

# KANSAS FARMER

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LARGE ENGLISH  
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WM. MAGUIRE, Haven, Kas.

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and Barred Plymouth Rock chickens. Tecumseh Short Stop 14750 at head of herd, assisted by Hadley Jr.'s Equal 15119 and King Tecumseh 16307. One hundred choice pigs for sale. Farm located three miles southwest of city. Calls or correspondence invited.  
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W. P. GOODE, Proprietor, Lenexa, Kas.

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125 head. The best individuals and most popular strains that money and judgment could buy and experience breed. Thirty choice spring pigs both sexes, by Black Stop Chief 16310 S. he by the great breeding boar Black Stop 10550 S., a son of the World's Fair winner, Short Stop. Write or visit us.  
WAIT & EAST, Altoona, Wilson Co., Kas.

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Herd boars are H's World's Fair No. 211930 and Don Wilkes 15475. Have fifty pigs for sale, strong in Tecumseh, Corwin and Wilkes strains. They are up-to-date in breeding and thrifty. Inspection and correspondence invited.  
W. F. Shamleffer, Council Grove, Kas.

## FRANKLIN COUNTY HERD POLAND-CHINA SWINE.

The champion herd of the big fair at Ottawa, 1897. Herd headed by Chief Editor 17965, assisted by Tecumseh Short Stop 14750 and an extra young boar, High Hadley. Twenty-five sows and gilts for sale, bred to the above-named boars. Call or write.  
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and prize-winning Barred Plymouth Rock chickens—first premium at Kansas State fair in '95-'96-'97. Choice birds \$2 to \$5 each. For thirty days will sell choice pigs at \$15 per pair. My two herd boars and brood sows, including first premium sow, at a bargain, as I wish to close out my hogs before winter.  
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Registered stock. Send for 44-page catalogue, prices and history, containing much other useful information to young breeders. Will be sent on receipt of stamp and address. J. M. Stonebraker, Panola, Ill.

**D. L. BUTTON,** North Topeka, Kas., breeder of Improved Chester Whites. Stock for sale. Farm 2 miles northwest of Reform School.

## SIXTEEN TO ONE HERD REGISTERED POLAND-CHINA SWINE.

Herd boars, Gold Standard Wilkes by Guy Wilkes 2d 1777 S. and Ideal Quality by Darkness Quality 2d 14361 S. Brood sows, Tecumseh, Black U. S. and Wilkes. Thirty spring pigs, both sexes, ready to go. Farm two miles north of Welda.  
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Spring pigs of either sex. The leading strains—Black U. S., Corwin and Wilkes. Write for prices, tell what you want and I can probably suit you.  
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LAWRENCE NATION, Hutchinson, Kas.

## PLEASANT VALLEY HERD REGISTERED POLAND-CHINA SWINE

Westphalia, Anderson Co., Kas. Breeder of high-class pedigree Poland-China swine. Herd headed by Lambing's Ideal. Sixty spring pigs for this season's trade, sired by herd boars King Perfection and Tecumseh's Grand out of sows by Chief Tecumseh 2d, Free Trade, Black U. S., etc. Write.  
E. A. BRICKER.

## BAYFIELD FARM HERD POLAND-CHINA SWINE.

FOR SALE—50 GILTS, to be bred for March, April and May litter, sired by U. S. Volunteer 15336 S. by One Price 4207 S., and Bayfield Chief 17793 S. by Chief Tecumseh 2d 1915 S. Also a few good spring boars.  
J. S. MACHIE, Linwood, Leavenworth Co., Kas.

## PURE-BRED POLAND-CHINA SWINE

Brood sows by Wren's Medium, Hadley M. Washington, Protection Boy and Darkness 1st 38752 in this herd. Tanner 19212, a son of Gen. Hidestretcher by the famous Hidestretcher, now heads my herd, and a finer breeder and individual is not in Kansas to-day. I need not comment on Tanner's breeding, nor on that of my brood sows. Pigs by One Price Medium 2d 18395. Prompt attention given to all inquiries. Prices reasonable. J. R. WILLSON, Marion, Kas.

## Mains' Herd Poland-Chinas

Headed by the three grand breeding boars, Model Combination—his sire was J. D. Model, he by Klever's Model 14664 out of McKelvey's Lass 42107; his dam Lady Chief 42919, she by Chief Tecumseh 2d 9115 and out of Ralph's Pet 42788; One Price Chief—his sire Chief Tecumseh 2d 9115, his dam Alpha Price 38785, she by One Price 4207; Kansas Chief 33615—he by Royal Chief's Best and out of Bell O. 74594. The sows are all selected and equal in breeding and quality to any. A few sows bred will be offered. Young males and gilts ready. Satisfaction guaranteed.  
James Mains, Oskaloosa, Jefferson Co., Kas.

## ESTABLISHED 1882. SERVICE FEE \$50. KLEVER'S 1st MODEL 18245 S.

Sired by Klever's Model 14664 S., the \$5,100 king of boars; first dam Graceful Maid (43851); second dam Graceful F. 3d (29670), litter sister to Old Look Me Over 9011, the \$3,600 boar. This gives Klever's 1st Model all that could be asked in breeding and sale ring backing. He is black as ink, low down, deep and broad, extra head and ears. His get follows the pattern perfectly. He will be assisted by other good boars in service on thirty mated sows of moderate type and breeding. I sell nothing but tops; keep my knife sharp for culls. Free livery at Roberts' stables.  
F. W. BAKER, Council Grove, Morris Co., Kas.

### SWINE.

## Wamego Herd Imp. Chester Whites and Poland-Chinas.

Mated for best results. Also Barred Plymouth Rock chickens and eggs for sale. Correspondence or inspection invited. Mention FARMER.  
C. J. HUGGINS, Proprietor, Wamego, Kas.

## SHADY BROOK POLAND-CHINAS STOCK FARM.

H. W. CHENEY, Prop., NORTH TOPEKA, KAS. Cheney's Chief I Know, assisted by Model Hadley, at head of herd. Topeka is the best shipping point and my stock the best kind to buy. When in Topeka call at 1132 N. Harrison St. and be shown stock.

## MILES BROTHERS' HERD Registered Poland-Chinas.

Peabody, Marion Co., Kas. Herd boars Miles' Look Me Over 18879, a son of the \$3,600 Look Me Over 25443 O. Our brood sows are specially selected ones. For present sale Hadley Corwin Faultless and two sows and two gilts bred to Miles' Look Me Over. Inspection and correspondence invited.

## 150 PIGS FROM PREMIUM CHESTER WHITE

stock; choice breeding, good length, bone and ham. Pairs and trios not akin from five grand boars and twenty-five sows. Special offering now of best breeding. Also B. P. Rocks and Buff Cochins for sale from best strains. Prices right.  
J. C. CANADAY, Bogard, Carroll Co., Mo.

## 175 PEDIGREED POLAND-CHINAS.

Black U. S., Tecumseh, Wilkes, Free Trade. Bred for individuality and usefulness. Herd boars Miller's U. S. 14031 S., Windsor U. S. T. 12044 S. and Wilkes Boy 16570 S. Thirty fall and spring boars, thirty fall and spring gilts ready to go. Correspondence and inspection invited.  
W. J. MILLER & SON, Windsor, Henry Co., Mo.

## TOPS! TOPS! TOPS!

One Poland-China boar fit to head any herd, sired by Nox All Wilkes 18179; price \$25. Some good young boars fit for service, \$15 each. Twenty-five last fall and spring young sows, bred and safe in pig, at low prices: sired by Silver Chief, Chief I Know, U. S. I Know, Claud Sanders and the great Nox All Wilkes. Two sows out of Bonnie Black U. S. and bred to Highland Chief by Chief Tecumseh 2d. Do not miss this opportunity.  
DIETRICH & SPALDING, Richmond, Kas.

### CATTLE.

## Bulls==Aberdeen-Angus.

Seven head of choice breeding and individuality. Twenty to thirty-six months old. In fine condition. Weights 1,200 to 1,600 pounds. Prices reasonable.  
WM. B. SUTTON & SON, Russell, Kas.

## ROCK HILL HERD OF SHORT-HORNS.

An Elbert & Falls "Waterloo" bull and Norton's "Clipper" Scotch bull "Cupid" head the herd. Ten Scotch and Scotch-topped daughters of the great Linwood "Lord Mayor" and several daughters of C. C. Norton's "Imp. Salamis" included. Young bulls for sale.  
J. F. TRUE, Newman, Kas. Twelve miles east of Topeka on U. P. railroad.

## SILVER CREEK HERD SHORT-HORN CATTLE.

Scotch and Scotch-topped, with the richly-bred Champion's Best 114671 in service. Also high-class DUROC-JERSEY SWINE. Can ship on Santa Fe, Frisco and Missouri Pacific railroads.  
J. F. STODDER, Burden, Cowley Co., Kas.

## DEER PARK FARM.

H. F. BAILL, Proprietor. Registered Jersey cattle. Young bulls and heifers for sale. Registered Poland-China swine. Young boars for sale. Farm two miles east of Topeka on Sixth street road.  
T. P. CRAWFORD, Mgr., Topeka, Kas.

## ROSE CREEK JERSEY CATTLE

and POLAND-CHINA SWINE. Our SILVER WYANDOTTES and Mammoth Bronze Turkeys are from premium stock. Write us if you want the best. (Farm in Republic Co., Kansas.)  
H. WOODFORD, Mgr., Chester, Neb.



## Agricultural Matters.

### FARMERS' INSTITUTES.

Editor Kansas Farmer:—The time of year for the annual farmers' institute is at hand, and every county in the State should hold one, and if every township should hold one, so much the better.

The county institute should last three days and evenings, and should be well patronized by the farmers, as it is about all the farmers have left, as our county fairs have turned aside from what they were created for, and consist of horse-racing, pigeon-shooting, balloon ascensions and many other things that do not edify the farmer's mind any.

The first and most important thing is the program, and upon this program hangs the success of the meeting. Subjects should be chosen that are adapted to the locality, the need of the times, especially at the time of the year the institute is held. If the county has passed through a general misfortune, such as a great drought, water famine, failure of certain vegetables or crops, or a lumpy condition of the soil, these subjects should be brought up and an attempt made to find out how far the trouble can be remedied should it ever occur again. A glee club should be secured, and the institute opened with an inspiring song or two, followed by an invocation from some eminent divine, then an address of welcome by the Mayor of the town, followed by a reply by the presiding officer of the meeting. Then the meeting should be opened and all annual business attended to, then an adjournment till 1:30 p. m. taken.

The members should bring the women folks and well-filled baskets, and an old-fashioned free-and-easy picnic dinner should be held in the hall each day, and the hall should be suitably decorated with American flags and other things, and above all things, should be warm and comfortable. The decorating, care of the hall, reception of visitors from abroad and usher work should all be attended to by a committee, a part of which should be ladies.

Samples of farm products and of the dairy should be brought, also home decorations, and anything likely to attract favorable attention.

As the most important thing is the program, a Board of Directors, composed of the Vice Presidents, one of which should be from each township, together with the President and Secretary, should meet at least three weeks in advance and formulate a suitable program. All farm topics should be listed for the day session, while such topics as "education," "flowers," "sanitation," "elocution" and kindred subjects should be reserved for the evening session, which is also a good time for the business man of the town who may be interested in farm work, to come in for his share of the work.

When the program is made out it should be well advertised in all the different ways possible, and the date of the institute be constantly kept before the public, such as hanging banners across the street, on transfer wagons, buses and street cars. The reception committee should secure board and lodging at reasonable rates for all visitors from a distance, and should not forget to provide flowers for the President's table, and should see that all officers who have important work to perform are hospitably entertained by the "city cousin;" in fact, the town folks should take advantage of this occasion to show their "country cousins" their interest in the welfare of the farmer, and should extend invitations to "sup with me" freely, and should the city merchants decide to give a banquet, why, all the better.

The President or presiding officer should have some snap about him, and should push things along with a vim, be firm in his decisions and have dignity and ease, always introducing the speaker with all the eloquence and flattery at his command, not forgetting to add a little spice once in awhile, and when the speaker is through he should kindly thank him for his efforts, complimenting him all he conscientiously can, then encourage all the discussion possible, except by foreign talent, who should only be asked questions. Should the discussion interfere with the next subject, let the discussion go on, and take a vote whether the first or second subject should be taken up next. The ladies should have a prominent part on the program, and our boys and girls should be put on the evening program for speeches, essays and songs.

The business man, the mechanic and the laborer should be made to understand that upon the success of the farmer depends their own success, and

should be glad of an opportunity to in every way aid the institute, especially by their presence, at least in the evening.

In closing the meeting the President should thank the audience for their kindness and attention, also extend to all a hearty invitation to attend the next one, promising them due notice of the same. The county institute should be the farmer's great annual vacation, and the farmer who misses this opportunity misses the brightest days of his life, and certainly has a weak spot in his make-up somewhere, and is to be pitied.

The past year has been a hard one to secure a catch of tame grass and this makes an interesting subject. The lumpy condition of the soil affords food for almost endless talk, while the great drought affords a talk on "Water System on the Farm," "Hauling Water," "Sheet Water," "Conservation of Soil Moisture," "Diseases of Farm Animals," "How to Blast a Well," "The Best Style of Well," and almost an endless number of subjects. While it is nice to listen to foreign talent, the home talent should not be neglected, and our business men, editors, lawyers, doctors and others should be made to help on the program, as we are all interested in the same great end.

CLARENCE J. NORTON.  
Morantown, Allen Co., Kas.

### Clover.

Editor Kansas Farmer:—I have farmed in Kansas thirty-one seasons, and for the past twenty-four years have grown clover. I would not now know how to farm without clover. I consider it the sheet anchor of successful husbandry, and the farmer in eastern Kansas who does not recognize the importance of clover in crop succession is certainly making an expensive mistake.

