an' we won't tell!
No, we don't—'cause we don't know
Why we got to laughin' so;
But we got to laughin so,
We ist kep' a-laughin'.

Wind wuz blowin' in the trees—
An' wuz only ist us three
Playin' there; an' ever' one
Ketched each other, like we done,
Squintin' up there at the sun
Like we wuz laughin'.

Nothin' funny anyway;
But I laughed, an' so did they—
An' we all three laughed, an' nen
Squint' our eyes an' laugh again;
Ner we didn't ist p'ten'—
We wuz shore-'nough laughin'.

We ist laugh' an' laugh',tel Bert
Says he can't quit an' it hurt.
Nen I howl, an' Minnie-Belle
She tear up the grass a spell
An' ist stop her yeers an' yell,
Like she'd die a-laughin'.

Never sich fool youngens yit!
Nothin' funny—not a bit!—
But we laugh' so, tell we whoop'
Purt'-nigh like we have the croup—
All so hoarse we'd wheeze an' whoop
An' ist choke a-laughin'.

—James Whitcomb Riley.

### A Fairy Story With a Moral to It.

"Papa, please tell us a story."

Pretty soon, Madge, I'm talking with mama now."

"When will you tell us a story, papa?"

"Just as soon as we get through talking, unless you begin to tease. You know what will happen if you tease."

"Yes, papa," and the little girl ran away, to be rewarded later by the undisputed possession of one arm of the big rocking-chair and hearing the question which never failed "Well, what shall it be this time?" Then came the inevitable reply "Oh, papa, a fairy story with a moral to it."

So while the wind blew the spring rain hard against the pane, and the fire blazed cheerfully within, papa leaned back in his chair and with an arm around the wee girl began:

"Once upon a time when pigs were swine and turkeys chewed tobacco, and little birds built their nests in old men's beards there lived a little girl named Mary. She was a pretty little girl and a very lucky one for she had a papa and mama to love her and take care of her and a fairy godmother, who not only loved her but was so wise that she could always tell the best thing to do, and so good that she always did it. Now Mary was a very good little girl in a great many ways, but she had one very bad habit. She was very careless about everything she undertook. Her dollies lay undressed upon the floor, her books somehow always lost their covers, and there was water left in the cups and saucers when she washed them for her mama. Her fairy-godmother who saw her only on her birthdays, did not know about these bad habits for a long time because Mary's mother dreaded speaking about her little girl's faults even to the fairy Dolly Doodle; but at last she grew so worried and troubled that she told the fairy all about it. "Oh," cried Dolly Doodle, "So that's the way the wind blows. I'll take Mary with me for a little trip and she'll come back cured of that fault, I'll promise you."

So Mary's mother collected her gloves from the table, her hat from the lawn, and jacket from the playroom floor and dressed Mary to go with the good fairy. "Where are we going, Dolly Doodle? Are you going to take me to fairy land?"

"Not this time dear; but we are going to have a very interesting journey nevertheless. Take my hand now—and puff, we are gone."

So they were, and were now standing with the sea at their feet, and wide stretches of sand all about them, so suddenly that Mary never could remember quite how it all happened.
quite how it all happened.

"Where are we, Dolly Doodle?" she gasped holding tight to the fairy's hand.

"There's a little boy over there, ask him."

Sure enough there was a little boy sitting on the sand and (could it be) actually eating it. Mary ran up to him quite forgetting her first question in her curiosity. "Why little boy what are you eating that sand for?"

"Taste it yourself," said the little fellow sullenly.

"Why it's sugar! How nice!"

"Yes, I suppose it seems so till you have to eat it and eat it every day all day long, then I guess you'll soon get enough of it."

"Why do you have to eat it and who makes you?"

"Dolly Doodle, to be sure," replied he—"because I used to make myself sick eating candy and things, all of us were brought here to cure us of some fault or other. Those little girls over there in the big glass cages used to quarrel all the time when they played together at home and now they can't play with anyone but themselves. My, but it's lonesome! I tell you what, ask Dolly Doodle if I can't take you round and show you some of the sights. I'd like to get away from this sugar business for a while."

"Had pretty near enough sugar for a while have you, Georgie? Well I'm glad of it for I know a mama that wants her little boy back again. I'm glad she's going to have a nice boy this time and not a little pig dressed in jacket and trousers. Go with Mary while I look after things here a bit and then you shall go home again." And away went the good fairy with a dozen thing to attend to.

"Down there" said Georgie as they trudged along, "are the little children who told fibs. Now they can't talk at all because of those rubber things in their mouths. And those are the ones who were unkind to their pets. That little girl crying behind that tree forgot to feed her white mice till one of them died. Now she's pretty hungry herself, I guess. And that boy pulled his dog's ears, and now his own are all pinched up with that clothes pin. I tell you I'm glad I'm going home. We won't go over to that corner, they make too much noise. Those are all the crying babies that cry about nothing at all. They have to stay there until they get all their crying done. The fairy has fixed them so they can't stop crying. And those are just as bad. They're the ones that are always giggling about nothing. Dolly Doodle has made some of them laugh so hard that they can't sit up. Laughing is pretty hard work, I guess when you have to do it all the time. I've laughed so hard it hurt in just a little while."

"What are those children doing all sitting in a row? Is it a game?"

"They were careless with their playthings and now they can't have any."

"Oh" said Mary blushing, "I guess I don't care to see any more here.

Let's find Dolly Doodle and get her to take us home."

A pleasant laugh close by them made them both look up and there was Dolly Doodle looking down at them with the kindest eyes in the world. "I guess both you little folks have had enough of Punishment Land. Now go to your mamas and give them my love." She stooped and kissed them as she spoke and with the kiss each little person was home again good and happy in their mother's arms.

"Now children, that's enough for to-night. Go to bed now like good children and we'll have another story some other night. Good-night."

# The Home Circle

## KANSAS CORN.

(Written for the Kansas Farmer.)

You have sung us the song of biscuits and bread
Made from the field of wheat.
Did you stop in the timing
Of pleasurable rhyming
And ask if the scene was complete?

Think of "off years" when the farmer's boy,
Heart-weary, and tired, and cross,
With work never ending
Every energy bending
Hurries to put in that field before frost.

Winter snow and spring sunshine, soft breeze, warm showers,
Have nurtured the grain to its prime—
Long drouths without number—
But the heat of mid-summer
Saw the field in its full harvest time.

A sea of rich promise. We grant you the picture,
Lightens the harvesters' toil,
And fancy finds leisure
To depict for his pleasure
A few of earth's goods for his spoil.

When binders are paid for, and threshers are gone,
What then of the roseate dream?
Biscuits and honey
For him who's made money,
But not for the planter it seems.

Wheat's a golden haired coquette who allures by her promise
But I like much better her cousin the Corn.
Though he fails us full often
His failure he softens
By not robbing of what he's not borne.

—Elizabeth Dreese.

## Education for the Farmer.

ADDRESS BY HON. JAMES WILSON, SECRETARY OF AGRICULTURE, WASHINGTON, D. C., DELIVERED AT THE UNIVERSITY OF MISSOURI.

The problem of educating the producers of wealth presents itself to the university with much force at the present time. The world is small, after all, and its ends seem to come nearer together as invention and enterprise shorten travel and the cost of it, bringing into active competition in the race of life the workers in the fields of all lands.

What can be done for our producers that they may live on higher levels of comfort and happiness, that they may help the weary hand with a better trained head, and have more time to devote to intellectual, moral and spiritual life, is the previous question upon which the universities and colleges of the great producing States of our country are called upon to decide. I congratulate the State of Missouri that her most progressive educators have made such progress toward a solution of this question, which is now foremost in the minds of so many of our people.

The four-year college course does not begin soon enough nor continue long enough to meet the requirements of our day in this regard. Teachers are wanted in primary and secondary schools, and in post-graduate work in in the university. They are wanted to do work that has not been done in all the ages, the discovery of truth regarding production and its application to the farm.

### EDUCATION OF PROFESSIONAL MEN.

Let us see how our professional men and our best equipped educators are prepared for their life-work. They attend primary, graded, and training schools until they are fitted for college; after the bachelor's degree is wrested from the faculty through much tribulation and some vexation of spirit on both sides, post-graduate work at home or abroad for the future teacher is the common road to be traveled. The professional enters upon special study, longer or shorter, and finally teacher and professional begin practice on people's minds or bodies or souls or teeth or misunderstandings, as the case may be. Our educated men travel this road—nearly all of them; it is a long study from youth to early manhood or womanhood, without intermission—this preparing for professional life-work.

There are self-made men who became strong in certain lines without university training, but rarely in more than one line. The West nurtured many unique characters in its vigorous ways of object-lesson teaching, but western conditions are changing. The prairie grass, the wild flowers, the fierse winds and bad roads, the privations and the neighborliness among the people are going with the grand men and women they inspired; and with them much self-reliance and individuality.

### THE FARMER MUST HAVE THOROUGH PREPARATION.

I would not advise young people to avoid our regular channels of learning and depend upon self-development. They would graduate late in life. The education of the youth who is to work in the fields, grow plants and rear animals, can not be pursued as the profesional prepares for future usefulness. He attends the district school, of which no man should speak lightly. It is one of the institutions, and the best, that distinguish us as a people from all others. It is the people's school, the nurseery of individuality and that indispensable quality we call Americanism. The secondary schools, or upper grades of our high schools, are excellent, and do their work admirably, but they lead to literary or professional studies. Is there a way by which we can enrich primary education with nature studies, so that the farmer's boy and girl may have their vision strengthened to see, on clear days, the Delectable Mountains of an educated farmer's life towering in the distance as high as other elevations?

### THE TEACHERS AND APPLIANCES.

The most useful and valuable educational work in all the world appealing to the university is that of the farmers of the country. Pioneer work along this line is waiting. The organization of faculties to do the work; apparatus, laboratories, text-books, illustrative material from primary to post-graduate and beyond, where studies of special ties must be combined, where research must be broadened and where specialists must be grouped to reach a desired end and meet the pressing demands of producers—all these are waiting. This is the great field of applied science, where the grower seeks the help of the scholar, of the experimenter and observer. The millions of Missouri farmers look to you for help in every direction, and I congratulate your farmers on the promise of help that your progress in these directions holds out to them.

The university generally neglects this opportunity. It has not been popular. I do not place the blame; it has been widespread.

### AN OBSOLETE IDEA.

The learned professions, so-called, with commerce, manufacturing, transportation, mining, lumbering and the like, have invited young men to the neglect of the study of the sciences that relate to production, but education has been overdone in several of these lines, and the supply exceeds the demand. The average mechanic earns more than the average professional. The one class more than all others that has become comfortable, well-to-do, independent, is the farmers who own the soil that is every year becoming more valuable. This class is being educated, but the studies that are offered by educational institutions are not what the producer from the soil requires. He goes to the warehouse to buy and must be content with what he can get. His interests require him to prepare himself for doing one thing, and his training prepares him to do another; he needs garments to answer in one kind of work and finds little or nothing for sale in his line, so he puts on what is designed for something different. The acquiremnts of literary and professional men would be ornamental only to the farmer. They are more ornamental than useful to many who rejoice in them in our day. There is a pernicious idea abroad among old-time educators that one educational system should be the foundation for future usefulness in all walks of life, and specialization should take place only after that foundation is laid. We find, in preparing scientists for our work in the Department of Agriculture that no one specialty is sufficient for him whose life-work it is to study soils and their composition, climate and its effects, moisture and its potentialities, animals and their uses, insect enemies and friends, the microscopic plants and animals and their influences; the economic growth and disposition of crops, and the like. These are all specialties, in the study of each of which a scientist might devote a lifetime, but concerning which the farmer should have considerable information to manage his affairs intelligently. Life is too short to make acquaintance with these sciences after going through primary schools, secondary schools and college, and attaining manhood with no knowledge of them. Their study should begin with the primary and continue through life; then the country will have farmers who will get response from the soil.

### AN OPEN FIELD.

To bring this about, to organize, inspire and develop the farmer for his work when necessity calls upon him to assume its burden, is the work of the university. Will this institution take the lead? The field is open.

The Department of Agriculture is educating two hundred and sixty young men and women in these sciences at the present time, because the universities have not trained them. Our scientists should devote their time to research in cooperation with State institutions, and this they do as far as practicable in every State and Territory and in the isles of the sea under our flag. I find fault with no system of education in operation for the benefit of any class of men. I assert that systems in vogue are not suitable for farmers, because they do nothing, comparatively, to make them use their heads to help their hands when the hands must lift the burden. I am not content to have the husbandman ignorant of the truths of nature; I am not content to have the American farmer remain as ignorant of the sciences that relate to his life-work as the European farmers are; I protest against conditions continuing that give grounds for tracing relationships between the farmer and the ox. A thorough study of applied science and modern languages will develop the mind sufficiently for all practical purposes. You will find that the student will acquire any modern language that will help him in the discovery of truth written in a foreign vernacular and it will be the same with regard to other studies that will help the toiler in the field; but let the necessity for every acquirement be apparent before the pupil is required to engage in it. The man who lives by the soil will only devote time to acquiring the useful.

The highest aim of the University of Missouri should be to educate the peopl of Missouri, and all of them, along lines of greatest usefulness to them and the commonwealth. The industries of the State are greatly diversified, including all the features of national life. The farm is the fallow ground, the neglected outfield, the unworked claim, the promising subject that will yield the best returns on the investment.

### AMERICA MUST LEAD IN EDUCATION.

I speak of the class that can not afford an ornamental education, and will not have it. In the methods of all farm operations we are in the lead of foreign farmers, through the efforts of the farmers themselves to learn of their own affairs as best they may. We are taking the lead in research after scientific truth, and have no veneration for the borrowed educational systems of the old world. Our American carriers excel, our American miners excel, our American mechanics ex-

(Continued on page 782.)


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# The Poultry Yard.

### Consumption of Eggs in Chicago and New York.

At a recent meeting of the Chicago Butter and Egg Board, J. Dixon Avery read a paper that will interest every commercial poultryman, as it shows receipts and shipments at Chicago and New York, the total production of eggs and other statistics that are of permanent value. The following is the paper:

"Some four or six weeks ago your president came to me and wanted to know what the daily consumption of eggs was in Chicago. There was sitting beside me one of the other officers of the board and he made the remark after the president had passed by that that was the work of a number of years.

"Of course no one can get the exact amount of eggs consumed daily any month or any week of the year, but I have succeeded in getting together figures that I think are fairly convincing, and such as I have I give unto you Please allow me to explain further that something over a year ago one of the largest handlers of eggs in the city and perhaps the very largest a good share of the year, called me up by telephone and wanted to know how many eggs were stored the year before. My reply to him was less than 4,000,000 cases. He said: 'How many eggs are produced in the country? There aren't half of them stored, are there?'

"This was a new proposition to me. I had never thought along this line before, but instantly replied to him: 'No, it can not be that half of them are stored.' After he had rung off I got to thinking the matter over and made up my mind that I would make an estimate of the production of the United States and for a number of days, and perhaps a few weeks, at different times, I worked on this proposition. I got all the data I could and putting this and that together I made up my mind that the production of eggs in the United States was about 40,000,000 cases. Some months ago the United States census report was published giving the production on the farms and ranches of the country 43,127,306. Now, if I succeed in arriving at the consumption here as near proportionately as I did in the production of United States I will be

In then
While

"We find that the receipts and consumption of eggs in New York City aggregated last year 2,372,500 cases. Assuming the population of Greater New York to be 3,000,000, we find that each person in New York City consumes 78-100 of an egg daily. Admitting that we consume as many eggs per capita here in Chicago as they do in New York City and also granting that we have 2,000,000 population here, we find that the average daily consumption in Chicago to be 4,333 cases of eggs.

"We all know that the daily consumption in Chicago to be 4,333 cases. We believe that there is no day in the year that the consumption in Chicago is less than 2,000 cases. We also believe that during the early spring season, or during March and April, the consumption of eggs would be about double the average, or 8,666 cases daily, therefore we have the two extremes before us, namely, from 2,000 cases to 8.666. I estimate further that there are about four months in the year, namely, May, June, September and October that the consumption is about the average per day for the twelve months and if it is also conceded that the consumption during two of the spring months is double the average then the daily consumption for the other six months of the year would average from 2,000 to 4,000 cases.

"I find that the receipts of eggs in Chicago from March 1, 1901, to March 1, 1902, to be 1,888,190 cases, and allowing that the daily consumption is as stated we consume in this city 1,581,545 cases yearly. Deducting this from the receipts as shown above shows that we ship to various cities, East and West, North and South, 306,645 cases yearly.

"Again, referring to the production of eggs in the United States, would say I find by the census report for 1899 that there was produced on the farms and ranches of the United States 43,127,306 cases of eggs and also find by the same report that the production ten years before, or in 1889, was only 25,324,073 cases, therefore the increase in the ten years was 15,803,233 cases, or a little over 58 per cent for the ten years, or something over 5½ per cent for each year. Now, in order to get the production of eggs upon the farms and ranches last year, or two years later than the time the census was taken, we must add 11 per cent to the census report, which would make last year's production upon the farms and ranches 47,871,309 cases and it seems to me that the production outside of the farms and ranches, namely, in the hamlets, villages, towns and cities, is at least 2½ per cent of the production upon the farms and ranches. If we add 2½ per cent to these figures we would have a grand total of 49,068,091 cases as the production for last year.

"If you would like to carry the question a little further and find what the production will be this year we must add 5½ per cent to last year's production, which would make the entire production for the country this year 51,766,836 cases. It is supposed that all of the refrigerators throughout the United States have a capacity for storing something over 5,000,000 cases of eggs only. Therefore if every foot of available space in every warehouse is utilized this year the storage will not exceed 5,000,000 cases, or a little less than 10 per cent of the whole production for the year. From these figures each one has a right to draw his own conclusions in regard to the prospective loss or profit on the eggs now in store, or that will be put in storage.

"I for one feel that if the people of the United States consume 90 per cent of all the eggs as they are produced that it is fair to believe that we can take care of the 10 per cent which may be stored this season without any great loss to the present owners."

### Goose Fifty Years Old.

I own a goose that was hatched out in April, 1852. Eggs were placed under a hen and three goslings hatched. These, when grown, proved to be two geese and a gander. Treated as pets by the old lady who had them in charge, they were always very tame, and she was never quite ready to part with them. So they were permitted to live on until their age unfitted them for market. And, besides, as the years went by, we began to venerate them, and the younger members of the family politely doffed their hats when in their presence.

Thirteen years ago the gander died and five years later one of these geese.

The survivor is yet hale and hearty, eye sight as good as ever and in every way appears just as nimble and sprightly as her younger associates. People invariably pick out one of the 5-year-olds that keep her company as being the oldest, this perhaps because they are all much larger—she being the smaller one of the flock. She has laid eggs every year up to within three years, the last year laying five.

Francis Willoughby, 1635-1672, the naturalist, records an instance of one that reached the age of 80 years and was killed at last for its mischievousness. THOS. R. BROWN.

Foster, R. I.

"Here's a good chance for you, Jack," said the father of the young man just about to graduate from college, looking up from the want advertisements in the paper. "A chance isn't what I want," said the young man loftily. "I am looking for an opportunity."

Usually it is best to wean the young calves while there is good pasturage feeding some ground grain at least ten days before weaning.


(Talk No. 8.)

EVENING READING.

There are a number of people who have given up evening reading altogether. They find the strain upon their eyes so great that they can not endure it. If they get the news at all they must have some one read to them or else wait for daylight. A great many tell me they have been in this condition for a number of years. They did not seem to realize that it could be remedied or that they needed glasses. Usually the first symptom of weak or defective eyes is a difficulty in evening reading by artificial light. Either the letters blur or the eyes burn or the head aches. A pair of glasses correctly fitted to the eyes will remove the trouble and make reading as easy and as pleasant as it ever was. They will strengthen the eyes to their normal tone and preserve them from further injury.

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# Miscellany.

### Wheat Crop of the World.

Collated from Department of Agriculture statements by the Cincinnati Price Current, representing bushels:

| | 1901. | 1900. |
|---|---|---|
| United States | 748,460,000 | 522,230,000 |
| Ontario | 22,194,000 | 31,265,000 |
| Manitoba | 52,094,000 | 13,436,000 |
| Other Canada | 16,000,000 | 7,000,000 |
| Mexico | 9,000,000 | 15,000,000 |
| Chile | 9,000,000 | 12,000,000 |
| Argentina | 74,753,000 | 101,655,000 |
| Uruguay | 3,664,000 | 6,891,000 |
| Great Britain | 54,111,000 | 54,299,000 |
| Ireland | 1,470,000 | 1,682,000 |
| Norway | 300,000 | 300,000 |
| Sweden | 4,310,000 | 5,249,000 |
| Denmark | 3,000,000 | 3,604,000 |
| Netherlands | 4,300,000 | 5,000,000 |
| Belgium | 12,920,000 | 13,788,000 |
| France | 304,210,000 | 326,083,000 |
| Spain | 108,000,000 | 92,424,000 |
| Portugal | 8,000,000 | 8,000,000 |
| Italy | 147,560,000 | 127,696,000 |
| Switzerland | 4,400,000 | 4,200,000 |
| Germany | 91,817,000 | 141,139,000 |
| Austria | 44,027,000 | 40,929,000 |
| Hungary | 127,864,000 | 141,221,000 |
| Croatia-Slavonia | 10,325,000 | 11,035,000 |
| Bosnia-Herzegovina | 2,000,000 | 1,750,000 |
| Roumania | 72,386,000 | 56,663,000 |
| Bulgaria | 24,000,000 | 27,000,000 |
| Servia | 10,000,000 | 9,000,000 |
| Montenegro | 200,000 | 220,000 |
| Turkey in Europe | 22,000,000 | 20,000,000 |
| Greece | 3,000,000 | 3,000,000 |
| Russia proper | 319,991,000 | 319,193,000 |
| Polan | 14,409,000 | 19,722,000 |
| North Cauacsus | 67,232,000 | 56,948,000 |
| Finland | 90,000 | 90,000 |
| Siberia | 16,504,000 | 20,172,000 |
| Central Asia | 9,645,000 | 6,959,000 |
| Transcaucasia | 35,000,000 | 35,000,000 |
| Turkey in Asia | 30,000,000 | 30,000,000 |
| Cyprus | 2,000,000 | 2,400,000 |
| Persia | 15,200,000 | 16,000,000 |
| British India | 245,751,000 | 181,803,000 |
| Japan | 20,000,000 | 21,688,000 |
| Algeria | 25,000,000 | 23,000,000 |
| Tunis | 6,400,000 | 5,600,000 |
| Egypt | 12,000 | 13,000,000 |
| Cape Colony | 2,000,000 | 2,000,000 |
| West Australia | 799,000 | 1,018,000 |
| South Australia | 11,608,000 | 8,720,000 |
| Queensland | 1,232,000 | 634,000 |
| New South Wales | 16,683,000 | 14,033,000 |
| Victoria | 18,410,000 | 15,718,000 |
| Tasmania | 1,145,000 | 1,136,000 |
| New Zealand | 6,733,000 | 8,852,000 |
| Total, bushels | 2,873,197,000 | 2,607,445,000 |

Total wheat crops by continents, in millions of bushels, for years indicated:

| | 1901. | 1900. | 1899. | 1898. | 1897. |
|---|---|---|---|---|---|
| North Amarica | 848 | 589 | 617 | 752 | 596 |
| South America | 87 | 120 | 125 | 73 | 46 |
| Europe | 1,462 | 1,490 | 1,521 | 1,603 | 1,153 |
| Asia | 374 | 314 | 404 | 436 | 375 |
| Africa | 45 | 44 | 42 | 49 | 39 |
| Australasia | 57 | 50 | 56 | 35 | 27 |
| Total | 2,873 | 2,607 | 2,765 | 2,948 | 2,236 |

### Farm Notes.

The overgrown horse is seldom a durable one.

Feed soiling foods and save the meadows.

The right kind of care will add macerially to the value of the horse.

Especially at this time it pays to keep the plows sharp.

The surplus horses on many farms eat up much of the profits.

Watch the leaks in feeding. Grain is too valuable to be wasted.

It is better to allow barn-yard manure to rot in in the land than in the heap.

As the pasturage fails some soiling crop should be used in feeding the stock.

The skin is a certain index of an animal's condition. It should be smooth and sleek.

Get all of the manure possible upon the land intended to be sown for fall wheat.

Every animal has a constitutional limit beyond which no process of feeding can push it to greater production.

By grinding the feed it is made easier for digestion while a better opportunity is offered for making combinations.

In feeding all classes of live stock the value of the feed is the same whether supplied to scrawny scrubs or nice full-bloods.

The farmer who understands how to produce at a relatively low cost rarely complains that farming does not pay.

It is a good plan to wait until late in the fall or early winter to breed some of the cows, so that they will come in at a time of good prices for dairy products.

The object in grooming the horse is not solely to remove the dirt from the surface, but to cleanse the skin as well.

In nearly all cases the best systems of cropping are those which call for the most thorough fertilization of the soil.

The object in fertilizing is not only to add needed elements to the soil ;but to supplement those already there.

The quality of the milk depends primarily upon the cows producing it and then upon the food and care given the cow.

One of the best checks on weeds is to keep the land occupied all of the time with some crop so as to give them no chance to mature seed.

Corn meal alone is not a good feed for little pigs, but if combined with wheat or bran, with a little oil meal it makes a good feed.


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A. H. DUFF, Larned, Kan.


### Trouble with Apple Trees.

EDITOR KANSAS FARMER:—I am sending under separate cover some bark and leaves taken from my apple-trees. Please examine them and answer through the columns of your paper what is the cause and remedy for the trees dying. All the bark is taken from the trunk which has several cracks and is about half decayed. Small red bugs seem to gather in the cracks and form a cotton-like substance. The inside of the dead part of the bark is covered with a great number of small bugs of different kinds. A worm with a large head lives on the live part of the bark.

D. W. McVEY.

Sterling, Rice County.

This inquiry was referred to Prof. Albert Dickens, of the Kansas State Agricultural College, who replies as follows:

The bark seems to be from a sun-scalded tree. The small insects found there are probably there for shelter and are not the cause of the injury. The "small red bug" is probably a mite or small spider attracted by the presence of the plant lice, Aphids, which are the ones that form the "cotton-like substance."