Its large, deep, penetrating roots is the most effectual and cheapest possible fertilizer. It does its work continually, while the farmer sleeps. It affords more pasture than almost any other forage plant, and, if properly cured, the best of hay, and as a restorer of exhausted soil it is admitted to be without an equal.

I usually sow with timothy—two-thirds clover, one-third timothy—one bushel mixed seed per acre. It is safest to sow alone without any grain crop, although I have excellent success by sowing one bushel oats per acre with it. If oats are not too thick it seems not to hurt the clover, and a good one-half or two-thirds crop may be grown by light seeding, say one bushel per acre. If sown alone the mowing machine must be run over the ground in June to kill the weeds, leaving the weeds on the ground where they fall. The clover will spring up through the weeds in one day and will furnish plenty of pasture through August and September, but care must be taken not to pasture it too close.

There are two varieties of red clover—common and mammoth. The common may be cut twice a year. First crop, about June 20, makes a fine crop of hay, and is the better if half timothy. The timothy will not make much of an after-growth, but the clover will make a crop of seed, which should be cut in September before it begins to shatter off. Will make all the way from one to four bushels per acre.

Mammoth makes a much heavier growth, but only one crop the same season, either seed or hay. It is good to restore exhausted fertility. I like common variety best. I have tried alfalfa in a small way. I do not think it will pay where red clover does as well as it does here in this part of Kansas.

In my orchards I sow red clover alone—no other grass with it. I cut the clover with mowing machine and leave it on the ground as a mulch for the trees. I am satisfied it is the best treatment for a growing orchard.

This coming season is the time to sow clover seed. It never was so cheap before. It was a wonderful crop over the whole country, East and West, and may never be so cheap again.

EDWIN SNYDER.

Oskaloosa, Kas.

### Corn or Kaffir Corn.

Editor Kansas Farmer:—I shall sow 160 acres to cane or Kaffir corn, and wish to know which is the better. If cane, what variety?

Rose Hill, Kas. H. C. STALEY.

The choice of crops depends somewhat on locality. For Manhattan and points west, and probably for most of the uplands of the eastern and southern parts of the State, red Kaffir corn is a better crop than Indian corn. In

the past nine years at the Kansas Experiment Station, red Kaffir corn has yielded about one-third more grain per acre than corn, and our experiments show that for fattening steers and pigs Kaffir corn and Indian corn are practically equal, pound for pound. If your soil is suitable for listing, list the Kaffir corn the same as you would corn, only plant the seed thick in the row. For surface planting, put the seed in with a grain drill, stopping up the holes, so that the rows will be three to three and one-half feet apart. Cultivate thoroughly, as you would for a good yield of corn.

H. M. COTTRELL.  
State Agricultural College.

### Cow Peas.

Editor Kansas Farmer:—I will take the liberty to inquire, through your paper, what cow peas are good for, how to plant and where they can be got. You gave a good description of them in one of your papers, but by loaning our papers we have lost track of the special one. I hope to get some reply through your valuable paper.

L. W. GATES.  
Anthony, Kas.

The chief value of cow peas for Kansas is as a green manure. Plowed under, they will loosen up stiff soils and for all soils furnish the much-needed nitrogen. The seed can be purchased of any seedsman. Planting should be done after danger of frost is over. Would advise sowing with a grain drill, stopping up holes, so that the rows of peas will be about thirty inches apart, and drop the seed one to two inches apart in the row. Cultivate shallow so as to kill the weeds, and after the plants get well started they will cover the ground and the crop will need no further attention. Plow under after the plant begins to develop pods. While cow peas will furnish a good green manure, wherever practicable it will pay better to raise a crop of clover or alfalfa, harvest the hay and use the roots to enrich the soil. Personally I have never felt like using the whole of a crop for manure. I want a paying crop above ground and one that will develop roots sufficient to fertilize the soil. Hay can be made of cow pea vines, but it is a difficult process and one not likely to be generally adopted in Kansas.

H. M. COTTRELL.  
State Agricultural College.

### Engineering Questions.

Editor Kansas Farmer:—I saw an article in the Farmer, some time ago, regarding cane and cane sleds, written by a Mr. Benedict. Will you please give me his address. [Eli Benedict, Medicine Lodge, Kas.—Editor.] I also noticed an article by an engineer, I think nearly a year ago, stating that a funnel inserted in the bottom of a tank would run out about one-third more water. I want to learn something about that.

I would suggest that you give a cut of a good economical three-horse evener to work on a tongue. I have not found one without side draft.

Modoc, Kas. R. B. IRWIN.

When a hole is made in the side or bottom of a vessel to deliver water, the quantity delivered depends not only upon the size of the hole, but also on its shape. A hole having sharp edges,

such as would be made by an auger, in the bottom of a stock tank would deliver only about 62 per cent. of what one might expect from the area of the hole. This is because water flowing towards the hole from the sides, when it reaches the hole cannot immediately change its direction and fall downward, but is projected in towards the center of the hole. The result is that at a distance from the upper plane of the hole, equal to half the diameter of the hole, the vein of outflowing water has a diameter of but eight-tenths of the diameter of the hole. If the edges of the hole are well rounded to a depth equal to one-half the hole diameter, the outflowing stream is very nearly equal to the size of the hole on the small side. A very little change, then, in smoothing and making more gradual the change of direction of the water as it flows towards and through the hole will greatly increase the delivery.

As to a three-horse equalizer. It is impossible to make three horses pull abreast, with the resistance behind and at one side of the center of the three, and not have so-called side draft. The effort will always be to have the resistance swing back into line with the resultant of the pull of the three horses. Some equalizers may make this much more apparent than others, but the side draft will always be there.

O. P. HOOD.  
State Agricultural College.

### Gleanings.

The Kansas City Board of Trade, which has always adhered strictly to the legitimate side of grain trading, dealing only in the cash article, by sample, has voted to establish future trading in wheat, and henceforth will be on an equal footing with Chicago and St. Louis in that respect. The contract grades are to be No. 2 hard winter and No. 2 red winter, of not less than fifty-nine pounds weight. The chief idea in establishing future trading was to facilitate "hedging" by Kansas City dealers, but it is expected that a considerable speculative trade will also develop.

Secretary Wilson asks Congress to give him the authority and money to employ a number of microscopists in the inspection of butter, fruit and other farm products intended for export. If he can have his way every article of food that is shipped to a foreign market will carry a certificate that it has been microscopically inspected under the supervision of the United States government and found to be pure, unadulterated and healthful. There is an immediate necessity for some such supervision of the foreign trade in butter, which is rapidly increasing and is likely to become very profitable. But the results of the patient and expensive efforts which have been put forth by the Secretary of Agriculture are apt to be destroyed at any time by unscrupulous exporters who may undertake to send abroad butter that is adulterated or otherwise impure. Secretary Wilson is determined to prevent such a disaster, and while he realizes that the exporters of butter will grumble at the extra trouble and labor that is put upon them, he is confident that they will soon find that the results will justify his action.

## Scoff and Cough.

The man who scoffs at the friendly advice, to "take something for that cough," will keep on coughing until he changes his mind or changes his earthly residence. A great many scoffers have been converted by the use of the standard cough remedy of the past half century,—Ayer's Cherry Pectoral. But some are scoffing and coughing yet. They wheeze with asthma, bark with bronchitis or groan with the grippe. Singular, isn't it, the number of stubborn people, who persist in gambling, with health and perhaps life as the stake, when they might be effectually cured of cough, cold or lung trouble, by a few doses of

## Ayer's Cherry Pectoral.

More particulars about Pectoral in Ayer's Curebook 100 pages. Sent free. J. C. Ayer Co., Lowell, Mass.



## The Stock Interest.

### THOROUGHbred STOCK SALES.

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

FEBRUARY 2, 1898—W. H. Wren, Poland-China brood sows, Marion, Kas.  
FEBRUARY 8, 1898—Clifton George, Poland-Chinas, Lathrop, Mo.  
MARCH 16, 1898—Jas. A. Funkhouser, Gudgell & Simpson, Herefords, Kansas City, Mo.  
MARCH 17, 1898—W. T. Clay-H. C. Duncan, Kansas City, Mo., Short-horns.  
APRIL 13, 1898—T. F. B. Sotham, Herefords, Chillicothe, Mo.  
APRIL 15, 1898—Scott & Marsh, Herefords, Belton, Cass Co., Mo.

### IMPROVED BREEDS OF CATTLE.

By T. F. B. Sotham, read before the Missouri Improved Stock Breeders' Association.

Improved breeds of live stock, under skillful management, appear to be inseparably connected with prosperity in an agricultural community. Show me the home of any of our improved breeds of cattle, and I will show you a prosperous country. Improved breeds of live stock appear to be just as inseparable from intelligence in an agricultural community.

The swine interest has been subjected to its boom of doubtful stability, but with due regard for his value by himself, the very nature of a hog compels that his great success be achieved in connection with cattle.

The shepherd is kinsman to the herdsman. The lowing herds and the bleating flocks have been inseparably linked since the days of Abraham, though if I must draw a comparison between them, the shepherd loses by it, because, possibly, of the narrower range and the smaller detail of his business. But the cattle breeders have been God's noblemen throughout history.

Jacob, as a cattle breeder, understood the "concentration of blood" and the blending of color and type; his herds were noted through his own and adjoining countries. David loved the flocks and herds, and encouraged their owners. Elisha was a cattleman, who was especially mentioned as making them useful under the yoke. God honored these and other cattlemen above their fellows, and even permitted his only son to be born in a manger.

As I ponder these facts, the later efforts of kings and nobility to encourage the improved breeds of cattle, while important, become less so, but all tends to prove that there is no nobler occupation open to man.

The intelligent cattle breeder is a man of broad ideas; association with his business impels them. I was forcibly reminded of this recently, while shipping a train load of cattle from Texas to the North and East. Even the railroad men in that part of the country where the larger part of their business is the hauling of cattle, become broader and kinder. The difference between a Western train man and the Eastern railroad hands, is the difference between a man who takes pleasure in courteously accommodating you, and one who treats you as an inconvenience to be borne with sulkily only from necessity.

Improved breeds of cattle have existed in America for nearly a hundred years. But only recently have their value and good influence begun to be understood. At first they were a "fad" or a "hobby," and "blooded" cattle, "fancy" cattle, "thoroughbred" cattle, and similar terms were used to describe them, and in the meanwhile they were considered the plaything of the rich, while the average farmer firmly believed the scrub eminently better suited to his necessities. As the land grows higher in value, and no corresponding increase in value of the crops follow, the intelligent farmer who did not want to abandon his calling, and was ambitious enough to desire to win a competence from it, was obliged to try to increase his crops and to seek a better market for them.

To obtain larger crops, the fertility of the soil must be increased. To obtain larger prices for products in this country of magnificent distances, and consequent costly transportation charges, the products must be concentrated in the minimum of condensed form. Say, for example, the freight on a bushel of corn worth 25 cents, costs 10 cents. The same corn concentrated into eight pounds of prime beef, worth 50 cents, can be transported the same distance for 2½ cents, or concentrated into four pounds prime butter, worth \$1, it could be transferred at the same cost. While at the same time these valuable concentrated products are being produced, the fertilizing value of the food consumed in their production is seen in the increased yield of crops from the lands to which the offal was applied.

While the "improved breeds of cattle" were by the majority looked upon as

playthings for the rich, to gratify their "hobbies," many visionary men, lacking the means to gratify their "fancy," undertook to breed improved cattle as a business. Unfortunately, many of these latter were crippled financially because they did not use good business judgment, and others because the time was not ripe. Many a man goes into a grocery business and fails because he does not understand it, or because the times and environments did not warrant a success.

Take any business you may think of, and you will find its successful followers in the minority, while the majority is made up of those who fail, or barely make ends meet. The breeding of improved breeds of cattle is no exception to the general rule. Look among your neighboring farmers, where one is thrifty, making money, progressive, seven others are constantly complaining of hard times. What is the reason? To an intelligent observer the cause is obvious.

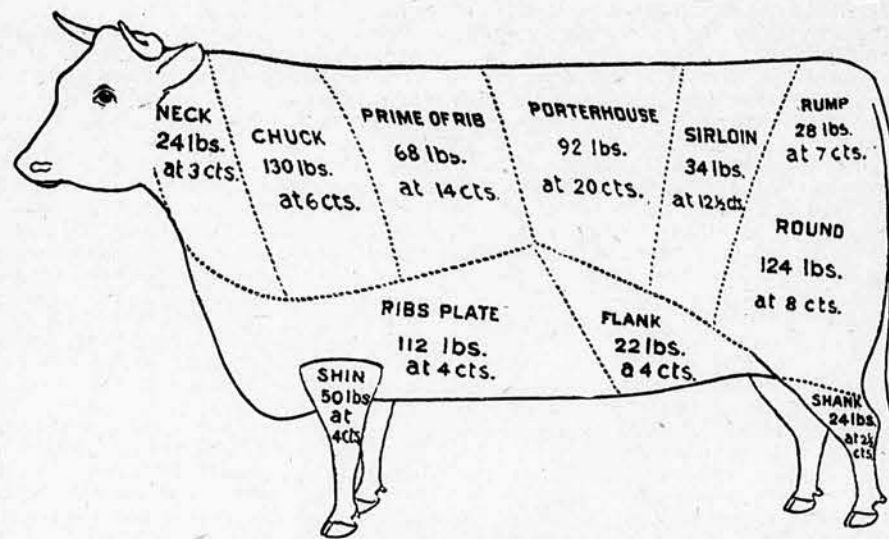
Beside the wrong impression as to the sphere of usefulness of "improved breeds of cattle," and retarding their proper use, was the silly theory, still held to by a few, that the scrub, under the same conditions of feed and care as the purebred, would develop just as thriftily and mature into the same valuable products. This ignorant idea was reinforced by those inexperienced cattle cranks who, carried away on the "cattle boom" of the 80's, concluded that one cow or steer was just as good as another, numbers being the desideratum. Happily for the country, "cost of production and value of product" has come to be the deciding factor with men whose decision is worth anything.