The "worm with a large head" is the flat-headed apple-tree borer, the larvae of Chrysobothris femorata. Bulletin 77, Kansas Experiment Station, says of it: "This insect selects for its attack principally trees which are weakened, owing to poor soil, lack of cultivation, prolonged droughts, and unusual extremes of heat and cold, and almost invariably selects as a place for depositing its eggs sun-scalded parts of the tree or parts that have been injured.

"That the tree is being attacked is indicated usually by a discoloration of the bark on the south and southwest sides where the larvae may be found in greatest numbers. Upon removing the bark numerous channels may be found upon the inner sap wood which are filled with the castings of the larvae. These channels often girdle the tree. The adult insect is flat and depressed, about three-eighths of an inch in length, general color greenish-black with copper reflections.

"Infested trees should be stimulated to make vigorous growths—thus increasing the flow of sap which is injurious to the young larvae, usually causing death by drowning. Unthrifty trees should be brought into a state of thrift,

by training trees, avoiding careless pruning, and preventing sun-scalded and decayed spots. In fact the orchard should be made as exempt as possible from the pest. The orchard should be inspected during the autumn, and wherever the work of the borer is detected by saw-dust filings or by the discoloration of the bark the larvae should be dug out with a knife. As a mechanical preventive, the trunk and large limbs should be given a coat of alkaline wash, —soft soap and washing soda made to the consistency of paint, to which enough carbolic acid is added to give the mixture a strong odor. Apply with a stiff brush at various times during the season."

The work on the leaves sent is done by the larvae of a moth known to the entomologist as Pempelia Hammondi, commonly called leaf-skeletonizer, from the habit of the worm of eating the green portions of the leaf and leaving the veins and mid-rib as a skeleton. The worm is greenish-brown, about half an inch long. The web it spins protects it to some extent, but some arsenical poison as paris green usually checks it. In orchards which are regularly sprayed for codling moth and canker worm the leaf-skeletonizer is kept in check by the latter spray for the codlin moth.

The slim insect, brown with dull stripes belongs to the family Elateridae, the larvae of which are the wire worms. It was probably under the bark for a hiding-place.

### The Cougar's Fighting.

The cougar does not leap upon its big game nor drop upon it out of tree-tops, but sneaks close or lies in wait upon the level, and goes from cover in a straight rush like the tiger or the hunting leopard. It endeavors to seize upon the lower throat or shoulder with its teeth, and to twist the quarry's head against this "purchase" in its powerful forearms, until the neck is broken. Failing in this attempt, yet making good its catch hold, the cougar will—do put it modernly—go in and finish in any old style. It will usually finish once tooth and claw are engaged, but sometimes it fails and even gets the worst of an encounter.

Felix Michaud, a most reliable free trapper of the old regime, once told me that he had watched a lion stalking a bull elk. It was a Teton mountain cougar of the big variety. It went from cover in a headlong rush, but missed its neck stroke as the bull lunged ahead, catching him at the point of the shoulder and going under his belly. Both animals were bowled over in a mix-up of hair, hoofs, claws and horns. In a brief struggle, as they rolled over together the cougar was thrown into the air, as if hoisted by a spring trap, by a convulsive kick from the bull's hind leg. The maddened elk gained its legs and chased its enemy off the field. An unlooked for punch in the wind had taken the sand out of pussy.—Outing.

Even the hired man in the United States is vastly better off than his brother in any other country. In India the hired man receives on an average of $30 a year for his services; in Italy, $50; in Russia, $60; in Germany $90; in Holland, $100; in France, $125; in England $150; while on Uncle Sam's great farm, he gets an average of $284 a year. Not only is the hired man in the United States better paid than in any other country in the world, while he remains in this capacity, but he does not have to remain hired man very long if he will develop the brains with which all Americans are endowed.

As an evolution of the old-time business college and in response to the demand of the times, there has grown up a few great institutions which are properly called schools of "actual business." In these institutions the successful effort is made to teach the students actual business in such manner that they are equipped for the active work of life in a much shorter time and at a much smaller expense than would be possible in the counting room. When a young man or woman undertakes to equip himself for a busines life by serving an apprenticeship in a great mercantile or banking institution, he finds himself much in the position of the youth who was apprenticed to a blacksmith and for the first six months was employed to mind the baby. In other words, the cadet in a great mercantile house will be set to work at those things which he can do and no thought or attention will be given to his training. In these great actual business schools on the other hand, the training of the youth and not the making money out of him is the first consideration. A youth trained in such an institution is not only better trained than he would be in a mercantile house, but he saves from five to ten years of time in attaining the success which is the reward of every well directed effort. Such an institution as we describe is the Chillicothe Normal School, located at Chillicothe, Mo., where students may obtain not only actual business training but a thorough training in shorthand with the privilege of special training in music, penmanship, elocution, etc. This institution is remarkable in that it gives the students free use of the text-books. For catalogue and full information write to President Allen Moore, Chillicothe, Mo., and mention the Kansas Farmer.

## WEEKLY WEATHER CROP BULLETIN.

Weekly weather crop bulletin for the Kansas Weather Service, for the week ending July 29, 1902, prepared by T. B. Jennings, Station Director.

### GENERAL CONDITIONS.

The week has been warm, though the temperature has remained slightly below normal. The highest temperatures were recorded in the western division, in many counties of which it reached 100 degrees, while in many counties counties in the eastern half of the State the temperature failed to reach 90 degrees. A larger, better distributed rainfall occurred this week than last, yet it has been quite light in the central counties during the past fifteen days. A severe hail storm occurred in Dickinson.

### RESULTS.

### EASTERN DIVISION.

Corn is in unusually good condition, and in many of the southern and central counties much of the early corn is hard enough to feed. Wheat threshing and stacking have progressed, and while some counties report it poor, others report it better than expected. Oats threshing is progressing with good yields. Flax is being cut in Wilson, with cutting nearly finished in Coffey; threshing has developed fair yields in Chase but poor yields in Johnson. Haying has progressed rapidly; tame hay is now mostly up and tame haying becoming more general. Potatoes are a fine crop in quality and quantity, though in Geary and Anderson they are rotting in places. Apples are quite promising in Johnson and Shawnee, but are dropping in Morris. Peaches are fine in quality but a light crop in Montgomery. Plowing is progressing in Allen and Johnson, but the ground is too dry in Chase.

Allen County.—Week fine for crops; threshing, plowing, and digging potatoes; fruit of good quality.

Anderson.—Potatoes rotting in places.

Brown.—Wheat yielding better than expected; good crop of timothy secured; corn doing nicely.

Chase.—Dry but corn doing well; alfalfa promises good third crop; Kafir-corn and the sorghums generally heading; flax threshing in progress with fair yield; too dry for fall plowing.

Coffey.—Corn good with plenty of rain; flax harvested, fair crop.

Doniphan.—Wheat badly damaged and oats injured by wet weather; corn fine; potatoes good; fruit fair.

Elk.—Rains local; corn and Kafir-corn doing well; prairie-grass very heavy; cattle doing nicely on grass.

Franklin.—Corn in fine condition; threshing progressing rapidly.

Geary.—Though not injured, corn needs rain; early corn hard enough to feed; millet, Kafir, and sorghum doing well; potatoes beginning to rot.

Jackson.—Much hay in stack; corn doing well, roasting ears plenty; threshing oats and wheat, mostly poor quality; much wheat no grade.

Jefferson.—Dry, good for haying and threshing.

Johnson.—Wheat two-thirds threshed; flax cut, some threshed, poor yield; crop of English bluegrass seed good; plowing commenced; early apples plentiful.

Leavenworth.—Crops growing finely; pastures good, stock doing first rate.

Marshall.—Second crop alfalfa mostly in stack; corn making good growth; wheat yields from poor to fair, oats from poor to good, hay crop good; pastures very good.

Montgomery.—Good corn week; rain would help plowing; forage crops good; peaches light crop but of fine quality.

Morris.—Corn earing well; feed crops will be full; threshing with poor yields; good crop millet being cut; apples dropping some.

Nemaha.—Small grain better than expected, though some is damaged badly; corn developing good ears and setting well, some growing weedy.

Osage.—Crops in good condition.

Pottawatomie.—Light rains softened ground.

Riley.—Quality and yield of wheat poor; oats are fair; corn needs rain.

Shawnee.—Corn fine, tasseling and silking; pastures and meadows good; cattle doing finely; garden truck plentiful; apples and grapes very promising; making of prairie hay commenced, good crop.

Wilson.—Wheat harvest over, except on low lands; flax being cut; millet and grass of all kinds good; potatoes fine.

Woodson.—Favorable week for corn; haying progressing; potato crop good; threshing continued; oats making fair yield.

Wyandotte.—Oats good crop on uplands, but somewhat damaged in bottoms; wheat threshing slow; haying nearly done, hay fair crop and outlook good for second crop; corn very promising.

### MIDDLE DIVISION.

Corn is generally in very good condition, though in Lincoln some is suffering for rain, and in Dickinson some has been damaged by hail; owing to the light rainfall for the past fifteen days, rain is needed to properly mature the crop; in the southern counties the early corn is hardening. Wheat harvest still lingers in a few counties, but in general it is over and threshing is in progress, developing poor to fair yields. Oats threshing is progressing with good yields. The third crop of alfalfa is growing rapidly. Pasture and hay grass are fine. Apples are plentiful in Cowley; early apples are about gone in Washington. Watermelons are being marketed in Sedgwick. Potatoes abundant and fine. Plums and peaches are abundant in Cowley. Early grapes are ripe in Sumner and ripening in Washington.

Barber.—Threshing from shock and stack, wheat of light weight and yield poor to fair; large crop of early corn assured, late in silk and tassel and doing well; forage crops fine; grass and water abundant; cattle doing well.

Barton.—Threshing from shocks, stacks wet; second crop alfalfa in stack; meadow-grass yielding well; forage crops fine; cattle in good condition, but pastures need rain; too dry for plowing.

Clay.—Wheat light, shriveled, and damp; rye light yield and generally poor quality; oats better than expected; corn improving; hay and alfalfa excellent.

Cloud.—Wheat yield fair, quality poor; oats about all cut; corn growing nicely, but will soon need rain; heavy second crop alfalfa being cut; apples doing well.

Cowley.—Yield and quality of wheat fair; rain in eastern half of county insures much of corn; third crop alfalfa making rapid growth; hay fine; apples, peaches, and plums plentiful.

Dickinson.—Oats crop excellent, wheat fair; prairie hay crop fine; hail did some damage to orchards and corn.

Ellsworth.—Wheat nearly harvested; oats crop good; corn nearly made; pastures and hay fine.

Harper.—Threshing continues; fall plowing begun; large corn crop promised; early corn made.

Kingman.—Threshing; corn in fine condition; grass very good.

Lincoln.—Dry week, some corn suffering; potatoes excellent and plenty.

McPherson.—Rain needed to make corn and soften ground for plowing; wheat yielding poor to fair crop, oats a good crop.

Pratt.—Corn fine; wheat shows poor to fair yields, oats fair to excellent.

Republic.—Corn growing rapidly but needs more rain; oats fair crop but poor quality.

Russell.—All crops doing well; corn still being cultivated; hay and pastures extra good.

Saline.—Corn needs rain to perfect crop.

Sedgwick.—Early corn hardening; forage crops fine growth; pastures and hay good; alfalfa nearly ready for third cutting; watermelons on market.

Smith.—Wheat cutting finished; threshing begun.

Stafford.—Good week for crops; pastures good, stock doing well.

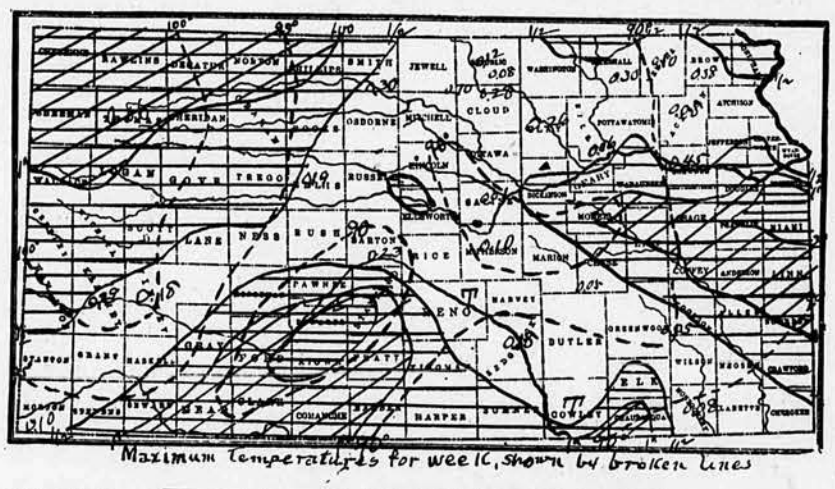
Sumner.—Much wheat yet in shock; potatoes ripe; fruit and vegetables abundant; early grapes ripe; ground good for plowing.

Washington.—Ground getting dry; corn doing well; potatoes and garden truck fine; grapes and elderberries ripening; early apples about gone.

### WESTERN DIVISION.

The early corn has been damaged by the dry, hot weather in several counties, but the late is holding well; corn is in roasting ear in Ness.

For Week Ending July 26.




SCALE IN INCHES. Less than ½. ½ to 1. 1 to 2. 2 to 3. Over 3. T. trace.

Threshing develops fair yields of wheat, better than anticipated in several counties. Second crop of alfalfa is not as good as expected in some counties and will be used for hay. Range-grass is good, and in Ness and Wallace is being cut for hay. Forage crops, with few exceptions, are fine. Plowing is progressing in Ness, but was stopped by the dry ground in Thomas. Good prospects for apples in Trego and fair in Wallace. Cattle are in fine condition.

Clark.—Good growing week.

Decatur.—Threshing in progress and grain going on market, yield and quality above expectation; corn in good condition, some injured by hot weather.

Finney.—Forage crops doing well but need rain; grass curing on ranges; cattle in fine condition; too dry to plow.

Ford.—Fodder and corn look fine; prairie hay good; cattle in fine condition.

Graham.—Good local rains of great benefit to corn.

Hamilton.—Range doing fairly well; forage crops good; second crop alfalfa short.

Kearney.—Good showers in some localities, forage crops suffering in others; good pasture.

Lane.—Threshing begun; corn and feed in some parts of county burning, some being cut.

Morton.—Growing weather; ground drying rapidly; young cattle fattening on grass.

Ness.—Corn in roasting ears; forage crops making good growth; plowing commenced, ground fine; good wild hay being put up; threshing, yield light.

Norton.—Rains light and local; early corn damaged by drouth; prospect for alfalfa seed crop poor, most of second growth cut for hay.

Rawlins.—Corn and cane suffering in places; harvesting over, threshing progressing, yielding well; second crop alfalfa put up.

Sheridan.—Some pieces of corn injured by hot winds; alfalfa in stack; threshing, yield fair average and good berry.

Thomas.—Early corn damaged, late holding out well; cane and Kafir damaged; wheat yielding poor to fair; too dry to plow.

Trego.—Corn and sorghum greatly benefited by rain 26th; apples good prospect; potatoes an excellent crop.

Wallace.—Rain 26th very beneficial; some injury by hail; haying in progress; blister potato bug damaging gardens; apples fair.

State of Ohio, City of Toledo, Lucas Co. ss.
Frank J. Cheney makes oath that he is the senior partner of the firm of F. J. Cheney & Co., doing business in the city of Toledo, county and State aforesaid, and that said firm will pay the sum of ONE HUNDRED DOLLARS for each and every case of Catarrh that can not be cured by the use of Hall's Catarrh Cure.
FRANK. J. CHENEY.
Sworn to before me and subscribed in my presence, this 6th day of December A. D., 1886.
A. W. GLEASON,
[Seal.] Notary Public.
Hall's Catarrh Cure is taken internally and acts directly on the blood and mucous surfaces of the system. Send for testimonials free. F. J. CHENEY & CO., Toledo, Ohio.
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### Education for the Farmer.

(Continued from page 779.)

cel, our American manufacturers excel, our systems of government excel. Why should not our systems of education excel also, especially for the creators of wealth, who never have had a university adapted to their wants nor even a college until within the memory of men still in the prime of manhood?

Foreign countries are looking to the United States for educators along these lines. Owners of land properties are inquiring for trained agriculturists at home and abroad. The state colleges and experiment stations inquire for masters in agricultural science to teach and investigate. Every farm that is being robbed of plant food is crying aloud for better treatment. The vanishing forests distress us with their dying wails, drouth-stricken fields admonish us, inferior animals advertise us. The United States Department of Agriculture, the agricultural colleges, the State experiment stations, the high schools of agriculture, agricultural societies, the agricultural press, authors of books on agriculture—all require university help in higher education, while the specialist needs facilities to expand into kindred specialties, to fit himself for doing some simple thing that has never been done before, to help some producer in wresting from nature some truth that has been hidden in all the past.

THE MAN.

The American people always find the right man to meet the emergency. We want a man now to organize the education of half the people under our flag, who till the soil and furnish sixty-five per cent of our exports; who create the wealth of the country from materials found in earth and air and water; we want organization from the primary school to the university and beyond, into fields where things grow, into the stable and yard through which crops go to market, into the farm factory where skill should add to value, into the pasture where skill should direct form, feature and development; into cultivation where science should defy drouth and deluge; into fertilization where observation and experience must be supplemented by education regarding soils and their composition.

The American farmer is waiting and watching for the coming of this man. Are we to look for him in some one of the half-dozen institutions that are doing promising work, or will help come from as many sources, and a highway be cast up by several men who realize the needs of our country in this regard? We will look for the coming man in some State where the people see the wisdom of strengthening the producer and admonish their representatives to that effect, where boards of control appreciate the value of this work and apply endowments of State and Nation to their legitimate uses.

THE AGRICULTURAL COLLEGES.

Five thousand students attend agricultural colleges, but these colleges are feeling their way in the dark along untraveled roads. They need the guidance of a university whose province it is to train leaders as well as to organize the schools below it and beyond it, and to indicate ways and means by which acquirements urgently demanded by our times may best be reached.

The farmers of the country asked for and secured the endowments of 1862 for agricultural colleges for the several States and Territories, and supposed that nothing more was to be done. They did not consider how students should be prepared for college, nor what they should do after commencement. They forgot to ask where teachers would come from who would be competent to apply science to the farmer's work. How few teachers the world possesses! It is interesting to look back over the intervening forty years and see the things done and left undone by these colleges. How grandly some of them have overcome obstacles, and how very little others have done! They have had no university to guide them. They have run like wild trains without a time-table, and some of them have simply used for other purposes the money Congress gave to educate the farmers. Boards of trustees and faculties who would under no circumstances break the laws of God or man, do not hesitate a moment to substitute students in something else than the sciences relating to agriculture. Less and less of this is being done, however. The wonder grows that such far-reaching interests have not had well-defined educational facilities along every special line. Look at the array and consider the want of exact information regarding them. Soils, buildings, grasses, grains, farm animals,, fibers, forests, fruits, and vegetables—twenty-five billions of dollars in value! The time has fully come when the university, especially in an agricultural, mining, or manufacturing State, should apply science to industry, and to this end the faculty should be constructed.

A GREAT OPENING.

My highest conception of duty when I went to Washington was to help to strengthen the State institutions along lines of agricultural education and research. I am still of that opinion, but I found it necessary to first strengthen the scientists of the Department by better facilities, apparatus, assistants, salaries, selections from outside and education within. Some progress is being made along all these lines. State and other institutions and foreign countries are calling on us for strong men. The whole column is marching toward the position of placing our country in the front rank of producers of everything that contributes to the happiness of mankind. Will the people of Missouri hold up the hands of President Jesse while he places this great institution at the head of the column?

I have been looking for a long time to find an institution giving this kind of instruction to farmers and managed by men who are thoroughly determined to run its affairs for the benefit of the agricultural classes. I am glad to say that from what I have learned since I came here I believe I have found such an institution in the Missouri State University. No other State is doing more, and in some respects none is doing as much, for the farmer as is your State University.

"What is the pedigree of your calf?" asked a would-be buyer of a breeder. "Well," said the stockman, "all I know about it is that its father gored a book agent to death; tossed a justice of the peace on top of the barn and stood a lightning-rod man on his head in a fence corner. Its mother chased a female lecturer two miles one day. If that ain't pedigree enough to ask $5 on you needn't take it."

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## SURGICAL OPERATIONS

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MRS. G. BRUCE.

sufficient vitality, an operation for ovarian troubles. Not a very cheerful prospect, to be sure. I, however, was advised to try **Lydia E. Pinkham's Vegetable Compound and Sanative Wash;** I did so, fortunately for me. Before a month had passed I felt that my general health had improved; in three months more I was cured, and I have been in perfect health since. I did not lose an engagement or miss a meal.

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*$5000 forfeit if above testimonial is not genuine.*

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## The Apiary.

Conducted by A. H. Duff, Larned, Kans., to whom all inquiries concerning this department should be addressed.

### Late Breeding.

A honey flow lasting late in summer, and also a fall flow of honey is very advantageous to the bees. It is thus that the bees are in the best possible condition to winter well, from the fact that they have a large force of young bees to enter the winter and in spring they are much stronger in numbers to begin the seasons' work. This is perhaps the best point in successful wintering, and many feed their bees in autumn to thus obtain plenty of young bees. Queens lay but few eggs, and but few young bees are hatched in late summer and autumn if there is not a flow of honey so the bees can gather a fair quantity.

In most places the best flow of honey comes during spring months, and it is exceptional that a late summer or autumn flow makes its appearance, but in many cases enough honey can be obtained to keep the bees breeding. When this does not occur it is good policy to feed them, commencing about the first of September, and feeding all through this month. The late force of young bees depends to some extent on queens also. Some will breed more than others, and in this the young queens will far excel the old ones. This is one thing very much in favor of the plan of requeening during the summer, and removing all old queens and replacing them with young ones.

All first swarms that come off in spring contain the older queens, and no other hives will have them unless the hive has not cast a swarm, when the old queen is till with such. By thus keeping the run of swarms, we can tell just where to find the old queens. Some queens are better than others, and more prolific at the same age. Many queens at 2 years old are yet very good and others should be superceded. If in any way a queen is found defective in producing a good hive full of bees this season, she will not be found of any profit the next.

### Bees in a Tree.

EDITOR KANSAS FARMER:—I took a colony of bees from a tree a week ago and put them in a box. Now can I get them into a good hive, and how can it be done? How can I tell the queen from the other bees? If I can get them into a hive will they swarm again this season? CHARLEY A. SNOW.

Birkville, Kans.

Get a good frame hive and fill each frame with sheets of foundation comb. The bee supply dealer of whom you get the foundation will give you full directions how to use the foundation. When you have your hive thus completed and equipped with foundation, put the bees in it, and if they are a good strong colony, they may fill up the hive with honey and brood sufficient to live over winter, but it is not likely they will do so well as to swarm again and in any case you should not allow of their swarming so late in the season. I take for granted that the bees have no comb to begin work on, and for them to now build their own comb I should judge they would not make a colony that would safely go over the winter. If they have comb enough to fill all the frames, then fit the combs into the frames, instead of using the foundation. It depends solely on the source of honey in your locality whether or not the colony does well, but it is worth trying anyhow.

You should be able to locate the queen, as there is no other bee in the hive that looks just like her. The queen is long in body, more wasp shape than the other bees. Queens vary in size as to their age and occupation at the time being. A virgin queen, that is a young infertile queen, those that always come with the second and all after swarms, are smaller than a laying queen, but are still longer in body than the worker bees, but owing to their size at this time they are much more difficult to find in the colony. A laying queen is larger owing to her body being extended by being full of eggs, and she is always found in the locality of the brood nest on the combs containing brood. Your queen, owing to her age, is doubtless a laying queen, for they become fertilized ordinarily in six or eight days after they are hatched from their cells. In taking bees thus from a tree we stand a chance of losing the queen by accident as she may have been killed or injured, so that the bees may have no queen at all, and in this case they will do no good, but will gradually dwindle down and become entirely extinct. When you once see a queen and become accustomed to her looks, you will ever afterward have no trouble in finding the queen. We go to a hive at any time and open it up and find the queen in a minute or two, and never fail to find her if one is there. It is more trouble to find her in a cluster of bees such as a swarm, than if the bees are in the hive, with movable frames, so that we can take out the frames of comb and thus examine them.

A colony of bees may be saved and built up into a first-class colony by feeding alone, but it scarcely pays except that we have such colony on hands, and care to experiment along the line of feeding. It is truly wonderful what can be done in the way of improvement with bees by feeding them, and it is simple and easily done.

### How Americans Succeed.

The British Iron Trade Commission gives details of the mineral resources of the United States as affecting that fundamental industry—the manufacture of iron and steel; show the extraordinary richness of the principal fields of coal, iron ore, and kindred minerals and demonstrate by concrete examples, how the natural inventiveness of the American has enabled him to apply to the operations of production and distribution a wealth of original ideas and methods that are as yet little known in Europe. It is also made manifest how on land, on lake, on river, and on canal, the American people have applied their minds to the solution of the conditions and problems of cheap transport until they have at last attained a level of rates and charges such as we have hardly had any experience of on this side of the Atlantic. It is not, however, to be supposed that the triumphs of the American people in these matters have been achieved without effort. Much testimony is borne to the fact that in the conditions of organization and administration, in their dealings with labor, in the confidence and enterprise with which they have embarked on industrial operations of great magnitude, in the efforts made to adapt themselves to new conditions, in the eagerness with which they have endeavored to create new demands both at home and abroad, and in the care and attention given to the successful cultivation of foreign markets, the American people have labored strenuously for many years, until labor, ingenuity, and enterprise have become their most distinguishing characteristics. When one has appreciated all that the Americans have done for themselves, it is neither natural nor reasonable to grudge them the success which has attended their labors.

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# In the Dairy.

Conducted by D. H. Otis, Professor of Dairy Husbandry, Kansas Experiment Station, Manhattan, Kans., to whom all correspondence with this department should be addressed.