Cattle feeders, who, year after year, sought height and size, without regard

originated and thrived 500 years in the richest pastures of the world, and wherever placed proves his superiority as a grazer. The natural development of the Hereford for so many centuries makes him thrive best under natural conditions. He is thrifty on pastures, in the open feed-lot, and on the broad, unprotected range, under ordinary conditions, is unequaled. The Short-horn has ever been a stall-fed breed. Most of the so-called best Short-horns, while at the head of their breed, were coddled and pampered till the entire breed demand it, and suffer without it. The Angus came from a country in which cattle barely exist without artificial or imported food. Being dependent on other food than grass, they have been fed on foreign food so long that no other breed so much requires skillful handling, and no other breed will consume larger grain rations; they are used to molasses and gruel, and when these demands on the feeders are complied with, no animal matures into a more valuable and toothsome beef, or into a shapelier form. There is a field in which the Galloway is peerless—that is where the climate is damp, much of the year wet, beef a secondary requisite, and robes the object.

But whether an object or not, the fact exists and must be recognized that in America the Hereford is first and most valuable as a beef breed; that Short-horns will be second choice of the majority of cattle-raisers, and that the Aberdeen-Angus will always have a limited demand from those who are willing to take the trouble to fill his every want.

I want to pass on, before closing, to a brief mention of pedigreed forms, and their influence on improved breeds of cattle. I am gratified to know that much



WHERE THE HIGH-PRICED MEAT GROWS.

One of the most instructive illustrations printed in Secretary Coburn's last Quarterly, is that presented herewith, showing the carcass of a well-fattened grade steer, as cut up by the Chicago butchers, giving the retail price per pound for the different cuts. A good 1,200-pound steer dresses about 800 pounds, and of this 708 pounds is marketable meat. All the best cuts are taken

from the ribs, loin and hind quarters. These valuable cuts together weigh 346 pounds, and at prices specified on the illustration sell for \$44.55. The less valuable cuts, from the fore quarters, belly and flank weigh 362 pounds, and bring only \$16.48.

With this diagram before him it is easy for the breeder to determine the type of animal which should bring the top of the market.

to length of leg; cattle feeders who could understand and appreciate weight, but could not comprehend quality, have had many years of costly experience. They see 1,600-pound steers quoted at \$6 per hundred weight and 1,600-pound steers quoted at 4 cents per pound, both on the same day's market. The same may be said of any other given weight, quality determining the price, not quantity.

In pointing agriculturists in the corn belt to the use of improved breeds of cattle, I would emphasize the following facts: First, there is absolutely no profit to the breeder or feeder of what is known as "butcher stuff," i. e., those grades of beef which make up the great bulk of market receipts, grading below export and dressed beef sorts. Second, there is absolute loss, ruinous, if largely carried, in the production of "canners' stuff." Third, there is no method of feeding, there is no skill in breeding, that can produce a prime beef animal without the use of the "improved breeds of cattle."

Perhaps I may not be criticised when I go so far as to point the agriculturist to a choice among the beef breeds. I leave the dairy breeds to those who like to milk, but I advocate the Hereford for beef purposes, because they command a premium from feeders and the top of the market from slaughterers.

The environments of the Hereford from his inceptancy were natural. He

from the ribs, loin and hind quarters. These valuable cuts together weigh 346 pounds, and at prices specified on the illustration sell for \$44.55. The less valuable cuts, from the fore quarters, belly and flank weigh 362 pounds, and bring only \$16.48.

I have spent thousands of dollars for illustrations of animals and their ancestors to incorporate in the body of pedi-

Money talks! We guarantee that

## Tuttle's Elixir

will cure anything that a liniment can cure—\$100 reward for you if it doesn't. Reference, publisher of this paper. Send for circulars and full particulars to DR. S. A. TUTTLE, 27 Beverly St., Boston.

grees, and for others to which reference marks are given in the pedigree, making them a part of the pedigree, to give the general public an idea that the names of animals given in a pedigree refer to an element of individuality, real and potent in its influence on the animal pedigree. I feel that my hearers will pardon my reference to what I have done along this line, because what I have done was from honest motive, and in the interest of a true and simple conception of the value of blood.

In conclusion, I want to say that: No man is fit to breed an improved breed of cattle, and no man will make a success with them, who does not naturally love his business and love his animals. The very first requirement in a breeder who will make an impression on the brood he handles, is to love his calling and his cattle better than profit and cash returns. Foundations of a great herd of improved cattle are not laid in a day; it more often takes years to get the trenches cleaned out before a single corner-stone is laid. Often the builder erects his wall before the ground is ready; often he builds with inferior workmanship; in both cases the wall comes down—is either taken down, or falls down. No! the man who goes into the business of raising and improving an improved breed of cattle with the sole idea of making money will verily reap disappointment and loss. While he who loves his calling, and with it combines ability, intelligence and a painstaking carefulness, will find in it a labor of love and a financial success equal to that obtainable in any other occupation open to the same or equal brains and capital.

### The Deluge of Half-fat Cattle.

That the rush of unfinished cattle to market should continue after such strong protests and emphatic object lessons as the past few weeks have brought forth, seems surprising. Such cattle now constitute the majority of arrivals, the situation in this respect seemingly getting worse instead of better. Last Monday four-fifths of the steer supply consisted of half-fat stuff that had to sell 15 to 20 cents per hundred pounds below Friday's values, while the well-finished lots sold fully steady. The proportion of poor to choice was not so great Wednesday, but larger than it should have been by a great deal. Just why feeders persist in sacrificing in this manner what would be if held good beef it is hard to determine. True it is that some are obliged to ship their cattle earlier than they would like and that the stock has not laid on flesh so rapidly as expected. Then, too, big numbers of branded Westerns were put in the lots for short feed, while in some cases feeders prefer shipping to paying existing prices for feed, particularly as the market has a strong tone. Their mistake is realized when the stock is sold and when it is too late to avoid disaster. Many steers have been sold on the Chicago market the past month for no greater price than they cost as feeders and no small number have had to go at a price below the stock's value at home. Two or three months' more feeding would have made the cattle fit for any purpose, for they do not lack the quality—the deficiency is in the matter of flesh.

It should be the aim of every feeder to make his cattle good enough to attract the attention of exporters and Eastern shippers. The more competition the better the price paid. The prime requisites are quality and finish. We have the former—there is little objection now on that score—but there is a lamentable lack of the latter. Steers other than yearlings or short twos that come to market between now and June 1 should be made to weigh 1,400 pounds average here. With this finish they will be heavy enough for any purpose. A hundred pounds count for a great deal when it is on the short side of 1,400. It may practically kill the sale of the



stock. We had a striking illustration of this point last week. A Missouri feeder sent in two loads of 1,300-pound steers, the very best bid upon which was \$4.15. Of course they were not of more than ordinary quality, but had they been held sixty to ninety days longer they would have sold on a similar market 60 cents per 100 pounds higher, as their increased weight would have fitted them for export. If on this margin a feeder can afford to hold that length of time he can very readily determine. There is no doubt of supplies of cattle continuing liberal, but the demand for good beef is strong and there is every indication that finishing and fattening will continue to be the only salvation for the feeder. It has been clearly demonstrated in the past month and we look for January to make a similar showing. —Clay & Robinson's Live Stock Report.

## Irrigation.

### MOISTURE AND THE BERRY PATCH.

By B. F. Smith, of Lawrence, Kas., read before the State Irrigation Society.

The dry season that has been with us since the middle of July forces the berry-grower to appreciate the moisture, which is the life blood of the berry patch. How to hold the moisture in the soil has been my constant study for more than twenty years. For several years past I have observed that when we plow our soil for the intended berry patch in December or just before freezing, it retains moisture longer, and then plants stand the summer heat better than when the plowing is done in the spring. The soil may be kept alive and more moist by frequent working with a small-tooth cultivator during dry, hot weather in the summer season. But the soil should never be permitted to bake after hard rains for the lack of cultivation, for the loss of moisture from unplowed land is largely in excess of that from cultivated soil. Yet, with all our care in stirring the soil from the day of planting a strawberry field till it bears its last crop of berries, there is more anxiety felt about moisture in the soil than there is about any other crop of fruit or grain raised in this country. The experienced planter plows and pulverizes his soil ready to receive the early and later rains, fearing all the while that when the time comes to plant his berry field it may be too dry. Then if he has had a good season of moisture for planting, he fears a drought in midsummer that may kill, or at least retard, the growth of his plants. Again, after his berry patch has passed through the summer and winter season, and is all set with perfumed blossoms, then the planter's anxiety is at fever heat, for he knows that it requires abundant moisture to bring out all points that make up an ideal berry crop.

The question comes up, why is the berry-grower in the rain belt of Kansas in a continual sweat about drought and moisture? The reply is, because he is dependent on climatic conditions for showers. The berry patch that has been nursed and tended for a year costs from \$30 to \$50 per acre, thus bringing it up to its first fruiting season. Here, then, we have the secret. It is the money banked on the berry field that causes the anxiety among berry-growers in almost all localities in this Western country. Mr. Chairman, I am familiar with this long train of uncertainties. I have been at all the stations, and have witnessed all the conditions of climate, from one extreme to another, through both wet and dry seasons. In looking back over the past thirty years, I find three dry seasons to one of sufficient moisture to mature a full crop of strawberries. Now, the point I am striving for, is to have something at hand that can be depended upon in dry seasons, instead of relying wholly on the uncertainty of flying clouds. Now there is no question about the supply of water, for it can be had in very many localities in our State at a small outlay compared with its value. We have it in the Kaw river, the Wakarusa, the Osage and other streams in the country where the water is running away to the Gulf of Mexico. Then there are many localities where wells can be dug that will furnish water enough to moisten the soil on from five to ten acres of berry patches or vegetables in dry seasons.

We have both read and heard wonderful stories of the wealth of the gold fields, far away towards the north pole, where millions of money will be spent and many lives lost in the search for a few millions of gold, while here at our very doors we have the Kaw and the Wakarusa gold fields that will never give out if we only use the water on our soils. Again, all over the Kaw river

bottom drive wells can be put down in a few hours that will furnish a never-failing supply of water, that can be raised by windmill power into tanks of almost any capacity desired. Then two thousand feet of one-inch iron pipe can be laid on top of the soil for about \$125, and with 100 feet of hose, that will cost from \$12 to \$15, ten acres can be so moistened that the berry-grower will never have any fear of calamity from drought.

In the berry season of 1894 I tapped one of the mains of the city water plant, laying 600 feet of pipe, so that with 100 feet of hose two acres were well watered during the ripening period. The yield of this patch per acre was more than three times as much as it was per acre on ten acres of my Highland berry farm, situated a half mile from the city limits, which was entirely dependent upon the rains for its moisture.

I have a well thirty-nine feet deep on my Highland farm, from which can be lifted 200 barrels of water in about fifteen hours. Anticipating a drought this last summer (though rather late when ready for business), I had a 200-barrel tank and a windmill put up. It has been tested sufficiently to know that it will water from eight to ten acres of berry patches in a dry season. It would require one man's entire time during the dry weather and the work of two men during the fruiting season in order to keep the water moving.

In behalf of the berry-growers, I would say that we have all been too indifferent about this matter of soil moisture for our berry patches. We have depended upon climatic or atmospheric changes for showers of rain. Too long we have borne the loss of our crops, when we might have made them profitable. Let every gardener and berry-grower consider the question of loss by lack of moisture, and begin, first in a small way, but sufficient to determine the advantage of a little water properly applied.

When the clouds fail to furnish the necessary moisture, and when the outlay of providing water artificially is too great, the berry patch and garden can be kept in a fairly moist condition by the frequent working of the soil between the rows, which will help the plants to survive hot winds and drought, and even insect injury; for let all berry-growers keep in mind that all insect life is very active in hot, dry weather, when plants are sickly through lack of moisture.

There is still another side to this question of soil moisture, upon which I will only just touch, that dampens the berry-grower's enthusiasm almost as much as hot winds, and that is an excess of rains during the picking season, which sometimes happens even in this Sunflower State of ours. The soil then becomes water-soaked and made sometimes almost lifeless. The berries become tasteless and unsalable and quite unfit for transportation to any great distance. To remedy this condition, the berry patch should be under-drained. But as stated above, we have three years of drought to one of excessive moisture.

For more than forty years the people of this great country have been the largest producers and consumers of strawberries in the world. Now that we have learned how to produce great crops, and to consume the same, let us try to learn how to avoid the liability of drought during the whole life of this choicest of all fruits with which kind providence has so bountifully favored us. Kind providence has furnished us with all the necessary elements of plant life, and has endowed us with reasoning and rational faculties to employ them. God has done his part in the work, and we must do ours, if we expect to succeed in the highest degree. Let us, therefore, do all we can to improve present methods and conditions. We shall then not only help ourselves, but prove a benediction to others, and the world will be the better for our having lived in it.

### Choice Improved Stock Farms

in southeastern Kansas ("the Stockman's Paradise") for sale at a sacrifice.

Important business and valuable properties back East requiring my immediate personal attention, I will sell my highly improved stock farms at Kimball and Stark, Kas., at a great sacrifice if taken soon. Deferred payments may be distributed through ten years' time at 5 per cent. Never a failure of crops. Immediate possession. Printed descriptions. Thos. D. Hubbard, Kimball, Nesho Co., Kas.

One poor day!—Remember whose and not how short it is! It is God's day, it is Columbus'. A lavish day! One day with life and heart, is more than time enough to find a world. —Lowell.

### The Cross-Breeding of Corn.

Paper read by Col. Guilford Dudley before the Northern Shawnee County Farmers' Institute, December 17, 1897.