### Methods of Applying Fly Mixture.

In an article on combatting flies which appeared in the KANSAS FARMER for July 10 the following formula for a home-prepared fly-repellant was given:

| | |
|---|---|
| Resin | 1½ lbs |
| Laundry soap | 2 cakes |
| Fish oil | ½ pint |

Water to make three gallons. Boil the resin and soap with part of the water, add fish oil and the rest of the water; apply with a brush.

A query has since come to the writer as to whether the mixture could be used as a spray, and thinking the same questions might arise with others, we will give a little of our personal experience with it.

It makes a mixture somewhat gummy and sticky; but in the proportions given it can be easily sprayed upon the animals. We have used it successfully with a small hand-sprayer, in fact we can use it by spraying far more evenly than with a brush. The brush puts on a heavier coat, and where it is not convenient or desirable to make a daily application, it is the best method, as it will give protection for a longer time. In using it in a sprayer it would be well to add a little kerosene as that thins the mixture and is an excellent repellent in itself.

We would earnestly recommend that every farmer at least make a trial of this or some other of the many fly-repellents. The relief afforded the animal would repay every true lover of live stock even if it should not pay in dollars and cents.

### The Hand Separator vs. A Klondike Gold Mine.

E. ADAMS.

The advantage of the hand separator is that the milk is separated while it is warm and while it still has the animal heat, and before fermentation, decomposition, or bacteria of any kind have a chance to work. By separating we will get the cream in the most perfect condition because the milk serum has to a great extent been removed, consequently the cream will keep sweet longer, for the bacteria cannot work on the fats of the cream.

The cream must be cooled down to a low temperature before adding to the last skimming; this is all that is necessary to make a fancy grade of butter. The hand separators are advancing and will continue to advance when the farmer realizes that his profits will come from the small amount of cream, and he will give it attention when perhaps the whole milk would be neglected. ed.

Some creameries will complain of the hand separator cream; but it has been proved that just as good butter can be made from this kind of cream where it is properly handled.

This machine also saves the farmer time in delivering, takes less time to handle for the same amount of butter-fat, and has the skim-milk for feeding his young stock and is always sweet and free from disease.

When the cream is well cared for, it is cooled and set in a cool and fresh place where there are no bad odors, and it may be delivered three times a week and in good condition.

Taking the average price of skim-milk at 35 cents per hundred, if he skims 40 per cent cream he has ninety pounds of skim-milk left from every hundred pounds of whole milk; this would be worth about 31 cents, and adding cost of hauling which is something like 10 cents, would make 41 cents. So the skim-milk would cost the patron 10 cents more when hauled to a station than if separated at home.

Creameries talk of sterilizing the skim-milk but this will contain all the impurities of the steam from the boiler and engine if exhaust steam is used. There is nothing quite so perfect as the natural conditions which nature has provided. There is no reason why the farmer cannot save time, expense, and labor by having a small building for a hand separator and necessary utensils. Then, using care in keeping everything neat and clean, cooling the cream, having the machine in good running order, and with a good herd of dairy animals with needed amount of feed and shelter the owner will certainly have something better than a "Klondike Gold Mine" right here in Kansas.

### A Missouri Milk Record.

The record of milk production and yearly income of a Missouri cow given below should open the eyes of some farmers to what it means to have a good cow. The record was made in the twelve months beginning May 12, 1901. The cow making it is owned by W. S. Nelson, Winfield, Mo. and is a fullblooded Holstein, ten years old. She is one of a herd kept for producing milk for the St. Louis market. One account of her dairy qualities, a careful record was kept by her owner for the year, weighing all the milk and keeping a record of the cost of feed used. The following table gives the production by months, beginning May 12, 1901, and ending May 12, 1902. The price per hundred pounds is the selling price received for the milk:

| | Pounds milk. | Price per 100 lbs. | Total income. |
|---|---|---|---|
| May | 932 | $ .72 | $ 6.71 |
| June | 1,546 | .84 | 12.98 |
| July | 1,304 | .98 | 12.78 |
| August | 1,368 | 1.10 | 15.04 |
| September | 1,155 | 1.10 | 12.71 |
| October | 1,056 | 1.16 | 12.24 |
| November | 850 | 1.25 | 10.62 |
| December | 844 | 1.28 | 10.80 |
| January | 943 | 1.25 | 11.79 |
| February | 719 | 1.25 | 8.98 |
| March | 833 | 1.16 | 9.66 |
| April | 719 | .86 | 6.18 |
| May | 344 | .76 | 2.41 |
| Total pounds milk | | | 12,614 |
| Total income | | | $132.90 |
| Cost for feed | | | 48.00 |
| Net profit | | | 84.90 |

It should be kept in mind that this splendid record was made during the most unprofitable season ever known in Missouri. On account of the drought the cow was on dry feed nearly twice as long as usual. During this period of dry feeding it was impossible at times for the owner to get bran and other proper feed. The fact that such a record was made under the unfavorable conditions was only possible because Mr. Nelson was well supplied with silage and fed it liberally. The credit of this record in my estimation is not entirely due to the cow, although she is undoubtedly an unusual animal. The "man behind the cow" and in this case the woman, too, judging from the interest shown by Mrs. Nelson is entitled to a good share of the credit. It would seem that results of this kind would set the man who keeps ordinary cows which give 4,000 pounds of milk per year on the average to thinking. The numerous Missouri farmers who expend $25 per year in keeping a cow to raise a $20 calf might also profit from this example.—C. H. Eckles in Coleman's Rural World.

### Should Kansas Farmers Build Silos, and Why?

L. R. MANLEY.

There are many reasons why Kansas farmers should build silos. Any man who has tested the feeding value of ensilage can readily see why every Kansas farmer that handles stock, and especially milch cows should always have plenty of ensilage at hand for the winter season and during drought periods when pastures are dry.

The silo preserves the crop, whatever it may be, in the same condition as when first cut, except that it ferments and sours, which is an essential thing in order to produce good ensilage. It retains the feed in a green and succulent state and is more palatable than when fed in a dry condition such as corn stover and other dry feeds. There is less loss of digestible nutrients when

**THE PROOF OF THE PUDDING!**

is in the eating. When we announced our price on the co-operative basis on January 1, the wise ones shook their heads. They said it wouldn't work. We began on that day to pay two and one half cents below the New York market for butter-fat, deducting the actual cost per pound for running the station. We figured that this would take the matter of price out of our hands, give an impetus to the business by making the patron directly interested in the business and help all concerned. Time has proved our judgment good and the results have been wonderful in many cases.

**NOW LOOK!**

The following table will show how it has worked in three stations:

| | Pounds Milk June, 1901. | Cost Operating Sta. | Price in June, 1901. | Pounds Milk June, 1902. | Cost Operating Sta. | Price in June, 1902. |
|---|---|---|---|---|---|---|
| Norwich | 153,580 | .021 | .145 | 206,277 | .013 | .1816 |
| Big Bend | 187,435 | .023 | .145 | 202,020 | .0125 | .1825 |
| Lyndon | 265,972 | .019 | .15 | 315,540 | .01 | .185 |

**DO YOU SEE THE POINT!**

These are only a few of the many which can be cited as showing the success of the plan. The more milk, the more money. That is all there is to it. Let everybody in this community join hands to build up the dairy business and interest more people in supplying more milk to the creamery. This has been done at the places named and these results have followed. You can do the same here. Try it. It is entirely in your hands. Bigger prices are what you want and we are ready to do our part to make it win. Prices are high now and there is no time like the present to push the business to its limit. Every men iu your community wil be benefited by an increase in the milk flow. Get your shoulder to the wheel.

THE CONTINENTAL CREAMERY CO.,

Topeka, Kansas.

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**BUTTER MAKERS** make better butter and more butter by using the

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**CREAM SEPARATOR**

simple, cheap, efficient. Easily cleaned. Free from repairs. Guaranteed to suit or money back. Send for Free book, "Good Butter and How to Make it." The Kneeland Crystal Creamery Co., 28 Concord St., Lansing, Mich.

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EASIEST CLEANED
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COUNCIL BLUFFS, IA.

***We Want to Buy Your Cream***

Write for particulars and commence shipping at once.

BLUE VALLEY CREAMERY CO.,

St. Joseph, Mo.

preserved in the silo than in any other method of handling.

If the farmer can arrange to put up a sufficient amount of ensilage to more than supply his winter need this surplus can be used to feed the cows through drought periods when pastures are short and in this way cows can be kept up to their flow of milk. This is important, for if the cow goes down in the flow of milk she cannot be brought up again until another period of lactation.

The utilization of the corn-crop by making ensilage from it, is as cheap a way to handle the crop as any other method, when it is considered that the ensilage, once in the silo, is ready for feeding without any more work, except to measure out to each animal its share for a feed.

As to the construction and filling of a silo, according to the statement of Mr. Cobb of Illinois, a two hundred and fifty ton silo can be built complete for eighty or eighty-five dollars. In size this will be sixteen feet in diameter and thirty feet high, and will be constructed either of lumber or stone. The latter material has been used quite successfully in the construction of silo. If constructed of wood fourteen and sixteen foot 2 by 4, hard pine is used. The structure is usually round, as this form has proven the best, as the ensilage packs better than in the square form of silo.

As to the expense of filling a silo; in the past the greatest difficulty in getting farmers to build silos has been the expense of filling. But with modern facilities and machinery such as corn binders and cutters, the labor and expense has been greatly reduced. The cost for filling, only being about thirty-five cents per ton for labor.

What shall we fill our silos with? Corn is the cheapest and best feed that we have from which to make ensilage. Kafir-corn and sorghum will do for ensilage in the absence of the field corn. If corn gets too ripe and dry, cane can be used with the corn in order to furnish moisture enough to ferment. The time for putting corn in the silo is when it is passing out of the roasting-ear period. If allowed to get too ripe, water can be used to increase the moisture. And this is an important point to consider and to note while filling, for if you do not have moisture enough the ensilage will mould and be very musty.

FEEDING VALUE OF ENSILAGE.

It is well known that a cow does her best and gives the largest flow of milk, when on rich summer pasture, which is the richest and most succulent feed we have. Why is it not then a wise thing for the farmer to provide green and succulent feed for her in the winter season when all other feeds are dry, and when pastures are short in the summer season. This succulent feed can be had by building a silo and storing in it the immense crops of corn that are produced in Kansas. And in this way it is possible for every farmer to have green feed the year around.

### Preparing Tubs to Hold Moisture.

C. J. GRIFFIN.

One thing I have noticed in butter-making is the moisture of the butter. We all know what over-run is to the man who operates a creamery. When we get this over-run, why not keep it? We sometimes lose a per cent of this over-run through neglect. For example, an experiment with a butter-tub will be of some value. A butter-tub will consume from one to two pounds of moisture. If not properly prepared before time to be packed, the tub will absorb moisture from the butter, which takes away from the amount of over-run gained in churning.

We will say a buttermaker makes ten tubs of butter a day for 313 days at a loss of one-half pound per tub per day, butter at 20 cents per pound. This will be a loss of $313 in that time, so we see we must look to the preparing of our tubs, which I think is very important.

### Importance of Good Females in Breeding Dairy Cattle.

C. H. CLARK.

The age, constitution, and breeding of foundation stock for the dairy should be carefully considered. The breed, if it is anything but a complex mixture, and the form should be the same or at least should harmonize well with that of the sires that are to be used in affecting the improvement of the herd.

The selection of females subsequent to those of foundation stock and the length of time the latter should be kept, must be based upon accurate records of the amount of milk and butter fat produced as compared with the cost of feed and care. Constitution, fecundity, and prepotency will also guide the careful breeder in his weeding out process. It frequently happens that a common or grade cow, while she is a good milker, transmits little or none of this quality to her offspring. On the other hand a better bred cow may be only a fair milker but may give to her calf the excellent milking qualities of the breed. In building up a herd of profitable cows the latter would certainly be preferable. When two animals are about equal with regard to economical production of butter fat and milk one of them may be retained or rejected upon some less important consideration, as the ease of milking, nervous temperament, proportion of male to female calves, disposition or tendency to ill health.

## Grain Markets.

Conducted by James Butler, Secretary of the Farmers' Co-operative Grain and Live Stock Association.

"The human race is divided into two classes,—those who go ahead and do something, and those who sit still and say, why wasn't it done the other way."—Oliver W. Holmes.

### Railroads Discrimination.

Railroad officials are just as narrow as other men, just as near sighted, just as prejudiced and just as foolish. They do not want the people to make war on their methods of discrimination and extortion upon certain localities and certain industries in Kansas. They will not even admit that the great agricultural interests of Kansas have rights that are worthy of respect.

In this matter they are near sighted. Such a policy is sure to bring just retribution. The great agriculturists will not always meekly submit to the discriminations and utter contempt displayed against them and their business organizations by railroad officials. We expect fair treatment and the same courtesies shown other commercial interests. We ask nothing more, and nothing less will satisfy us.

The agricultural interest is the dominant industry in the State. Second to it is the railroad industry. It seems that these two dominant interests could and should work mutually for the advancement of each other. But the railroads have not shown a spirit of fairness toward the farmers and their organized movement. If their present policy is pursued it will precipitate a fight which will be a bitter one and in which the railroads will for a time have the advantage, until they reach the ballot box, where the enraged formers usually go to even up with the railroads. Railroads complain about hostile legislation but by their policy of discrimination they bring it on themselves.