The cross-breeding of plants is not a new scientific discovery—simply one that is not generally known. Since the publication of the works of Charles Darwin, in 1859, the evolution of plants, as well as of animals, has been well established.

Prof. T. H. Huxley took up the work soon after Darwin and elaborated and simplified the basic principles of plant-breeding and domestication to the easy understanding of all.

Many farmers harbor sentiments of opposition, averseness, to scientific farming—hold it to be a fruitful source of costly experiments without adequate returns, a sort of relegation of means acquired by other avocations, or by inheritance, or by chance. This need not necessarily follow. Webster defines science "ascertained truth." Prof. Huxley says, "Truth is common sense clarified." Scientific farming, then, must mean a systematic application of common sense.

Most of us have a profound respect for such scientists as Isaac Newton, Benj. Franklin, Thos. H. Huxley, Charles Darwin, et al., through whose instrumentality that branch of science known as biology, "The science of life," has come to be one of the elementary branches in the revival of learning.

The biologists tell us that when they examine the physical organization of man they resolve him into the finest particles into which the microscope will enable them to break him up, then they make a sort of anatomical record of developments, his functions and his activities, and study his environments as he appears on the surface to the world. They then take up other animals, the one most convenient, the bird dog for instance, and they find that his body is resolvable into the same elements as the man. So of all the other animals. Their microscopic inquiries resolve them all into specks of animated jelly.

Then they pursue their investigations into the vegetable world, and find that they can, in the same way, follow out the structure of the plant from the most intricate flower, grass, shrub, up to the largest tree, and their seeds, the storehouse of oil, starch, sugar, fiber and gluten; which either in their normal state or in a concentrated form—flesh—with a little "salt of the earth," compose the whole menu of animal food; that, through a similar series of gradations, they can resolve these all into specks of animated jelly; that in the growth and development of the animal, the nitrogenous substance from which the nutrition, secretion, and growth of the cellular speck goes forward in its spontaneous duplication and reproduction, is called protoplasm, and in the performance of its function, emits carbonic acid through epidermal—skin—and pulmonary—lung—channels, and other debris through abdominal viscera from the depository, while the plant throws off as the unused of its nutriment, oxygen and resinous substance and elaborates its protoplasm—sap—in its leaves and tissues without receiving it into any cavity—stomach—like the animal. Oxygen is required by the animal. Carbonic acid is essential to the plant. Protein is manufactured from the elements by the plant, which is destitute of sense and voluntary motion, still has the wonderful gift, the power to charge its produce, protein, with the innate living principle of organic life.

Scientists, with the aid of the most expert chemists, have vainly tried to analyze protein. They can change it back into the elements, but cannot restore any part to its living self again. When analyzed by them it is "gone where the woodbine twineth."

The animal will take the same nitrogenous, amorphous substance into its laboratory—stomach—dissolve it, analyze it and reproduce it again in living protein.

The most industrious, astute student, the most profoundly learned, under a microscopic investigation, cannot separate, nor tell the difference between the vegetable jelly and the animal jelly.

"Thus biologists have arrived at the conclusion that a fundamental uniformity of structure pervades the animal and vegetable worlds, and that plants and animals differ from one another simply as diverse modifications of the same general plan." Again, Prof. Huxley says, "The study of living bodies is really one discipline which is divided into zoology and botany, simply as a matter of convenience." Again, "The animal and vegetable worlds are only two aspects of the same fundamental series of phenomena, each capable of throwing a flood of light upon the other." This, then, is the foundation of our argument for our



When a man who has neglected his health finally realizes that he is being attacked by serious illness it is no time for half-measures. Death is an enemy that must be knocked out in the first round, or he is pretty sure to conquer in the end.

A weak stomach, an impaired digestion and a disordered liver mean that a man is fighting the first round with death. Unless he manages to strike the knock-out blow, it means that death will come up in the second round in the guise of some serious malady. When a man's stomach is weak and his digestion is impaired, the life-giving elements of the food he takes are not assimilated into the blood. The blood gets thin and weak, and the body slowly starves. In the meantime the disordered liver and the sluggish bowels have forced into the blood all manner of impurities. The body is hungry and eagerly consumes anything that the bloodstream carries to it. In place of healthy nutriment, it receives for food foul poisons that should have been excreted by the bowels. Continued, this system of starvation combined with poisoning, will wreck every organ in the body. Naturally, the weakest organ will give way first. If a man is naturally nervous, he will break down with nervous exhaustion or prostration. If he inherits weak lungs, the consequence will be consumption, bronchitis, asthma, or some disease of the air-passages. If he has a naturally sluggish liver, he will suffer from a serious bilious or malarial attack. Dr. Pierce's Golden Medical Discovery cures all disorders of the stomach, digestion and liver. It purifies the blood and fills it with the life-giving elements of the food that build new and healthy tissue. It is the great blood-maker and flesh-builder and nerve tonic. It cures 98 per cent. of all cases of consumption. Thousands have testified to their recovery from this dread disease under this great medicine.

Dr. Pierce's Pellets cure constipation.

theme—that the same general, natural laws that control animal life control plant life.

If the premises are admitted, we think the conclusions are inevitable. Who would think of improving the desirable qualities of his dairy herd, or of his swine or of his chickens by long, too close inbreeding. Darwin says, "Nature abhors continuous inbreeding." If the same general laws control plant evolution, why not cross-breed the corn, wheat, oats, potatoes, garden products and fruits? Why simply hunt for natural variations in the vegetable world, and study scientific genealogy in animal life?

Why study the growth and the development, in detail—warm barns, fresh air, pure water, regular and generous food, the nitrogenous and the carbohydrate ration, the careful and select breeding—for the animal and leave the corn to inbreeding, to neglect, to hardly sufficient care, to grow the carbohydrate, fodder, to general deterioration, to dwarf proclivities and to a scrub future?

The cost of an enterprise often affects the amount of care and attention, from the fact that it represents a large financial investment, whereas our project does not require a large outlay of cash. It is so simple and cheap that it does not require or suggest the placing of a chattel mortgage or even paying back dues to the Grange, no relegating the old harrow or cultivators to the scrap-heap, or the purchasing of new implements. Simply a free use of the old ones. (Of course, if getting new tools, would buy the latest improved, up-to-date.) It requires no high-priced seed corn that some fakir is advertising largely—the process is so easy that the hired man can do it and will become interested in his work, more than likely become an enthusiast.

When ready to plant, use two varieties, as near alike as possible; two of white or two of yellow that mature near the same time. Plant in alternate rows. When the tassels appear, ride between the rows on horseback and pull the tassels from one row only. This will destroy all the pollen (male) from the one variety, and leave the silks (female) to be fertilized from the pollen of the other variety. The row with the tassels untouched will self-fertilize as is usual in corn fields, and also fertilize the row with the tassels pulled. The corn grown upon the row with no tassel will be purely and sexually cross-bred. Removing the tassel will not check the growth. If the variety of pollen is liable to become mixed by a neighbor's corn field being too close, try to have both plant the same kind of seed. Otherwise, iso-



lating the cross-fertilizing patch would be a proper precaution.

The pollen is secreted in the little anthers which a short time after the appearance of the tassel hang like so many diminutive Chinese lanterns from the flowers of the tassel. They are divided into two apartments and shed the golden-colored fertilizing dust through round holes in the bottom. The silks, covered with a sort of mucilaginous substance, show a natural affinity for the golden-colored powder.

Experience proves, and all the authorities agree, that the cross-breeding of plant adds vigor, growth and fertility. It revitalizes and increases largely the yield of seed, as well as the herbage.

Mr. L. H. Bailey, in his work on "Cross-Breeding of Plants," conceives the creation of sex to be for the purpose of vitalizing, invigorating the growth and the fertility of the offspring. Herbert J. Webber, Assistant, Division of Vegetable Physiology and Pathology, United States Department of Agriculture, says: "The importance of intelligent crossing in improving the varieties of cultivated plants cannot be over-es-

only one of the large raisers, but a scientific producer of a high quality of beef.

We also cross-bred a small plot of corn the season of 1897, with satisfactory results, and will plant the new corn next season, hoping that the marriage of the two varieties may blend into a harmonious one, for the good of the maize family, and that the evolution of their offspring may be recognized and as pronounced over their cousins in the neighboring States as their home soil is over that of their neighbors.

It is said "The highest scope of education is the performance of some action or thing to be done." Hence the essays of practical, successful agriculturists have more of the right ring, lead up to larger productions with economy of labor, rather than the literary dissertations of the paper and proxy farmers, who produce largely theories and speculation. Not that we would have less of literature for amusement and recreation, but for sturdy growth and improvements in crops, give us more biology, zoology and botany.

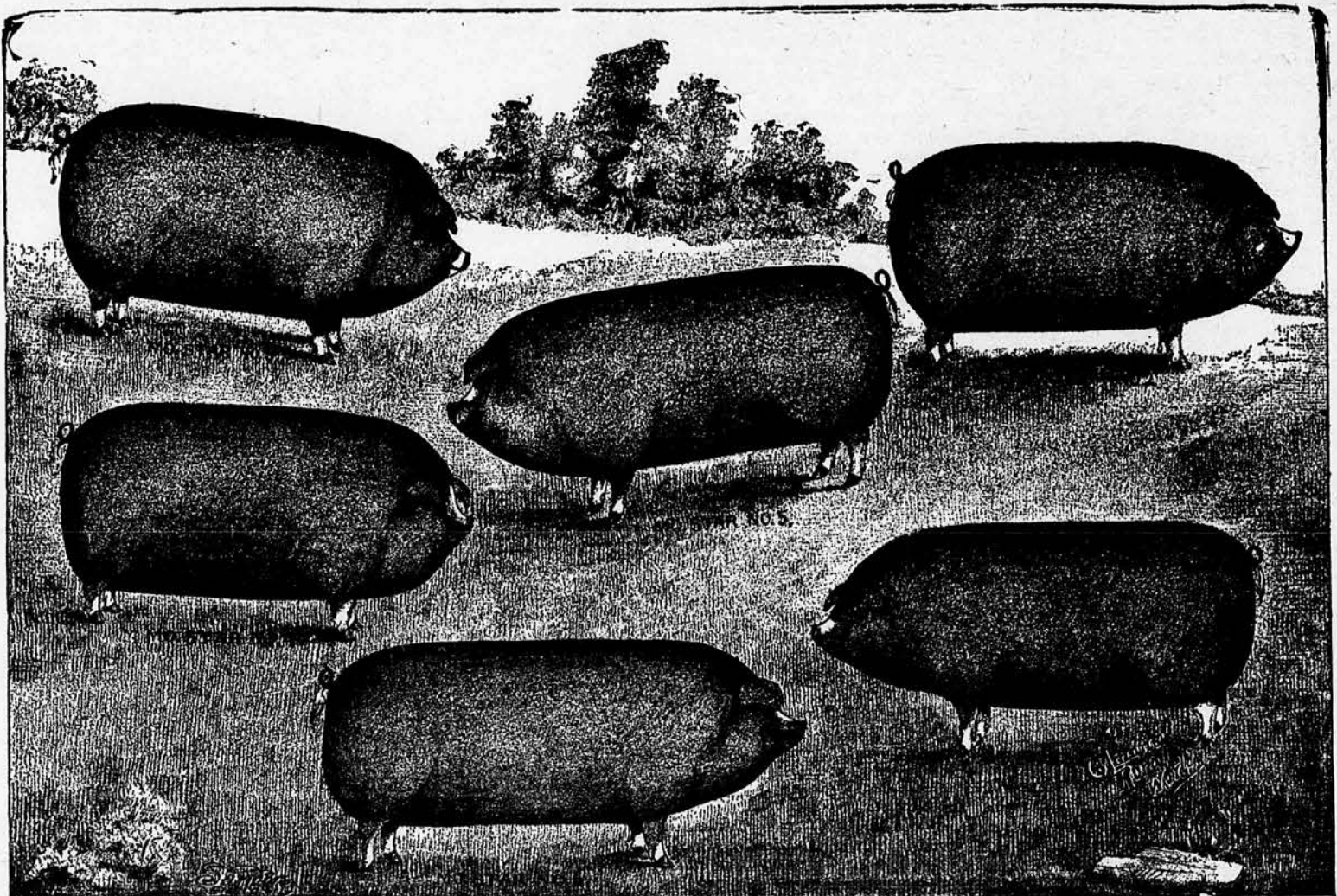
Why not ask our public servants in

half lap before planting; again in a week after planting harrowed one way, gave shallow cultivation, cultivating twice after "laid by." It was cut, put into shocks, and is being husked and weighed as fodder is needed. The quality of the 1897 corn looks better than of 1896, but does not average in weight by about two bushels to the load. It is good merchantable corn.

On a careful review we find that the real farmer is the embodiment of intelligence, of content, of true nobility. He is almost the sole factor in the highest development of Nature's general plan. He is en rapport with the great truths of morphology and physiology. The practice of his chosen vocation ennobles individual character. He never charges his mistakes, his mismanagement to the banks and corporations. He realizes that the depression of the hard times affects all vocations very nearly alike. He utilizes the experience, the lessons of the past, the true and clear knowledge of the day, to the higher evolution of the plant realm, correspondingly to the animal branch of the same kingdom.

to go into the details of every case. Henry Imthurn, of Madison, Kas., a German farmer, had been making and selling \$2.40 worth of butter per week. After using the separator and selling to the creamery the cream from the same cows, for the first two weeks his check for cream was \$14.69. Tony Heldrick, of Madison, was making forty pounds of butter per week and was selling it at 10 cents a pound, and thought he was doing well, taking in \$4 per week. The creamery paid him 20 1/4 cents per pound for the butter fat in his cream. His check for the first two weeks was \$29.11. Francis Long, of Madison, had been selling about \$2 worth of butter per week. Got his check after using the separator and selling the cream from the same cows to the creamery for two weeks, and thought there must be something wrong about it. It was for \$14.28. It is not surprising that 200 more separators will be taken in this one county before spring.

Mrs. Frank Rice, of Palatine Bridge, N. Y., writes Kansas Farmer as follows: "I like the Kansas Farmer sewing ma-



ALL ONE LITTER. Sired by the premium boar, Crown Prince 3104 S., bred and owned by W. J. Miller & Sons, Windsor, Mo.

All one litter, sired by the premium boar, Crown Prince 3104 S., bred and owned by W. J. Miller & Son, Windsor, Henry county, Missouri, who now have forty specially selected young boars and gilts ready to go, by such sires as Millers' U. S. 14031 S., Wilkes Boy 16570 S., Wilkes Tecumseh 17760 S. and Windsor U. S. Tecumseh. The lot are the tops out of over 100 head, and will be priced low down in order to make room for the coming spring pig crop. The visitor at the farm finds that the herd has as good individuality, especially length, ham and bone, as has the best herds in the State. The commingling of Corwin, Tecumseh, Wilkes and Black U. S. blood makes the herd one of the desirable kind. Write the Messrs. Miller for what you want and get prices.

timated. No branch of horticulture or agriculture promises more remunerative results than may be attained by intelligent plant breeding."

The breeding of animals proves that thoroughbred breeding without thoroughbred feeding fails to bring the best results. So, without the selection of seed, thorough preparation of the seed-bed, cultivation and tillage, the cross-breeding of corn is not in accord with nature's best effort.

Ever since the publication of Sir Isaac Newton's "Principia," the principle has been well established that a covering of snow is a non-conductor of cold, prevents deep freezing, and for the same reason a good mulch of dry earth is a non-conductor, or retards evaporation and helps very materially to hold the moisture for plant use.

Mr. D. J. Small cross-bred about three acres of white corn the present season, and while I have not learned the results of the harvest, he assured me that he should continue along the same line in the future, that his foreman and hired help, as well as his neighbors, were showing great interest in the work. He is one of the most progressive, up-to-date farmers of the West, and is not

agriculture to teach more of chemistry, more of vegetable physiology, more of the basic principles of the metamorphosing of leaves and stalks of plants into corn? How to increase the protein in our food productions; how more systematically to apply to our calling common sense. Compared with the income of the farmer, we think that we are paying salaries to get the highest service, and we expect them to be "bureaus of education," close observers, interpreters of nature, to originate new forms of beauty, blending the green background, the chlorophyl so universal in the plant kingdom, harmoniously with the studied tints of the cultured in art. Nothing is too good for the "sons and daughters of the tillers of the soil."

You will naturally ask, is the writer a producer of corn? In answer, will say, he does not profess to be. Still, during the seasons of 1896 and 1897 he caused to be planted in corn about thirty-five acres, and raised about forty bushels to the acre each year, on an upland farm. He used the subsoil plow in the furrow after the stirring plow, in 1896, to the depth of about thirteen inches, and again in 1897, to about fifteen inches; double harrowed it with

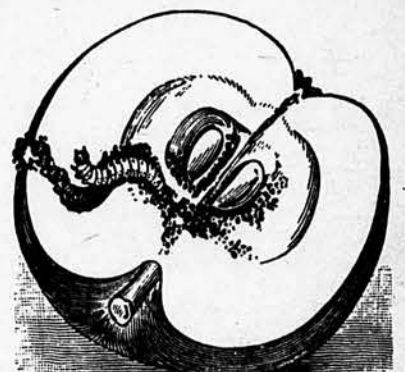
The Kansas farmer is one of the most progressive, up-to-date of the age. We believe that in the near future each article put up for exhibition in our fairs and expositions representing agricultural food products, our cereals, fruits, and our domesticated vegetables, as well as flowers and plants, will be accompanied with its pedigree, as suggested by our friend Cowgill in a paper recently read before the horticultural society; that if we can raise a fair crop of corn during the season of 1897 (a dry year) with former experience, with our cross-fertilizing and the use of a little more "common sense" we can raise a fair corn crop in Kansas almost every year, and that by the evolution of our seed we can very materially increase the yield of our field corn without increase of expense or labor.

The fact that fifty "American" cream separators were sold during one month in the vicinity of Madison, Greenwood county, led the publishers of the Kansas Farmer to inquire as to the results attained by some of the purchasers. It would be interesting to know how each of the entire fifty came out, but we were not able, in the brief time at command,

chine better every time I use it. I think it is a most excellent one."

#### Spraying Fruit Trees.

The question of spraying fruit trees to prevent the depredations of insect pests and fungous diseases is no longer an experiment but a necessity.



Our readers will do well to write Wm. tahl, Quincy, Ill., and get his catalogue describing twenty-one styles of spraying outfits and full treatise on spraying the different fruit and vegetable crops, which may be had for the asking and contains much valuable information.



## The Home Circle.

### HAUNTED HOUSES.

When I was a maiden,  
Busy at my play,  
Down behind a forest,  
Where some marshes lay;  
Stood a dismal dwelling,  
And 'twas often said,  
That its rooms were haunted  
By spirits of the dead.  
Stories of its tenants  
Terror made for me;  
And in silent darkness  
Ogres I could see.

Now, with fading vision,  
And hair growing gray,  
I find haunted houses  
All along the way.  
At the door and windows;  
Standing on the walk;  
Gathered into clusters  
For an evening talk;  
I see forms and faces  
Of those gone to rest;  
Hear familiar laughter  
O'er some old-time jest.

But no thought of terror  
Comes upon the note;  
Back into the past days  
Pleasant memories float;  
And a thrill of gladness  
Ghost-like figures greet;  
While more dear and home-like  
Seems the village street.  
Happy with their tenants,  
Glad I am to-day  
Of the haunted houses  
All along the way.—A. H. J.

### AN EPISODE.

"This is a charming spot—for two," he said, seating himself comfortably at her feet.

"We are lucky to find it unoccupied," she said, "especially at one of Mrs. Gurdon's garden parties. She will be pleased. I don't believe there is a square inch of the lawn to be seen."

"The whole world is here. I know, Miss Lindsay; I have shaken hands with it."

"It is one of the penalties of being a great author."

"Or of being notorious?"

"You are too modest, Mr. Holland. Have you not shared the honors of the afternoon with the Prince and the latest lion—just imported from South Africa, was it not?"

"And felt like a martyr all the time. But there you have the proof, Miss Lindsay. Don't think I am complaining. Fame and notoriety mean the same—in London. And in this"—he indicated the screen of shrubbery which cut off the little nook from the rest of the garden, but did not shut out the strains of the Blue Hungarians or the hum of many voices—"in this I have my reward. I forgive the lion-hunters."

"It is a relief to be out of it," she admitted. "Do you know, Mr. Holland, that these nooks—yes, there are more of them—are a pet idea of Mrs. Gurdon's?"

"I must thank her. She is a woman of genius."

She laughed merrily. "Oh, no, she is only an incorrigible match-maker—and finds them useful."

"So she, at least, believes in love?" he asked, picking up the thread of a former conversation.

"Or in marriage. It is not always the same thing, is it?"

"It should be," he replied, with an air of the deepest conviction. He was looking up into her eyes.

"What does somebody say—that in woman love is a disease; in man it is an episode?"

"I seem to recollect that," he said. "But it is nonsense; love cannot be summed up in an epigram."

Again she laughed. "I am afraid you have a very bad memory, Mr. Holland. Is it another of the penalties of notoriety?"

"In my case I am afraid so. Is Meredith the culprit?"

"I must leave that to your conscience, sir. The sentiment appears in a brilliant study of society, entitled 'Providence and Mrs. Grundy,' for which, if the title-page is to be trusted—"

"Ah! I remember now. Please spare me, Miss Lindsay. You don't know the evil effects of phrase-making—it saps a man's morals until he has not even a nodding acquaintance with the truth. And you have taken your revenge."

"But, really, Mr. Holland, I trusted to your—your knowledge of human nature, shall I say? I was glad, for my own sake—"

"For what, if I may ask?"

"That 'in man it was an episode.' It makes life so much easier to believe so."

"You will let me retract in sackcloth and ashes, Miss Lindsay? Honestly I have some reason to do so. It is three years since I wrote that miserable book. Can you guess my excuse?"

"It seems to infer a compliment—somewhere," she said, rather doubtfully.

"I am very much in earnest," he said,

getting up and standing above her, and he looked it. "I didn't know you then. If I had, the thing—call it an epigram if you like—would never have been written. How could it, when—"

Here the bushes were parted, and a face—a tanned, handsome, open face it was, albeit just now the expression was not too pleasant—showed in the interstices. Miss Lindsay nodded brightly. "Come in, Ralph," she said.

"Very sorry, I'm sure," said the newcomer. "I didn't know, Nell"—Then he disappeared.

Miss Lindsay smiled. "Captain Havelock seems—out of sorts," remarked her companion, sitting down again.

"Probably he is looking for my mother," said she. "I told him to attend to her."

"He is a capital fellow," he said, indifferently. "Done something in India, hasn't he?"

"A small affair of outposts," she replied, in the same tone. Only, perhaps, it was as well that he was not studying her eyes very intently at that moment. "He held a fort somewhere on the frontier for a fortnight against a couple of thousand tribesmen, with only a European sergeant and fifty Sikhs under him, and he was reduced to thirty rounds of ammunition and no provisions before he was relieved. It is quite a common thing out there. He told me so himself."

"He is modest—as well as lucky," said Holland. "You and he are old friends, Miss Lindsay?"

"We were brought up together."

"Like brother and sister?"

"Exactly. We quarrel quite as much, at least."

"And make it up, I dare say? But I am sure the quarrels are not serious. Apropos, am I forgiven?"

"Was there a crime, Mr. Holland? Really, I have forgotten."

"We were discussing—"

"George Meredith, was it not?"

"Then I am not forgiven for that unfortunate fault of my youth? You are very hard, Miss Lindsay. You have taught me the error of my ways, and yet you refuse to credit the conversion! How can I convince you? I am quite serious."

"Oh, I hope not," she said. "It is too warm for anything but frivolity." He reddened a little, and nervously plucked the grass around him. Miss Lindsay watched him with some curiosity out of the corners of her eyes; the symptoms were not unknown to her.

"There is a green thing on your coat," Mr. Holland, she went on.

"Thanks." He flicked the insect off. "I have something to say, Miss Lindsay—a kind of confession. It is stupid, but I don't quite know how to say it."

"Is it necessary," she asked innocently. "I don't like confessions," Mr. Holland. "We are Low Church people."

"It means a lot to me," he continued, and again there was silence. Then he rose for the second time, perhaps feeling that an upright position conduces to a proper dignity.

She perceived her opening and rose also. "It is time we were returning," she remarked.

"Don't go just yet, Miss Lindsay," he pleaded, putting out a hand to detain her.

"I want you to listen to me for a moment. I won't keep you if"—

But already she was half hidden by the shrubbery, and her only answer was a bewildering smile. He had perforce to follow.

"It seems more crowded than ever," she said, as they picked their way through the throng. "Ah! there are my mother and Captain Havelock. Shall we join them? I hope you are attending to your duties, Ralph? Mr. Holland and I have been discussing Meredith—and things. Tired, mother? Oh! you must be. Mr. Holland, will you find my mother a seat somewhere—near the band, if you can? The Hungarians are so good."

"Delighted," he replied. Then lower: "I may see you again before you go, Miss Lindsay?"

"If you can," she repeated.

She watched them until they were lost in the crowd, and then deliberately led Captain Havelock back to the little nook. Some girls have no originality. But it was still empty.

"Better sit down, Ralph," she said, taking her old place.

"Thanks; I prefer to stand," he said stiffly.

"It is a matter of taste—or of comfort." She gave him a swift glance. "Not up to Simla, is it?"

"I'm sick of it. Beastly pack. I haven't had a chance of speaking to you all afternoon, Nell."

"Philanthropy is its own reward," she said.

"It's not that—Mrs. Lindsay is all



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right. But there's that scribbling fellow who's always dangling after you."

"He is very amusing—and clever."

"Is he? He doesn't know one end of a gun from the other, and I suppose he thinks that horses were invented to drag the Chelsea 'bus—or wherever he stays."

"Why, dear boy, to be a groom is not man's chief end. And you are very rude. Mr. Holland speaks very nicely of you."

"Confound his impudence!" and, by way of relief, he proceeded to kick a hole in Mrs. Gurdon's turf. "Look here, Nell," he said presently; "I'm going off to Egypt."

"Indeed! I thought winter was the proper season. Won't it be rather warm there just now?"

"That is, if they'll have me," he continued, paying no heed. "I've volunteered for Dongola. Kitchener is going up to Khartoum in the autumn—at least I hope so."

"In Cook's boats? What fun!"

"It will be—for Fuzzy and the dervishes. But you might have the decency to say you are sorry, Nell. I mayn't come back, you know."

"So that is why you told me?" she asked. "Don't you think it is rather crude, Capt. Havelock?" But she was not looking at him, being engaged in tracing fancy patterns on the grass. Not that it would have mattered, for he, on his part, was also regarding the point of the sunshade with apparent interest.

"Oh, I dare say that writing chap would have done it better," he said savagely. "It's his trade. I suppose you mean to marry the beggar, Nell?"

"His name is Holland," she suggested.

"I know that. You can see his portrait in any illustrated paper for a sixpence. It's in them all."

"Which is really no reason why he shouldn't be addressed properly, is it? I have some idea that I have seen another portrait in the same places, with the letters D. S. O. after the name."

"You need not get nasty. Besides, you haven't told me yet if you are engaged to him."

"Well, you see"—here she ventured another glance—"he hasn't asked me yet."

"I suppose you will marry him, though," he persisted. "It's natural enough, perhaps—he's a genius and all that—and of course I'm not. Wait a minute, Nell! I can't stand this any longer, and I'm bound to have it out for good. You were always cleverer than I was; but you know what I've wished for ever since I was an unlicked cub at Eton. I wasn't afraid to tell you then. You remember, Nell?"