To illustrate and further explain what we have said above we will quote last Saturday's market on No. 2 and No. 3 hard wheat at Kansas City:

NO. 2 HARD WHEAT.

| | |
|---|---|
| 1 car fancy old | .71 |
| 1 car fancy old | .70 |
| 1 car old | .69 |
| 2 cars | .67½ |
| 4 cars | .67 |
| 5 cars | .66 |
| 1 car | 65 |

NO. 3 HARD WHEAT.

| | |
|---|---|
| 2 cars | .65 |
| 1 car | .64 |
| 2 cars | 63 |
| 2 cars | .62½ |
| 1 cars | .62 |
| 9 cars | 61½ |
| 2 cars | .61 |

The reader will readily see that there was a spread of six cents per bushel on No. 2 hard wheat. The highest price was seventy-one cents and the lowest price sixty-five cents. If a bidder makes an offer on No. 2 hard wheat he would be compelled to accept wheat that graded No. 2 hard no matter what it would bring on the market. If the bidder or local buyer understands his business he is going to buy on a safe margin.

No one but a fool could be expected to do otherwise. Then to be safe he must bid on the basis of the lowest price which in this case would be sixty-five cents. Any other course would be business suicide and a game of chance. On No. 3 hard wheat there was a spread of four cents per bushel and the above reasoning applies to No. 3 hard wheat as well as No. 2. Do not understand me that you will always win by consigning your wheat, but on the average the farmers will get the best price by consigning their grain.

If it were otherwise the grain dealers would go to the wall. Our association will make you as liberal bids as any of the other dealers if you desire to sell on track; but we are firmly of the belief that farmers will on the average realize more for their wheat if they consign to our association. The lowest price paid for a car of wheat last Saturday, July 26, in Kansas City was forty-five cents per bushel; the highest price seventy-one cents, a spread of twenty-six cents.

Every officer of our association who handles money is bonded in a reliable surety company.

Our association has never seen the day it could not meet its obligations on a moment's notice.

Our association should have two thousand stockholders by the first of next year. Write us for application blanks.

Our company is composed of 350 of the best farmers in the State and more than thirty of the local cooperative associations.

The Farmers' Co-operative Grain and Live Stock Association, (non-partisan) is now the strongest farmers organization in Kansas and it is constantly growing more powerful.

Our members and the farmers interested in the success of our association can make it the greatest commission company in the State by consigning their grain to us and getting others to consign.

Is there a grain grower in Kansas who has not received benefit directly or indirectly from the existence of the Farmers' Cooperative Grain and Live Stock Association? Every wheat grower in the State has been benefited.

When at Inman a few days ago the writer offered the farmers four cents a bushel more than the grain dealers were paying at that station for No. 2 old hard wheat providing they would furnish it on board of cars at that station.

If each of our members would secure the consignment of one car of grain to us, it would wonderfully strengthen and assist our movement. This is your company, work for it, and push it to the front. Every member should act as a solicitor.

The Grain Trust Journal of Chicago admits that if the farmers' co-operative associations succeed the grain trust dealers must go to the wall. They can not compete with farmers' organizations if the farmers stand firmly together. Their only hope is to work on the prejudice of farmers and that farmers will prove themselves too stupid to accept advantages offered them by cooperation.

If each of our co-operative associations will ship us a car a day for the next thirty days, the capital stock of our association will be worth 200 cents on every dollar of stock subscribed and paid for, and in addition to this we can save our patrons at least one cent on every bushel of grain consigned. If you want to build up a powerful farmers' movement you know how to do it. Consign your grain to our association.

Every member of the farmers' cooperative association has reason to be proud of the work that has been done. Every farmer who has not helped his brother grain growers in this battle for their rights must feel ashamed of himself—must surely realize that he is profiting from the labor and investments of others without any attempt on his part to reciprocate. He is reaping what he has not sown.

One of the grain trust dealers at Inman refused to open the school house for a farmers' meeting at that place for the purpose of organizing a cooperative shipping association. How could we injure the grain dealer if we do not assist the farmer? Our lecture is clearly educational and permissable under the rules governing the school board. But it is the kind of education that the grain dealer fears; hence his refusal to let us speak.

If you desire to organize a farmers' co-operative shipping association at any of the stations in Jewell, Mitchell, Osborne, Smith, Rooks, Phillips, Norton. Decatur, Sheridan, or Rawlins counties write for dates giving the facts and names of interested farmers at your station. We expect to have an organizer in your part of the State in the near future and if you want a meeting apply at once to James Butler, Office Block, Topeka, Kansas.

In consigning grain to us, bill, "shippers order, Kansas City, notify The Farmers' Cooperative Grain and Live Stock Association." If you ship No. 2 wheat and load it on the A. T. & S. F., Union Pacific or Rock Island have your bill of lading read, "Stop in Topeka for Inspection." On all other roads and all law grade grain, bill to us direct at Kansas City. This will give us a chance to sell No. 2 wheat to mills here or direct it to other mills or forward to Kansas City. The freight will be just the same no matter whether it stops here or goes to Kansas City.

The farmers and grain growers met in K. P. Hall last Saturday afternoon and completed the organization of a Farmers' Live Stock and Grain Growers Association. The following are the officers of the permanent organization: President, F. O. Mott; Vice-President, M. W. Parsons; Secretary, S. D. Cox; and Treasurer, N. P. Cunningham. The


**More Milk. More Money.**

Cows will give 15 to 20 per cent. more milk if protected from the annoyance of flies with **Childs' So-Bos-So Kilfly.** It is a thorough fly and insect killer, and it absolutely destroys all bacterial germs. It allays nervousness in horses as well as cows and keeps both in better general condition by the comfort it gives. For scours in calves, hog cholera, and foul in calves' feet it has no equal.

It is perfectly harmless to man and beast and may be rapidly applied with **Childs' Electric Sprayer.**

It is a true antiseptic and it will keep stables, cow sheds, chicken houses and pig pens in a perfectly sanitary condition. **Convenient. Cheap. Practical.**

Mr. Jacob Steibel, Supt. to the Hon. John E. Parsons, Lenox, Mass., says: "I have used So-Bos-So Kilfly with good results. It is a comfort to both man and beast at milking time."

*Ask your dealer for SO-BOS-SO or send $2.00 for 1 gallon can and sprayer complete, express paid to any point east of Mississippi river.*

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**THE FARMERS'**

**Cooperative Grain and Live Stock Association**

will handle your grain, hay and feed on commission at Topeka, Kans., or Kansas City, Mo. If you appreciate honest work, good treatment and prompt returns, consign your grain to us. We want the consignment of all cooperative associations, independent dealers, scoop shovel men and farmers. Correspondence solicited. Address all communications to

**JAMES BUTLER, Secretary.**
Room 14, Office Block, Topeka, Kans.

Kansas City address 404 Board of Trade.



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**Office, 267-268-269 Second Floor Exchange Bldg.** OVER INTERSTATE NATIONAL BANK.

**STOCK YARDS, KANSAS CITY, U. S. A.**

References—Inter-State National Bank and Cattlemen Generally.

Directors are, Ellis Miller, D. C. Brown, W. P. Bradshaw, Z. T. Thompson, T. F. Gallaher, Joe Swartz, and C. H. Martin. The stock is being rapidly subscribed, and the association expects to immediately commence the erection of a ten thousand-bushel elevator in Harper. The association is made up of the very best and most substantial farmers of Harper County.—Harper Advocate.

## THE MARKETS.

The grain market so far as wheat is concerned in Kansas this year, is very peculiar. We have what is generally known to the grain trade as an elevator crop. The spread in the wheat market at the present time is about twelve cents per bushel. Track bidding is very difficult on account of the condition of the crop. All track bidders keep a good safe margin between their bids and the market.

They will no doubt continue to do this. The farmer who sells his low grade wheat on track will as a general rule sell it several cents below what it is actually worth. The condition of the crop and the uncertainty of the grade will make the track bidders keep on the safe side; hence the farmer who sells low grade wheat on track or to the local buyer will be loser unless the local buyer represents a cooperative association in which he, the seller, has stock, and in that way gets the profits made on his wheat returned to him in dividends.

The grain dealer is not to blame if he buys your wheat for 10 cents a bushel less than it is worth. If you sell it to him you should blame yourself. He does not beat you, you beat yourself. You are to blame because you do not ship your grain or join with other grain growers in forming a cooperative shipping association and in this way get all your grain will bring on the market.

If you can not secure an organization at your station then load your grain into cars and consign the same to the Farmers' Cooperative Grain and Live Stock Association, Kansas City. We charge a commission of 1 cent a bushel on wheat and ½ cent on corn and oats. By consigning your grain to us you get State inspection and State weights, which insures you correct grades, and in this way you get all that your grain is worth on the market.

The farmer who sells his grain to the local dealer or on track will generally be the loser this year. The local buyer can beat him on grades as well as price, while on the other hand if he consigns to us he gets correct grades and it is our business to see to it that he gets all his grain is worth on the market. If you want to help yourself, get the best possible price for your grain, and also help the farmers' cooperatiev movement, then patronize the Farmers' Cooperative Grain and Live Stock Association which is owned and controlled by farmers; the purpose of which is to secure equitable prices for the grain growers' products.

As to advising you regarding future markets it is a very difficult matter, but we have no hesitancy in advising you to consign your wheat. We are sure it will bring you best results. This advice is as applicable to local buyers and local associations as it is to individuals.

### Frazius' Market Review.

Topeka, Kans., July 28.

The past week has demonstrated the fact that farmers are not willing for wheat to bring a fair price. They are now making such tremendous deliveries of wet, unsound and sprouted wheat, that the same can not be taken care of in the terminal markets of the country. When Kansas City gets from 300 to 500 cars of low grade wet wheat per day prices must give way; dealers can not handle such stuff without great loss in price and in weight by evaporation, and no one is to blame except the farmer who forces his product upon the market in such bad condition. The right way for farmers to do with wheat out of conditon is to carefully put it in narrow, well-covered stacks, let it cure, and not force it upon the market. This wet wheat must be got in condition before it can be exported, to prevent heating in transit. At best, it will bring a poor price and our domestic mills can not use it at all. Exports are running about 60 per cent of those of a year ago, while primary receipts of wheat are much larger than they were a year ago. Primary receipts of wheat last week were 6,559 cars against only 5,477 cars for the corresponding week in 1901. The visible supply increased over a million bushels last week and the demand from Europe for our wheat is not very urgent at present. Crops in all countries abroad are said to be good. Under these circumstances low prices must be expected, especially as the movement of spring wheat will soon begin, and if farmers in the Northwest will persist in following the course of the Southwestern farmes they themselves will bring about a demoralization of the market. Who is to blame?

Markets closed weak and lower as follows:

Chicago.—No. 2 red wheat 71@71½c; No. 2 hard wheat, 71½c; No. 2 corn, 61c; No. 2 oats, 42c; September wheat 71c.

Kansas City.—No. 2 hard wheat, 66½@69c; No. 3 hard wheat, 59@63c; rejected hard wheat, 52@54c; No. 2 red wheat, 67c; No. 3 red wheat, 61@62c; September wheat, 63½c; No. 2 corn, 57c; No. 2 oats 35c.

F. W. FRASIUS.

### Kansas City Live Stock.

Kansas City, Mo., July 28, 1902.

Grass cattle continued to pour into market last week, but not to such an extent as they did during the drouth period in the corresponding week in 1901. Total receipts for the week amounted to 41,000 head. A year ago 76,700 head arrived. Quarantine arrivals amounted to 15,200 head, against 10,400 a year ago. Killing cattle declined 15@25c during the fore part of the week, but rallied towards the close, making the net loss not much over 10c. Best beeves sold up to $8.30. On Wednesday L. F. Fellwock, of Beatrice, Neb., marketed a load of well-finished 1,485-pound natives at that price. Robert Thompson, of Berlin, Iowa, marketed top hogs for the week on Monday. They brought $7.82½. Kansas and Missouri were left in the cold in regard to securing tops this week.

The liberal run of quarantine beeves had the effect of weakening the general market on native grassers and most grades sold off 15@25c. Best feeding cattle sold about steady, but common grades were hammered hard and closed at the low point of the season. Good feeders are bringing a little over $5, but country-men are becoming somewhat timid about taking on high-priced feeding stock and prefer to keep out of the race rather than pay fancy prices. A good class of steers can be bought from $4.50 to $5.

All the markets showed heavy decreases in hog receipts when compared with a year ago. Chicago leads off with 69,700 and Kansas City followed right in her wake with 62,000. The total supply at the five markets amounted to only 205,000 against 426,800 the same time in 1901. The week's supply at this market was right at 22,000, the smallest since Christmas week of 1895. In spite of the light receipts packers were bears upon the market and prices declined the first three days. Later a reaction was had but the week closed with values 10c lower than in our last report. The $8 mark for swine is not for the shipper at present. On Monday of this week best porkers were selling at $7.85, while medium swine were worth form $7.50@7.70. The trade looks for a reaction in prices. The meagre receipts should secure this result in spite of the attitude of the packers.

Sheep arrivals were moderate at 13,700 head. Prices soared skyward on Monday and Tuesday but lambs broke heavily later on and closed 10@25c lower than the previous week. Muttons held the advance and closed a good quarter higher. Best muttons now command $4@4.25. The margin between them and lambs is closing. Shippers should not figure on receiving over $6 for lambs at present. The proportion of lambs among the offerings is heavy and the market is showing symptoms of breaking from the present high plane of values. As soon as the Western lamb movement sets in lambs will be selling nearer the $5 than the $6 mark.

Very little was doing in either horses or mules during the week. Arrivals showed some improvement over the previous seven days, aggregating 650 head. The increase was largely in range horses, however. They sold about steady. The general market remains unchanged. There is a better feeling in big mules and sales look stronger.

Spring chickens were weak during the past seven days and quotations are now at 13c per pound. Other kinds of poultry are steady. Hens are worth 9½c; roosters 20c each; ducks 6c; young ducks 8c; geese 4c; turkey hens 10c, gobblers 8c. Eggs are good sellers at fully steady prices. Candled eggs are bringing 14c. Butter selling steady 19½c for fancy creamery, 14½c for store packed.

POWELL.

### South St. Joseph Live Stock.

South St. Joseph, Mo., July 28.

Beeves on the fancy order were absent and choice grades were scarce, with the demand good and prices at the top notch of the year. Good fat kinds were in light quota, but values broke 15@25c. Underfed natives, grassers, and westerns made up the bult of the arrivals, which classes of cattle lost 25@40c. Under light receipts, cow and heifer prices advanced 25@40c, but with increased supplies later in the week 15@25c of the gain was wiped out. The trend of stock cattle prices was downward the greater part of the week, a net decline of 25c being recorded. Fresh arrivals were fairly good in numbers with the movement to the country of very good volume.

Receipts on the quarantine side were liberal with the big end of the offerings running to steers of medium to good quality. The demand was strong and plenty of activity was manifested in the trade each day, although the week closed up 15@25c lower. Cows were in moderate proportion and buyers were eager for them, with prices averaging steady for the week. Calves were in light quota and good demand at firm figures.

The good increase in hog receipts early in the week and sharp break in provision market gave the packers an opportunity to pound the hog market to the tune of 25@30c for the week, although there was some reaction for the better late in the week under decreased supplies. The quality averaged fair to good.

Early in the week arrivals in the sheep division were light and prices advanced sharply but with increased offerings later on, part of the gain was dissipated, with the week closing 15@25c higher on both lambs and sheep. The bulk of the offerings ran to Idaho, Utah, and Oregon wethers and yearlings, with a fair quota of lambs and ewes included. Native supplies were very light.

**PILES** Fistula, Fissure, all Rectal Diseases radically and permanently cured in a few weeks without the knife, cutting, ligature, or caustics, and without pain or detention from business. Particulars of our treatment and sample mailed free.

Mr. M. McCoy, Goganac, Kans., Captain Company A., Fifteenth Indiana Infantry, writes: "Hermit Remedy Company, Dear Sirs:—I have doctored for piles since the Civil War—thirty-six years—and am now glad to report that after using your treatment for a few weeks I am completely cured. I believe you can cure any one, for a man could not be in a much worse condition than I was and live, and I am duly grateful to you. Respectfully,

"M. McCOY."

We have hundreds of similar testimonials of cures in desperate cases from grateful patients who have tried many cure-alls, doctors' treatment, and different methods of operation without relief.

Ninety per cent of the people we treat come to us from one telling the other. You can have a trial sample mailed free by writing us full particulars of your case. Address, HERMIT REMEDY COMPANY, Suite 736, Adams Express Building, Chicago, Ill.

**HEAVES CAN BE CURED**

We have a guarantee cure for Heaves, Coughs and Colds. Guaranteed to cure or your money refunded. One package by mail, 60c 12 pkgs. by exp., with written guarantee to cure $5.00. WILBUR SEED MEAL CO., 294 2nd St., Milwaukee, Wis.

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All kinds for invalids and cripples. Built on new and practical methods at moderate prices. Full particulars on application. : :

RECLINING CHAIRS .. FOR LIBRARY OR SICK-ROOM.

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**FOR SALE INDIAN LANDS.**

**6,000 Acres of Inherited Land**

Located in the Indian Territory, for which titles can pass. Consisting of 80-, 160-, and 200-acre tracts convenient to railroads. Good farming land—some in cultivation. Prices from $11 to $20 per acre. Address

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If so I will cure you in three weeks or refund the money. Three weeks treatment sent to any address postpaid for 25 cents, stamps or coin. The safest, surest, and most practical cure on earth. That celebrated book entitled "What I Know About PILES" FREE. Address H. C. Daniels, 284 Asylum St., Hartford, Conn.

**FARM FOR RENT.**

Fine upland farm of 324 acres in Dickenson county, Kansas, three miles from Navarre, a Santa Fe station. 160 acres plow land, 110 acres fine prarie grass pasture, 30 acres hay land, 17 acres alfalfa, all land level and free from stone. Good springs in pasture, two wells, one windmill, nine room frame dwelling, new frame barn 64 by 37 feet, farm all under wire fence. A fine dairy farm 2½ miles from skimming station. Terms, $1.40 per acre. Rent payable semi-annually and must be secured. Address for further particulars, G. W. Borman, Navarre, Kansas.

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Any disease successfully treated by noted physicians of long experience for $5 per month including medicines. Write to-day. Thousands cured by mail. SOUTHERN INSTITUTE, (Uninc.) 216 South Clark Street, Chicago, Ill.

## The Stray List.

### Week Ending July 17.

Wilson County—C. W. Isham, Clerk.

HEIFER—Taken up by David Woodson, Coyville. Verdigris, tp. One red and white heifer, branded K on left hip, white hornes, valued at $18.

Lyon County—H. E. Peach, Clerk.

HORSE—Taken up by Aaron Hammer one mile southwest of Emporia, one dark bay horse, about 9 years old, white strip in face, the right hind foot white, about 15 hands high.

Sedgwick County—J. M. Chain, Clerk.

HORSE—Taken up by Jacob Schaulf of Garden Plain, Alton tp., Sedgwick County. One oay mare, blind in right eye, weight about 1000 pounds.

### For Week Ending July 24.

Cherokee County—S. W. Swinney, Clerk.

HORSE—Taken up by J. F. Degraff, in Shawnee tp. (P. O. Messer), June 25, 1902, one sorrel yearling mare, blaze face; valued at $25.

MULE—Taken up by same, one dark bay mule, 4 feet high; valued at $25.

Crawford County—John Vleits, Clerk.

HORSE—Taken up by James Wylie, six miles southwest of Girard, May 11, 1902, one gray horse, 8 or 9 years old, weight about 900 pounds.

Allen County—C. A. Fronk, Clerk.

HORSE—Taken up by R. O. Furmeaux, in Marmaton tp., July 9, 1902, one sorrel gelding, about 7 years old, with brand on left hip, white strip on face; valued at $10.

### For Week Ending July 31.

Sumner County— W. E. Wood, Clerk.

MARE—Taken up by C. M. Conner, May 1, 1902, one dark bay pony mare, 13½ hands high, Spanish brand on right shoulder, blemish on right hip, star in forehead, wearing leather halter head stall.

Marshall County—James Montgomery, Clerk.

HORSE—Taken up by Wm. McDonald in Marysville tp., (P. O. Marysville), on July 3, 1902, one bay horse, 6 or 7 years old, weight about 1,100 pounds, Branded with T W on left shoulder, with halfmoon over letters. No evidence of having been worked.

Barber County—J. E. Holmes, Clerk.

PIGS—Taken up by Geo. T. Knight, in Medicine Lodge tp., (P. O. Medicine Lodge), on July 23, 1902, one black pig with white and red spots; one pig with black and red spots; one black pig one black sow weight about 250 pounds; four white feet, split in right ear; one black sow with white marks, weight about 140 pounds, split in right ear.

## Special Want Column.

"Wanted," "For Sale," "For Exchange," and small or special advertisements for short time will be inserted in this column, without display for 10 cents per line of seven words or less, per week. Initials or a number counted as one word. Cash with the order. It will pay. Try it.

### CATTLE.

DAIRY STOCK FOR SALE—To reduce our stock we offer for sale, Fifty High Grade Shorthorn Cows, all good colors, and fine milkers, broke to halters. Also twenty registered Jersey cows and heifer, three Jersey bulls. These are a fancy lot of cattle. Sam Swoyer, Winchester, Jefferson Co., Kans.

FOR SALE—Guernsey bulls from best registered stock. J. W. Perkins, 423 Altman Building, Kansas City, Mo.

D. P. NORTON, Dunlap, Kansas, has a few young bulls, by British Lion, fit for service the coming season.

FIVE HEREFORD BULLS FOR SALE—Never used in a herd, they are in fine fix, at a bargain for cow men. O. L. Thistler, Chapman, Kans.

FOR SALE—Six good Shorthorns bulls, four of them straight Cruickshanks; prices reasonable; now is your chance to get a good individual. H. W. McAfee, Topeka, Kans.

### SWINE.

FORTY CHOICE DUROC-JERSEY SPRING PIGS—At $10 each. Address Chas. Dorr, Peterton, Kans.

PEDIGREED POLAND-CHINAS—$5 each; choice Shorthorns cheap. Send stamp for booklet. M. C. Hemenway, Hope, Kans.

### HORSES AND MULES.

PROSPECT FARM—CLYDESDALE STALLIONS, SHORTHORN CATTLE and POLAND CHINA HOGS. Write for prices of finest animals in Kansas H W. McAfee, Topeka, Kansas.

### SHEEP.

REGISTERED SHROPSHIRES—A choice lot of ewes, lambs, and rams for sale. Also Scotch Collie puppies. Olin Templin, Lawrence, Kans.

### FARMS AND RANCHES.

FOR SALE—435 acres, 150 bottom, 40 hay, pasture, running water, stone barn, fine timber, school-house, station adjoining; $27 per acre. A. H. Harshaw, Junction City, Kans.

FOR SALE—FOR SALE—A choice 320 acre farm located in Chase County Kansas. 140 acres under plow, 125 acres now in crop, 20 acres native meadow, 160 acres in pasture, fair buildings, good orchard, good pure water. Will sell with farm al the crop. 30 head of cattle, 13 head of them are registered Shorthorns, 5 horses, harness, wagons, farming implements. Send for full printed description. John G. Howard, Homestead, Chase Co., Kans.

FARM HOUSES for sale; fine ones; can sell yours. Buckeye Agency, Agricola, Kans,

FARM FOR SALE OR EXCHANGE—I have a large farm in eastern Kansas. I would like to exchange for a smaller one, or land that would do for a sheep ranch. For further particulars inquire of John Morrison, Drexell, Mo.

FOR SALE—480 acres of farm and pasture land, good location, plenty of stock water. For particulars address James A. Carpenter, Carbondale, Kans.

### SEEDS AND PLANTS.

FOR SALE—Alfalfa seed, crop of 1901. Write for sample and price. Smoky Hill Ranch, Gill, Logan Co., Kans.

SIBERIAN MILLET—Best for late sowing, bushel, $1; German, $1.15; cane, $1; Kafir-corn, 80 cts.; Dwarf Essex rape, 8 cts. pound; turnip, 35 cts. Trumbull & Co., Kansas City, Mo.

CANE-SEED—KAFIR-CORN—Choice white Kafir, choice cane-seed. All home-grown, thoroughly tested and warranted to grow; $2 per 100 lbs., sacked in jute sacks f. o. b. Kremlin, O. T. M. T. Williams & Co.

### PATENTS.

J. A. ROSEN, Patent Attorney, 418 Kansas Avenue, Topeka, Kansas

### MISCELLANEOUS.

WANTED—To exchange one year's scholarship in a high-grade ladies' college near St Louis for a team of good driving horses, 16 to 17 hands high, fairly well matched. Address Kansas Farmer.

FOR SALE—Elegant stock of groceries in best business town in Michigan. Doing a fine SPOT CASH business (no credit). Will take improved or part improved farm in part payment, if free of incumbrance. Address Grocer, Care Indian Medicine Co., Benton Harbor, Mich.

FOR SALE—Wholesale dairying business located just outside city limits, with a guaranteed trade, under contract at 12½ cents per gallon of $3,422 per year. Fine opening for farmer with boys who desire educational advantages of city. Our other business interests force sale of this business. Address Burton & Burton, Topeka, Kans.

$5 TO $12 WEEKLY; for copying letters for us in your own home, outfit and particulars free. Address Ladies' Home Magazine, Philadephia, Pa.

CREAMERY FOR SALE—At Neodesha, Kans., new four years ago, run two years and in good condition. Will sell or trade all or part. Ten horse power engine. Plant complete cost $3,500; will sell for less than half first cost. F. P. Graham, Neodesha, Kans.

FOR SALE CHEAP—Pedigreed Scotch Collie pups. W. H. Richards, V. S., Emporia, Kans.

WOOL WANTED—Will pay highest market price for wool. Sacks for sale. Topeka Woolen Mill Co., Oakland, Kans.