"I remember thinking that those lickings—which you did not get—might have done you good."

"Well, you didn't say so! And all the time I was stewing in India it was the same, and when I was down with fever in the plains I kept shouting one name—so the doctor told me."

"It was in very bad taste," she murmured.

"Oh! Then that fort on the frontier, with the Waziris howling round—and not five minutes' sleep on end for fear they should rush us—and the grub running out—and the only idea in my head was to see it through somehow, and get home to ask you to marry me! There, Nell, it's out at last!"

She was looking at him now, but there was a world of reproach—and, perhaps, something else—in her eyes. "You haven't asked me yet!" she cried.

"But, Nell—good heavens!—you don't mean to say"—

And then—well, in some mysterious fashion he managed to gain possession of her hands, and to say the rest without words. As for her:

"You might have seen it, you foolish boy!" she said.

And that was all.

Except that, a little later, she met Mr. Holland.

"I have been looking for you, Miss Lindsay," he said. "I have something to say. Not going already, surely? I may call to-night, then? I need not tell you what it is—perhaps you can guess—I—I hope so."

"I think it would be better not to come, Mr. Holland," she replied, giving him her hand. "I am sorry, but—will you oblige me by considering the episode closed? I am engaged to Captain Havelock."—David L. Johnston, in Chambers' Journal.

### The Language of Jewelry.

Human fancy, which looks for symbolic meaning in everything, has found the proper symbolism in jewelry. It is said that in making a present of jewelry the first matter to be considered is the color of the hair of the recipient. It is supposed that brunettes possess mainly positive qualities, as intelligence, discretion, etc., while the blondes are believed to be more lively and ideally inclined. Since silver symbolizes fancy and enthusiasm, it should prevail in the jewelry of dark-haired persons, for thus they receive what they lack—poetry and idealism. In the jewelry of blondes, however, gold should predominate, for this metal will dampen their vivacity and weaken their fancy.

Of the gems, rubies and garnets are considered the symbols for wisdom and good common sense, and are, therefore, fit gifts for blondes. Other gems best suited for light-haired beauties are the topaz, turquoise and sapphire. Brunettes should be presented with the amethyst or emerald.

The king of gems, the diamond, is the symbol for elegance. It suits all, the blonde or brunette. Pearls symbolize tears in popular superstition, and brides particularly should not wear these gems of the sea, for the wearing of them at the wedding indicates the coming of tearful days.—Keystone.

### Japanese Public Ovens.

On nearly every block in Japanese cities is a public oven where, for a small fee, housewives may have their dinners and suppers cooked for them.

### Force of Habit.

She—You say I am the only woman you have ever loved?

He—I do, with all my heart.

She—And do you really know why you say that?

He—Certainly; from force of habit.—Richmond Dispatch.

### Unimpeachable Testimony.

"Do you say to this jury, sir," roared the cross-examiner, "that you saw two trains approaching each other at the rate of fifty miles an hour when they were not more than two hundred feet apart, and that there was no collision? Was there ever ranker perjury?"

"Oh, yes, Colonel. These trains were on different tracks."—Detroit Free Press.

An excellent remedy. "Two of my children have been much troubled with neuralgia all winter. They used Salvation Oil and a few applications produced a complete cure. I consider it an excellent remedy.—John H. Jones, Deputy Inspector, Tobacco Warehouse No. 4, Baltimore, Md."

Send \$1.25 for Kansas Farmer one year and book, "Samantha at Saratoga."



## The Young Folks.

### A SONG FOR THE NEW YEAR.

By fairy hands from forest shade  
Of withered leaves a wreath is made,  
And gently placed upon the brow  
Of one who lies unconscious now.  
For eighteen ninety-seven is dead,  
His mission o'er, his spirit fled,  
And through the mystic path of light  
That hides and veils him from our sight,  
We usher in with joy elate,  
The reign of eighteen ninety-eight.  
A rustic song he gaily sings,  
And in its tones a promise brings,  
Of sunny skies, and balmy showers,  
Of budding trees and blooming flowers,  
Of summer days so long and fair,  
Of cherries ripe, and melons rare,  
And since he comes with words of cheer,  
Then hail, all hail, the glad new year.  
With greetings warm begin the day,  
And as the moments glide away,  
Take up the links in friendship's chain,  
And make them bright with joy again,  
And if our hearts estranged have grown,  
To those we in the past have known;  
We may be wrong as well as they,  
Let all be right on New Year's day.  
Forget, forgive, be kind to all,  
And only pleasant things recall.  
Let every cloud be swept away,  
Remember this is New Year day.  
God bless our homes, and native soil,  
Make strong our hands for honest toil,  
May bonds of love unite us here,  
And peace unbroken crown the year.  
—Fanny Crosby.

### How a New England Gander Attended a School Institute.

It must have been in the 40's that my great-uncle, Charles N—, was graduated from college, and began to teach school. Communication was not so rapid then as now, and the exchange of ideas was accomplished with more difficulty. The country was not overrun with teachers' manuals and guides, and there were few educational works. It was only by gathering together and exchanging ideas that teachers were able to progress. To facilitate this, several would in the summer time travel from place to place, holding "institutes," to which all who taught in the neighboring country would flock to receive or disseminate new ideas, and to discuss methods of study.

My uncle and a friend of his had started on a tour of this kind, and on Saturday arrived at a town where they were to hold an "institute" the following Monday.

Sunday afternoon they took a stroll in the outskirts of the town, on the banks of a stream, and were engaged in deep conversation, when my uncle's friend espied a flock of geese approaching in solemn procession. Moved by a sudden impulse, he took off his hat, made a low bow, and, addressing the geese, said: "Allow me to introduce to you my friend, Mr. N—, who will hold an institute in this town to-morrow. I cordially invite you to be present." The geese appeared to listen attentively to the young man's words, and when he had finished they waddled gravely away.

The incident passed quickly from their minds, the next afternoon arrived, and the friends repaired to the church where they were to expound their educational views to those who were assembled for instruction and profit. The day was beautiful and sunshiny, and everything beamed propitiously on my uncle as he arose from his seat behind the pulpit to address the dignified gathering.

Hardly had he opened his mouth to speak when something in the wide-opened door attracted his attention. There stood the old gander, leader of the flock they had seen the day before, and behind him were all the geese. Having completed his survey, to my uncle's horror and chagrin, he waddled slowly up the middle aisle, followed by the rest.

Was ever a young man in a more painfully embarrassing situation? At this moment he received a tug on his coat tails and plainly heard the partially suppressed amusement of his friend and the whispered exclamation: "They've come!"

My uncle grew redder and hotter as the geese approached in front and the tugs on his coat tail continued behind. He could only stutter and stammer, each moment becoming more painfully aware of the awkwardness of his position.

At last, with the timely assistance of the congregation, the unwelcome intruders were expelled, amid quackings, confusion and uproar.

It is almost unnecessary to add that the fount of my uncle's eloquence was choked for the time being, and consequently his exposition on the education of the young was not as edifying as it might have been under ordinary circumstances.

This did not end the matter, however. My uncle's friend for many years after, at every dinner when he was called upon for a speech, managed to recount this incident. If my uncle was there

it only added to the general enjoyment.

Tiring of this in the course of years, Uncle Charles once arose, after his friend had related the story, and said: "That there was one point to which sufficient attention had not been called, namely, Why had the geese understood so perfectly all that his friend had said?" —Anna Northend Benjamin, in Inter Ocean.

### Barry, the St. Bernard.

The hospitality and untiring humanity of the monks of the convent of St. Bernard have long been famous; and the fidelity and sagacity of their well-known breed of dogs, kept by them to assist them in their labors, have long been equally celebrated.

The most noted of all the dogs that have lived and striven and died in the service of the monks was named Barry. This faithful creature served the hospital for the period of twelve years, and during that time he saved the lives of no less than forty persons. His zeal was unconquerable. It was his custom, after a heavy fall of snow, to set out by himself in search of lost travelers. He would run along, barking at the top of his lungs, until he was entirely out of breath, when he would often fall over in the snow from sheer exhaustion.

No place was too perilous for him to venture into, and when he found, as he sometimes did, that his own strength was insufficient to draw from the snow a traveler benumbed by the cold, he would immediately hurry off to the hospital to fetch the monks.

One day Barry found a child frozen apparently to death between the bridge of Dronaz and the ice-house of Balsora. He began at once to lick him, and having succeeded by this means in restoring animation, he induced the child to tie himself to his body. In this way he managed to carry the poor little wretch to the hospital.

When he became too old to get about, the Prior of the convent, by way of reward, pensioned him at Berney, and after his death his skin was stuffed and placed in the museum of that town, where it is still preserved.

The little flask in which he carried brandy for the relief of travelers whom he found exhausted in the snow on the mountains is still suspended from his neck.—Harper's Round Table.

### Locust Plague in Argentina.

Captain d'Urso, commanding the Italian bark Maria L., which arrived recently at Philadelphia from La Plata, near Buenos Ayres, told a representative of the Philadelphia Press that unless immediate aid was given the inhabitants of that section of Argentina their end from starvation is not far off, as the locusts have ruined and eaten up even every blade of green grass about that part of the country. They rise up as dark clouds and sweep before the winds from one section to another, bringing destruction and ruin to all sorts of vegetation. Railroad traffic just outside of Buenos Ayres was suspended for a time, as the trains could not move through the dense clouds of insects, which for a time hovered about that particular locality. The tracks became so thick with insects that the wheels slipped as though running on an oily substance, and it was this, coupled with the fact that the engineers could not detect danger signals, that traffic was suspended.

In a locality set aside by the government for the purpose there was deposited, by the natives, who are rewarded handsomely, over 1,000 tons of locust eggs, undergoing a process of destruction.

The natives are reduced to a condition of poverty and are almost desperate. Rates of exchange are lower than ever known, banks are becoming embarrassed daily and the people declare that they cannot exist much longer unless some relief can be had. The government is using its every effort to rid the country of the plague, but so far without material success. A commission of scientists is engaged in the study of the destruction of the insect, but at the time Captain d'Urso left it had not agreed upon any fixed line of action. This commission has encouraged the natives very much by the circulation of a paper giving it as their judgment the plague will soon abate. They claim that the life of the locust in any fixed locality has never exceeded seven years, and that five have already been spent in South America. Although this year's plague has been their worst, this body of scientists claim that the insect is becoming debilitated and with the cold weather will die out altogether.

Send \$1.25 for Kansas Farmer one year and book, "Samantha at Saratoga."

### A Boy Emperor.

Every year there is an Emperor crowned at Rome. The coronation, which of course takes place in a church, does not stir the world to its depths, though there are doubtless many dwellers in Rome who have an intense interest in the matter.

The "Emperor" is the title given to the boy who distinguishes himself above all others in his knowledge of Christian doctrines, or the catechism, during the year.

It is almost a commonplace to say that the lad who gains the first place in such a contest as this must acquire in the process a very fair elementary knowledge of theological lore, and, as a consequence, he frequently shows a desire to go further and become a priest.

Vincenzo Postacchini is the lad who this year was crowned Emperor.

One of his privileges is to visit the Pope and the several Cardinals, who give him presents.

This year an impostor got up a train of Princes, which are a feature of the new dignity, and went around collecting the perquisites of the position from the Cardinals. The genuine Emperor has suffered in his budget from this pretender. The time-honored dignity will, however, suffer no diminution in the future.—Rome Correspondence Baltimore Sun.

### Poultney Bigelow Writes About Berlin.

Berlin is almost as discouraging in its other landmarks of its notable Germans as in its public statues. It is almost as bad as New York, where few houses now stand that were in existence when Franklin and Washington were alive. London is rich in buildings associated with great men, and an American can hardly walk from Westminster to St. Paul's without recalling a dozen names of men whose lives are dear to him. Berlin has, however, been almost built anew since 1870. I can remember whole streets that were different when I was a boy. There are, to be sure, a few instances of memorial plates being affixed to houses where notable Germans have lived, but even in these cases the houses themselves are an uninteresting portion of an uninteresting street. The Prussian kings adored uniformity in street architecture, as well as in the dressing of soldiers, and that may be the reason why to-day the most beautiful streets of Berlin furnish less interest to a stranger than the grimmest alleys of London with their charming diversity of dirty fronts. The houses here are all equally high, equally broad, equally gaudy on the outside, and equally devoid of individuality within. The Anglo-Saxon owns his house and makes it comfortable for himself and his family. The Prussian lives in an apartment house, along with perhaps a dozen or more families, all of them subject to the petty tyranny of a porter whose duties are dangerously near to those of a police agent. Thus the individual taste of a Berlin artist, writer, actor or other notable resident finds no expression through his architectural surroundings. A Helmholtz, a Mommsen, a Menzel, or a Virchow is in Berlin as little identified with his house as a soldier with his barracks. This form of living has its conveniences, particularly to a bachelor, but it is not conducive to interest in those who seek the literary landmarks of great capitals.—Harper's Weekly.

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**KANSAS FARMER CO., Topeka, Kas.**

Our "blocks of three" proposition is a popular one. Every old subscriber should read it. Many are acting upon it to their profit.

The receipts of flax seed in Chicago during 1897 were 5,760,800 bushels, against 5,987,150 bushels during 1896. Are Americans abandoning the production of flax seed?

The annual meeting of the Kansas State Historical Society will be held in Representative hall, next Tuesday evening, January 18. The Directors' meeting will be held Tuesday afternoon at 3 o'clock. An interesting program is provided for the evening session.

The year 1897 was the greatest ever known in the Kansas City stock market. The valuation of the stock handled exceeded \$110,500,000 and was \$7,118,000 greater than any previous year. The combined gain in cattle, hogs and sheep over 1896 was nearly 1,000,000 head. In 1871 the number of animals handled was 167,199, in 1897 6,444,000.

## BLOCKS OF THREE.

Every present subscriber for **Kansas Farmer** who will send in two new subscribers and \$2 may have his own subscription extended one year without additional cost. We mean it; blocks of three—one old and two new subscribers for \$2. This offer is made for the purpose of greatly enlarging the **Kansas Farmer's** subscription list, and is confined strictly to the proposition as stated. It will be an easy matter for any old subscriber to get two new ones, and it is almost certain that after reading the "Old Reliable" for a whole year they, too, will become permanent members of the **Kansas Farmer** family. This is to the publishers the business end of this extraordinary proposition. Blocks of three—one old with two new subscribers—all for \$2.

## KANSAS AGRICULTURAL PRODUCTS FOR TEN YEARS.

The table, printed on another page, showing, from the records of the State Board of Agriculture, the products of Kansas for the last ten years and for each of these years, tells its story so plainly as to scarcely need comment. This paper should be laid away and preserved, for it will make it possible to find the answer to inquiries which every year inundate the **Kansas Farmer** office. The showing of \$136,295,181 produced in this State on the average each year for the last ten, and the aggregate of \$1,362,951,818 for the period is not as if these were the amounts of trade or of factory products, the materials for which cost all except a certain fraction of compensation for handling or for transforming, but more as if these vast sums were mined. They represent almost exclusively the compensation of the farmers of Kansas for what they have produced from the great original source, the soil. It is gratifying to know that Secretary Coburn will send this table, together with the able editorial discussing it in last Saturday's **Topeka Capital**, to 1,000 papers in other States, thus giving to them the best possible answer to the many inquiries from abroad which are poured in upon the board.

## IMPROVEMENT OF PLANTS BY BREEDING.

The **Kansas Farmer** publishes this week an important paper on "The Cross-Breeding of Corn," by Col. Guilford Dudley, of Topeka, who has entered upon this line of experimentation. It is to be hoped that Col. Dudley will continue the good work he has begun. The field is a most inviting one and is as yet almost unexplored. Pedigreed cattle, horses, sheep and swine we have, whose lineages may be traced through many generations. No man knows the parentage of the corn he plants, or, at most, only the maternal parent is known. Even of the mother plant it is not known whether it came of a family inclined to produce an ear on every stalk or of a family that produced many barren stalks; whether it was healthy under the conditions of its growth or possessed constitutional defects liable to interfere with its progeny. In no case was any account taken of the composition of the seed; yet it is known that there is great variation in the composition of samples of corn and corresponding variation in their feeding value. Thus, the percentage of protein, the most valuable constituent of corn, averages 10.5 per cent., but varies from 7 per cent. to 15.3 per cent., as given in the 1894 "Year-book" of the United States Department of Agriculture. No one would use the seed containing 7 per cent. of protein and expect as good results as from seed containing 15 per cent. of this valuable constituent.

In stock breeding, the expert finds that to produce the ideal animal he must know both parents, and, since no animal is absolutely perfect, must so mate them that the characteristics of the two parents blended will correct the ill and reinforce the good characteristics. But it is well known to the breeder that the offspring is liable to partake of characteristics of more remote ancestors. He must, therefore, know all four of the grandparents and make sure that qualities which have disappeared in a proposed parent shall not reappear with increased prominence by bringing together blood that united may reproduce a defect which by more judicious breeding might have been permanently eliminated. Indeed, it may be necessary to consider the four grandparents of each of the proposed parents to make sure of the degree of improvement desired in the offspring. Until plant-breeding shall be established on a basis of complete knowledge of plant pedigrees, plant-producers—i. e., farmers—must be considered open to the charge of devoting their labor to the costly and comparatively unremunerative cultivation of "scrubs" in their fields.

That intelligent plant-breeding may produce plants as superior to the ordinary as the most fashionable Poland-China pig is superior to the Arkansas "razor-back" is not open to doubt. That new varieties of plants having superior merit may be produced and propagated is proven by the few trials heretofore made. A series of experiments in this line in England received its first public notice in the *Cable*, of London, in December, 1897. In its leading editorial that paper said:

"In wheat the grain has been increased in size 40 to 50 per cent., the quantity of gluten has also been increased, and the quality very considerably improved. From the new breeds of wheat it will be possible to grow here in England, in a normal season, wheats superior in quality to those produced in any other quarter of the globe.

"In the new breeds of barley a series of six-row types have been evolved. These barleys grow a grain almost equal in size and quality to the two-row, with, of course, a greatly increased yield per acre.

"In oats the most notable and striking results obtained are the innumerable new breeds of naked oats. These grow without any husk or cover adhering to them, and produce on an average from four to six grains, where the ordinary varieties produce one or two, the yield of kernel alone per acre being quite equal to the combined weight of kernel and husk of the ordinary varieties.

"New breeds of grasses, clovers and other plants have also been produced. We are convinced that if our readers will only take the trouble to study the history of these wonderful experiments, which have extended over a period of eighteen years, they will come to the same conclusion as that arrived at by one of our leading botanists who describes them as ranking amongst the greatest scientific discoveries of the century."

If these results can be produced in England, corresponding results can be

produced in Kansas. If grains adapted to the climate of England can be produced there, who shall say that grains adapted to the climate of Kansas cannot be developed here? If a naked oat yielding as much kernel alone as has heretofore been produced of both kernel and husk can be produced in England, why shall we not do as well in Kansas? Finally, if these changes can be produced, who shall deny our ability to produce changes in composition as well as in external characteristics, thus adding to the value as well as increasing the yield of our crops?

It is with much satisfaction that it is learned that Prof. Cottrell, of the Kansas State Agricultural College, will take up this work of plant development, beginning the coming spring. No doubt the argument of Col. Dudley's paper will confirm him, and laymen as well, in their confidence in the utility of the work.

## ANSWERS TO INQUIRIES ABOUT THE NATIONAL CREAMERY MEETING.

Many inquiries are received as to the next meeting of the National Creamery Buttermakers' Association. Without printing the inquiries in detail, the following answers from a circular prepared by Secretary Nissley, are submitted:

The meetings will be held at Topeka, Kas., February 21 to 26.

While every day will be one of much interest, yet, in order to facilitate the time, the managers have set apart Wednesday, the 23d, as Buttermakers' day and Thursday as Patrons' day, the balance of the days being given up for subjects that may be of more general interest.

On Patrons' day Prof. T. L. Haecker, of the Experiment Station of Minnesota, will give a lecture, taking for his subjects about ten living types of cows and calves. A suitable place will be arranged where this lecture will be given. Every patron that can arrange to hear this will find it not only interesting but helpful, especially in the selection of his dairy cattle.

Prof. C. F. Curtis, of the Iowa Agricultural College, will give an address on the value of skim-milk for feeding calves. He has made practical tests and is an unquestioned authority on this subject. This lecture alone will compensate any patron who is within reasonable distance of Topeka to attend.

Prof. Clinton D. Smith, of the Michigan Experiment Station, will give a lecture illustrated by stereopticon views, on the feeding and development of the dairy cow. This, besides being extremely unique, will be instructive as well.

Prof. Cottrell, of Manhattan, will lecture on the production of milk.

The inquiry as to whether private dairies will be allowed to compete for premiums, is answered by Art. 7 of the constitution of the National Association, which provides: "That a creamery shall consist of not less than twenty patrons, and that they shall run not less than six months in each year to be eligible to enter butter to compete for premiums given by this association."

There will, however, be facilities for exhibiting the products of private dairies, and it is stated that such exhibits will be scored by the judges, giving authoritative recognition to the merits of such exhibits.

## SPREADING THE GOSPEL OF CORN.

Senator Mason, of Illinois, is preparing and will introduce a bill making an appropriation for a corn meal exhibit at the Paris exposition, in 1900. It is intended by this means to second the efforts of United States representatives in Europe to widen the market for American corn. There is little doubt that the appropriation will be made, for it can be clearly shown that past efforts to extend the European market have been wonderfully successful, far out-running in benefits the meager cost of preaching the gospel of American maize. Fifty years ago, during the great famine in Ireland, a cargo of corn was sent from the United States for the relief of the destitute—and the destitute did not know what it was nor what to do with it. The situation was not greatly improved until about six years ago, when a systematic effort was made to acquaint the people of Europe with the merits of maize as a foodstuff. Charles J. Murphy, afterward known as "Corn Bread Murphy," conceived the idea that a market for corn could be worked up in Europe, and succeeded in getting the backing of the New York Produce Exchange. He next interested the then Secretary of Agriculture, Hon. Jerry Rusk, who gave the project official endorsement. Mr. Murphy set up cooking places in the chief towns of Europe, where dainties from corn meal were given away. Palatable corn bread was always to be

had at Mr. Murphy's "free lunches." At first the people held aloof, but some were converted, and an inroad was made into the conservatism of both the English and Scotch.

In Germany Mr. Murphy succeeded in getting the government to try corn for the army rations, the trial order being for 30,000 bushels. The great mass of the people, however, were extremely slow in accepting the new substance in their food, and to this day the Germans have not taken much to corn. Many of them get it mixed in their cheap grades of flour, but they do not know it.

Through England and Scotland corn has taken the place to some extent of the potato when that crop fails. When Hon. J. Sterling Morton was Secretary of Agriculture the mission of Mr. Murphy was discouraged and the work of converting Europe to corn was officially given up. Secretary Morton could not see the benefits of the propaganda, but the wisdom of the mission upon which Mr. Murphy was originally sent is apparent in the marvelous increase of our exports of corn, which have grown from 31,000,000 bushels in 1891 to 186,000,000 bushels in 1897, and are still growing. During the last week of 1897 a little over 5,000,000 bushels was exported. While the immense exports of the past year are undoubtedly due in part to the wheat shortage abroad and the consequent high prices, those causes could have had little effect in increasing the corn exports in 1896, a year of cheap wheat, when the aggregate was 116,000,000 bushels, nearly four times what it was five years before.

A change in the crop conditions of Europe undoubtedly would result in a lessening of the corn exports from the 1897 figures, but it is confidently believed that an increasing market for American corn has been developed, and that the time is opportune for accelerating the increase by continuing at Paris the propaganda begun with such satisfactory results by Mr. Murphy. It is to this end that Senator Mason will urge his bill for an appropriation.

## WHY THE TREES DIED.

The Kansas City papers have been learnedly discussing during the past few days the reason why large forest trees taken up from Clay county woods and reset in Holmes Square, one of Kansas City's new "breathing places for poor people," have withered and died. A bright reporter for the *Journal* discovered, in the course of his investigations, and announced with all solemnity, that: "Large trees that are transported—it is regarded as a settled rule—will wither and die unless they are set in the ground in exactly the same position in which they first grew. The side of the tree trunk that faced south must face that way in its new position." To the failure to observe this "well-settled" rule the reporter for the *Journal* attributes the failure of the Holmes Square trees to survive the summer. The *Star* editorially follows up this cue with a profundity which is charming, if, perhaps, lacking in arboreal accuracy. Says the *Star*: "Attention should be called to the absolute necessity, in this latitude, at least, of replacing trees in the ground in the same position in which they originally grew. The north side of a tree, in replanting, should be turned to the north, as it is unable to bear the heated exposure. Nature in the forest usually marks the north side of trees with moss, which indicates their proper position when replanted."

All of which, while not wholly to be gainsaid, is so superficial a study of the reason why the trees died as to be little less than ridiculous. There is little doubt that it may be worth a planter's while, in resetting large trees, so long as it involves little or no extra labor, to set the north side to the north; but that this is the sine qua non of successful tree-planting is silly. It is of vastly more importance that the tree be equipped with as large a share as is possible of its original root growth; that bruised and broken roots be carefully trimmed before resetting; that the tree be set at fully its original depth, or a little lower; that none but the finest of fine earth be thrown about the roots; that the earth be pressed up about the roots firmly, and that the top be pruned into balance with the greatly shortened root growth. If all these precautions be observed, together with the additional one that the tree be so supported that the wind cannot weave it about to so great an extent as to loosen its hold on the ground, and open air spaces about the roots, it will cut very little figure whether or not the points of the compass are taken into account in the replanting; and, on the other hand, if these precautions are neglected, an entire corps of surveyors, with all the in-



1. *Journal of the American Medical Association*, 2000; 283: 2689-2696.



## Horticulture.

### KANSAS HORTICULTURISTS IN SESSION.

(Continued from last week.)

The discussion of varieties of apples was continued, as follows:

#### MAIDEN'S BLUSH.

Cook—If you have a local market it is all right to raise them. For family use we cannot get along without them. Good, hardy tree.

Holman—The Maiden's Blush deserves a place both in the family and commercial orchard. In its season it is unexcelled for market purposes, especially attractive. It should be recommended as a commercial fruit.

Ferris—Would place it just about first as a summer apple, and also for local market.

Gano—You certainly cannot discard it. Griffin—It is about the first apple that can be shipped well in summer. Very profitable.

Dixon—I find it rather a shy bearer, but the tree is long-lived and very hardy. It certainly deserves a place in the family orchard. I do not think there is any profit in them for commercial purposes.

Wellhouse—They are long-lived and very hardy. Would recommend them for family but not for commercial orchards.

Whittaker—The Maiden's Blush comes in at a time when there is so much other fruit that it does not pay very well. Mine turn brown from some cause.

Lux—At this time it is probably our very best apple, and while we are talking of the commercial orchard, there is going to be a demand for apples in localities of this country of ours for all seasons of the year. If we discard this apple we shall have nothing at that time. Place it in the commercial orchard.

Griffin—Do not know that it is profitable as a summer apple, but as to quality the Maiden's Blush is well worthy of a place among fruits.

Bailey—As a summer apple I would place it at the head of the list for family and commercial orchards.

Cutter—It is the best apple of its season for all purposes.

Smyth—It is the best commercial apple for the summer trade that we have.