# The Veterinarian.

We cordially invite our readers to consult us whenever they desire any information in regard to sick or lame animals, and thus assist us in making this department one of the interesting features of the Kansas Farmer. Give age, color, and sex of animal, stating symptoms accurately, of how long standing, and what treatment, if any, has been resorted to. All replies through this column are free. In order to receive a prompt reply, all letters for this department should give the inquirer's postoffice, should be signed with his full name, and should be addressed to the Veterinary Department, Kansas Farmer, Topeka, Kans.

**Black Leg.**—What is the matter with my calves? I have had three die in one week. The first to die was a steer calf about 4 months old. It seemed to swell about the head, throat, and tongue. The next took milk at night and refused it in the morning. Died the middle of the afternoon. The third took milk in the morning but was missing at night. I found it in the morning. I cut the second and third open. The first one was all right so far as I could see except the blood had settled on the lower part of the intestines as if it had been hurt. In the second one I cut open I could find nothing wrong except that the lungs did not look just right. They looked spotted and dark. I have another which seems to be stiff in the neck and refused to suck. All the calves sucked the cows and ran on cane. Had been on it obout a week. None were over-fat. A. C. BALL.

Rosehill, Butler County.

Answer.—It may show on any part of the body. Have them vaccinated with blackleg vaccine.

**Stringy Milk.**—I had two red cows about six and eight years old. Both cows about a month ago stopped giving milk and what milk they gave for a week or ten days was thick and lumpy. I gave them a raw egg and turpentine together with sulphur and saltpeter in their salt. Now I have another cow that has the same disease and I have used the same treatment as above. What is the cause and what is the best thing to do? J. P. NIELSON.

Lincoln, Lincoln County.

Answer.—It is caused by fungi. Probably taken into the system in drinking water or feed.

**Warts.**—I have a yearling heifer that has a sort of mange on neck that now resembles seed-warts more than anything else. It commenced at first about the eyes and head, in a round white spot about the size of a silver dollar. Now it covers nearly all the lower part of the neck. One of my neighbors has a two-year-old heifer troubled with the same thing only much larger. C. H. DANLEY.

Jennings, Decatur County.

Answer.—Paint the parts with tincture of iodine every three days for two weeks, then apply castor oil, six ounces; sulphur, three ounces, mixed.

**Paralysis.**—What ails my pigs? They are three months old and run on alfalfa pasture. I feed them corn and slop made with milk and water, about one-third milk and two-thirds water, and some shorts mixed in it. The pigs get weak in the hind quarters. When they go the hind quarters fall down first one way and then the other, and after two or three weeks they are unable to use the hind quarters at all, but will pull themselves around with their front feet. The sick ones eat heartily and do just as well as the others. They can run all around the pasture on their front feet pulling their hind quarters without any pain. What is the matter with them and what shall I do for them? JAMES BOTTOM.

Onaga, Pottawatomie County.

Answer.—Shut them up in a dark stall with a good, deep bed. Apply turpentine along spine. Give twenty drops of tincture of Nux vomica to each in feed three times a day.

**Fistula.**—I have a grey horse five years old that was taken with fistula two years ago. I used bichloride of mercury and blue vitrol to destroy the pipes so they are all out; but I can't heal it up. It seems to be dry and will not heal. I used carbolic acid one part to seven parts water with no effect. I am now using air-slacked lime. Can it be cured and what shall I do? The horse is on alfalfa with no grass. O. T. WHITED.

Cedarvale, Chautauqua County.

Answer.—Take Russian cantharides one ounce, hogs lard four ounces, mix and boil and apply once a week. This will stimulate it and start it to healing. Then wash out in twelve hours and apply once a day camphor phenique four ounces, benzine tincture three ounces, olive oil, nine ounces, mixed.

**Broncholele.**—I have a bay mare that has a bump on the under side of her neck that has been there for some time. It is close up to her head, about the size of a turkey's egg, and is hard. She eats heartily and is in fine condition otherwise. I think it must be thick-neck. What can I do for her? FRED JONES.

Woodston, Rooks County.

Answer.—Paint it with tincture of iodine three times a week. Give her one dram of iodide of potassium in feed or drench in half a pint of water once a day for three weeks.

**Keratitis contagiosa.**—A number of my neighbor's cattle are afficted with what he terms pink-eye. About one week or more ago my bull (a large Shorthorn) broke through the hedge fence and also the wire fence on opposite side of road. When I found him discovered that one of his eyes was badly swollen, but paid no attention to it, thinking that he had punctured it with a hedge thorn or that he had been struck with a rock. As he seemed to grow worse I made an examination, with the following results: Water and a kind of puss were freely oozing from the eyes. One of his horns which had been sawed off early in the spring had begun to run apparently in sympathy with the eye. Screw worms were in it. I got the worms out and both eye and horn are now better. The conjunctiva, the cornea, and the sclerotic coat are each a perfect pink each of a different shade. I have not been treating it other than to put a little shoo-fly and axle grease about his head to keep the flies off. I am conducting a little butter dairy and what is worrying me most is how to prevent my cows from taking it and if they should how to treat them and suffer the least damage. My bull has been running with my cows ever since I brought him home not knowing what the trouble was until recently. Some of my neighbor's cattle have lost both eyes, some one, and some get entirely over it. Give me all the information possible, how to handle it, how to prevent it, and how to treat it after they have become afficted. J. F. ENSOR.

Merriam, Johnson County.

Answer.—Take equal parts of calomel and boracic acid mixed and blow the eye full after bathing it out with hot water, hold the lids open and cover the eye with the powder just once. Keep in a darkened stable during the day time.

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Keep your system in perfect order and you will have health, even in the most sickly seasons. The occasional use of Prickly Ash Bitters will insure vigor and regularity in all the vital organs.

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### Leading Exhibitions for 1902.

Missouri State Fair—Sedalia, Aug. 18-23.
Iowa State Fair—Des Moines, Aug. 22-30.
Ohio State Fair—Columbus, Sept. 1-5.
Nebraska State Fair—Lincoln, Sept. 1-5.
Minnesota State Fair—Hamline, Sept. 1-6.
Wisconsin State Fair—Milwaukee, Sept. 8-13.
Indiana State Fair—Indianapolis, Sept. 15-19.
Kentucky State Fair—Louisville, Sept. 22-27.
Michigan State Fair—Pontiac, Sept. 22-26.
Illinois State Fair—Springfield, Sept. 29-Oct. 4.
Texas State Fair—Dallas, Sept. 27-Oct. 12.
St. Louis Fair, Oct. 6-11.
American Royal Hereford, Shorthorn, Galloway, Aberdeen-Angus, Berkshire, and Poland-China—Kansas City, Oct. 20-25.
International Live Stock Exposition, Dec. 1-6.

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### Kansas Fairs in 1902.

Following is a list of fairs to be held in Kansas in 1902, their dates, locations and secretaries, as reported to the State Board of Agriculture and compiled by Secretary F. D. Coburn:

Allen County Agricultural Society—C. H. Wheaton, Secretary, Iola; September 2-5.

Barton County Fair Association—James W. Clarke, Secretary, Great Bend; September 2-5.

Brown County Fair Association—Grant W. Harrington, Secretary, Hiawatha; August 27-29.

Butler County Fair Association—H. M. Balch, Secretary, Eldorado; September 29-October 3.

Chautauqua County—Hewins Park and Fair Association—P. N. Whitney, Secretary, Cedar Vale.

Clay County Fair Association—E. E. Hooues, Secretary, Clay Center; September 9-12.

Coffey County Agricultural Fair Association—J. E. Woodford, Secretary, Burlington; September 9-12.

Finney County Agricultural Society—Fred Mims, Secretary, Garden City; August 27-29.

Franklin County Agricultural Society—Carey M. Porter, Secretary, Ottawa; September 16-19.

Greeley County Fair Association—G. P. Hawkins, Secretary, Tribune.

Harvey County Agricultural Society—John C. Nicholson, Secretary, Newton; September 23-26.

Jackson County Agricultural and Fair Association—S. B. McGrew, Secretary, Holton; September 23-26.

Jefferson County Agricultural and Mechanical Association—Geo. A. Patterson, Secretary, Oskaloosa; September 2-5.

Marshall County Fair Association—E. L. Miller, Secretary, Marysville; September 9-12.

Marshall County—Frankfort Fair Association—J. D. Gregg, Secretary, Frankfort; September 23-26.

Miami County Agricultural, Mechanical and Fair Association—W. H. Bradbury, Secretary, Paola; September 9-12.

Morris County Exposition Company—M. F. Amrine, Secretary, Council Grove; September 24-26.

Nemaha County Fair Association—A. R. Spaulding, Secretary, Seneca; September 3-5.

Neosho County Fair Association—H. Lodge, Secretary, Erie; September 30-October 3.

Neosho County—Chanute Agricultural, Fair, Park, and Driving Association—A. E. Timpane, Secretary, Chanute; August 26-29.

Ness County Agricultural Association—H. C. Taylor, Secretary, Ness City; September 24-26.

Norton County Agricultural Association—J. L. Miller, Secretary, Norton; September 2-5.

Osage County Fair Association—E. T. Price, Secretary, Burlingame; September 2-5.

Reno County—Central Kansas Agricultural Fair and Live-stock Association—Ed. M. Moore, Secretary, Hutchinson; September 15-19.

Rice County Agricultural Association—C. Hawkins, Secretary, Sterling; September 8-12.

Riley County Agricultural Society—A. B. Lee, Secretary, Riley; September 2-5.

Rooks County Fair Association—Olmer Adams, Secretary, Stockton; September 9-12.

Saline County Agricultural, Horticultural and Mechanical Association—H. B. Wallace, Secretary, Salina; September 2-5.

Sedgwick County—The Wichita and Southwestern Exposition and Fair Association: H. L. Resing, Secretary, Wichita; September 22-27.

Stafford County Fair Association—Frank C. Swartz, Secretary, St. John; August 20-22.

Wilson County—Fredonia Agricultural Association—J. T. Cooper, Secretary, Fredonia, August 19-22.

Cowley County—Eastern Cowley Fair Association—J. M. Henderson, Secretary, Burden.

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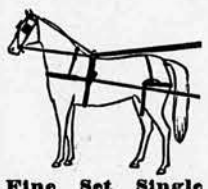

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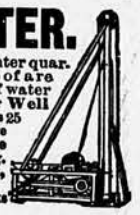

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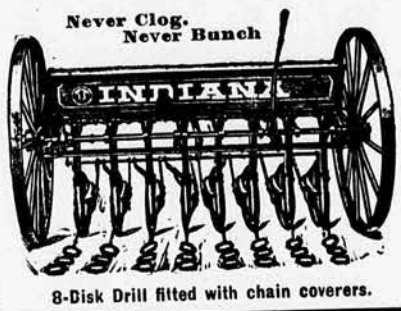


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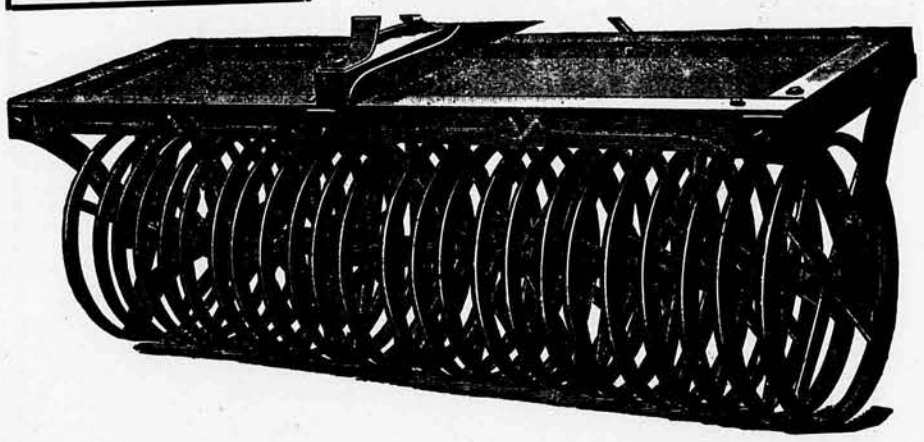

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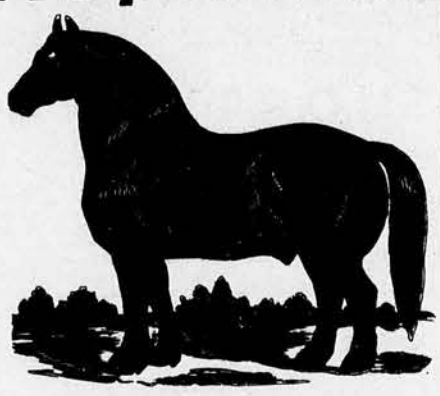

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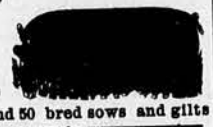

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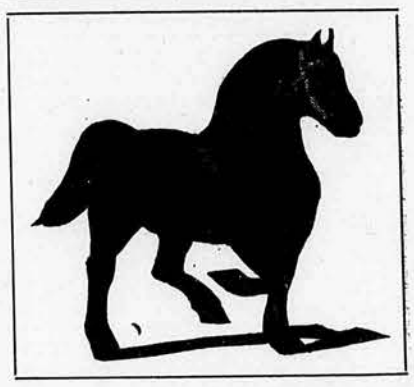

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