Secretary Barnes—At the late meeting of the Missouri Horticultural Society the Secretary stated that he thought there was good money in the Maiden's Blush. He said the trouble was they were raised in too small quantities. Thought they could be raised in car lots, so that they could be shipped to northern cities; that they were quick growers and brought ready money and you had very little competition in the market.

Ferris—My experience is that it bears every other year.

President Wellhouse—The Maiden's Blush is the only summer apple that we have made pay at all.

Robinson—We have not been in the habit of growing the Maiden's Blush very largely here. It is one of our old apples in Illinois, and it is the earliest bearer and most regular and profuse bearer and the best keeper to ship in hot weather of any apple in its season. It was named for its beauty and it is the most attractive apple that grows. It has the property of keeping if kept moderately cool. From central Illinois north the tree is tender in very cold seasons.

#### GRIMES' GOLDEN.

Cook—I have not tried to ship any of the Grimes' Golden. I would place it about second on the list as a summer apple. With me it is a good, thrifty, hardy tree. My orchard is young.

Robinson—It is one of the best fall apples and one of the beautiful ones. It does not keep very well. It sits badly after it is gathered and goes to market in rather bad shape. But I have grown it rather extensively. It is not planted nearly as much now as in the past.

Holman—Grimes' Golden stands alongside the Jonathan in high quality and is a first-class dessert fruit. It is also a good bearer and ought to be in every family orchard. But I would not recommend it for the commercial orchard.

Ferris—Mine bore very heavily and were large and fine. Sold well locally. Never shipped any. Should think it ought to have a place in the commercial orchard next to the Maiden's Blush.

Gano—The Grimes' Golden is the best apple that grows, in its season. Should be in all family orchards and have a small place in the commercial orchard.

McAfee—Like Mr. Gano, I consider it the best apple that grows and one of the most profitable apples in my orchard. I find it to be a short-lived tree. I

think 90 per cent. of my Grimes' Golden are now dead. But what few I have left I am taking the very best care of for my family use until about the first of November.

Dixon—It is the best apple for family use, but drops very badly. The tree is not very long-lived, but it is a good bearer.

Whittaker—I prefer to plant the Grimes' Golden to the Maiden's Blush for profit. The Grimes' Golden is a very pretty apple; brings a good price in the market, especially at this time of the year [December].

Lux—I have had more or less experience with this apple for some years. For family orchard we cannot very well do without it. It is the apple that we aim to keep in our family as long as it will last—until February—and we say that it has a quality that no other apple has. It is better in my opinion than any pear that is grown in our State. It has to be handled carefully to keep its flavor, but in a cold, dry cellar it keeps pretty well. Give it a small place in the commercial orchard.

Maxey—I like to eat them. I believe most of us do. I believe there is a place for them as a fancy apple.

Cutter—I consider it the best flavored apple that ever grew, for family use. Missouri and Arkansas have brought the big red apples into notoriety, but now the big yellow apple is preferred by nearly all consumers.

Smyth—I pack mine in boxes as well as barrels. I consider them fine.

Johnson—I find the tree not as hardy as I would like to have it. As far as the apple is concerned, it sells as well as any apple.

#### WILLOW TWIG.

Cook—I am in favor of putting it on the retired list.

Robinson—The Willow Twig with me, in Butler county, has been a failure entirely. I have not a single tree planted that has paid for the room that it stands on. Have a few scattering apples and defective from some blemish on one side. The tree grows very well but has not produced apples in quantity, quality or appearance that would justify putting it in the commercial orchard.

Holman—It ought to be retained for its large size and good keeping quality and long life of tree. It is one of the worst trees in its early stages to blight.

Ferris—It blights badly. Am afraid it carries it to other trees. The apples are very large but I cannot get them to grow well. My neighbors have another quality that they call Willow Twig that do well. I think they are a little mixed up.

Griffin—I would not think of planting it any more.

McAfee—Have quite a number but of no value.

Sharp—Have had 100 trees to die. Apples rot on the trees. Have no use for them.

Whittaker—I do not believe I would advise any one to put them out for profit.

Lux—It is a good apple if you can get it perfect. A good seller. I had 200 trees planted in 1872 and the first year the fruit was somewhat good, but blight came on and I say they ought not to have a place in any orchard.

Dixon—I find that if the soil and location are suitable it grows all right, but in some locations it is entirely worthless—trees blight and no fruit. A moist soil is best for them.

Gerald Holsinger—We had a few trees—like them very much.

Maxey—The tree has not done well with us.

Smyth—Only few locations are suitable for them. Hilly land is best. I attended the Wyandotte meeting and I never saw a finer exhibit of Willow Twigs. I saw them in Johnson's orchard and he told the society that he sold them to be shipped to Europe for 75 cents per barrel more than any other apple he had. In Lawrence the grocer-men pay more for Willow Twigs.

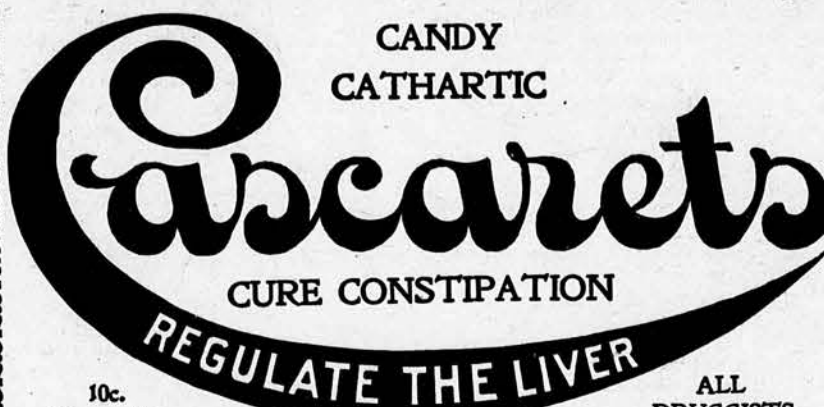
#### HUNTSMAN.

Cutter—I have found the Huntsman as long lived as any apple. I believe it deserves a place in our list.

Holman—The Huntsman is an apple on the York Imperial order—an old apple that has not been sufficiently known. In Kansas City I saw that apple for sale at \$6 per barrel. The tree is a good bearer. It is an apple that is bound to be planted more than it has been. The tree never blights.

Smyth—I agree with Mr. Holman. Gano—As an orchard tree it is very desirable. It is just wonderful how our old orchards are holding out. The quality and size of this apple are immense. There is one fault with the Huntsman, and that is when it is put in cold storage it bleaches out, as any yellow apple will do. I cannot keep yellow apples in

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storage and the Huntsman has been a disappointment to me. But if it is taken out and sold about this period [December] it is a success. As has been said, it is being sold at \$6 per barrel in Kansas City.

#### MAMMOTH BLACK TWIG.

Cutter—My trees tried to bear three years and all dropped off.

President Wellhouse—Mr. Munger says his apples were very small this year.

Bailey—I have a few trees which have been planted eight years, but the fruit this year was very small.

Holman—A good many Mammoth Black Twig trees have been propagated by nurserymen. It would be well if we knew more about them, because when this variety was first brought before the public it was brought forth with a hurrah and people were told that they had an apple of the quality of the Winesap and the vigor of the Ben Davis.

Mrs. Moore—My husband and I superintend sixty acres. We bought 500 bushes of the Mammoth Black Twig, all very fine.

Smyth—Two years ago I was down the Port Arthur road and saw the Mammoth Black Twig, and it is a very fine looking apple. But when I tasted it I thought I had seen many others better. But I think in the common trade it will do well. We have a few trees and would say they are rapid growers. But I would not recommend them for flavor.

Walter Wellhouse—I examined some Mammoth Black Twigs in Leavenworth, and they were a very good size. They were as large as any Winesaps I ever saw and good color.

Buck—It is a hardy grower. This year it is small.

#### PECK'S PLEASANT.

Ferris—We have a large number of trees. While they are generally small, they can be made large by cultivation and care. They are the longest keepers that I know of. They keep well in shipping.

Secretary Barnes—About a year ago Gov. Morrill said to me: "Why don't you get your people to grow Peck's Pleasant? It is one of the best apples growing."

Holman—I had several trees planted in 1870. They have been light bearers. The apple is of high quality and keeps until January. It has not as good a color as Huntsman's Favorite. The trees die quick.

Ferris—I do not agree with the gentleman. I never had one die. The apple is long and red.

Holman—I would like to know what he is talking about. Mine have always been green.

Ferris—I must be off.

Cook—Peck's Pleasant is a green apple. It is a good apple for home use. Not very profitable.

Gano—Good family apple—green—sub-acid—elegant in quality.

#### INGRAM.

Mrs. Moore—I speak of it as the coming apple in southern Missouri. Not very large—beautiful color—have a tendency to overbear—grow in clusters. Cannot use a rake but require to be pulled by hand. Free from common diseases.

Maxey—I am particularly interested in this apple. Very late last spring I was in Kansas City, and while passing along noticed a variety of apple standing out that looked as fresh and the stems were as green as if they had just been picked off. They had been taken out of cold storage. I was told that they were the Ingram. While talking with a gentleman in Lawrence, later, he told me they were grown in the vicinity of Garden City. On inquiry of the grower, he stated that they were worthy of growing.

Mrs. Moore—I have seen the apple kept until the following August.

Whittaker—I got twenty barrels from Mr. Bose, in Kansas City. I brought them up here and we retailed most of them and got \$6 per barrel for them. I do not think we found two bad apples to the barrel. Nine-tenths of the people thought they were the Genet. I think it a profitable tree to put out.

Smyth—In making collection for the World's Fair, in Douglas county, we could not have told it from the Genet except in growth. It is a beautifully streaked apple, and the party who grew it called it a variety of the Genet.

#### LOWELL.

McAfee—I have realized more from my Lowell apples than from any others in my orchard. They are early, very prolific, and do not think I have a dead tree among them. The Lowell has been the best paying and the best selling apple here in our market.

Lux—I planted my Lowells in 1870. They blight very badly and the apples are somewhat given to be knotty. Have made no money from them.

Robinson—I have grown the Lowell in Illinois. I brought it here and planted it in 1879 and 1880. Made money there and here. It is a large, green, smooth apple. It comes in the time of the year just following the Maiden's Blush. The tree did not blight with me at all, either there or here. It is an old apple, has been growing a long time and is going out.

Holman—This kind of an apple is all right where there is such a market as Topeka affords, and no one else has any at that time. It is not a good apple to ship. There are other apples that can be handled better for shipment than this. Another apple that we do not know much about is the Orange Pippin. There is \$2 or \$3 in it where there is \$1 in the Maiden's Blush. It can be shipped to Liverpool and back in good condition. There is no other that can compare with it in productiveness. It is a fruit that ought to be on this list.

(To be continued.)

"Old, yet ever new, and simple and beautiful ever," sings the poet, in words which might well apply to Ayer's Sarsaparilla—the most efficient and scientific blood purifier ever offered to suffering humanity. Nothing but superior merit keeps it so long at the front.

## BURPEE'S SEEDS GROW!

Write a postal card to-day for

BURPEE'S FARM ANNUAL for 1898,  
Brighter and better than ever before.

W. ATLEE BURPEE & CO., Philadelphia.

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2,000,000 Strawberry Plants at \$1.50

per 1,000 and up; 12,000

Peach trees 1 1/2c. and up;

Osage Orange Hedge \$1 per 1,000; Ash Seed-

lings 75c. per 1,000. A large supply of all kinds

of exceedingly well-rooted, true to name and

strictly first-class nursery stock. Write for

price list to

BOHEMIAN NURSERIES, Reynolds, Neb.

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In buying seeds "economy is  
extravagance," because the cost  
of cultivation wasted on inferior seeds  
always largely exceeds the original  
cost of the best and dearest seeds to  
be had. The best is always the  
cheapest. Pay a trifle more for

## FERRY'S SEEDS

and always get your money's worth.  
Five cents per paper everywhere.  
Always the best. Seed Annual free.  
D.M. FERRY & CO., Detroit, Mich.



## In the Dairy.

Conducted by A. E. JONES, of Oakland Dairy Farm.  
Address all communications Topeka, Kas.

### New Ulm Prize Butter--How It Was Made.

You ask me to tell the boys just how that sweepstakes tub of butter at New Ulm was made, and as I have no "secrets" in the making of butter, and you think it might be of interest, I am pleased to comply with your request.

To begin with, I will be frank and say that the churning of 600 pounds, from which this tub was taken, was made to order for convention scoring and was not quite the regular make. What the regular make here is a good many of the boys on the road know. The milk was all only one day old, and in the making of this butter we began at the weigh-can. I am so fortunate as to have a man at the weigh-can whose better I have not yet seen in that place, and his instructions were that we were going to get up a tub for the convention, and if he found any milk at all questionable to reject it, or at least to call my attention to it before admitting it. He rejected no milk that day, and by frequently applying the alkali test to the milk in the receiving vat as it came in I found that it all tested .2 per cent. of acid or under. This I consider a good showing when it comes from 130 patrons.

This milk was then Pasteurized and skimmed at the Pasteurizing temperature, taking a cream which tested 33 per cent. fat. The cream was cooled to 68 degrees as fast as skimmed and appeared to show slightly less acidity than the whole milk.

We added, when about half done skimming, a 10 per cent. starter made from pure culture and kept the cream at 68 degrees until it showed very near .5 per cent. of acidity, when we cooled it gradually to 50 degrees, so that by the time it reached 50 degrees it showed fully .6 per cent. acid. It was allowed to remain at that temperature for a few hours, or until it showed .7 per cent. of acidity, which was the point we intended to reach. It was then churned at 49 degrees, taking two hours and forty-five minutes to churn, the granules being small.

The buttermilk was drawn off and butter drained only fairly dry. It was not washed at all, no water being used to rinse down the cream vat or in the churn. It was then salted two ounces to the pound and worked until the buttermilk had all disappeared and the grain showed up to suit us. The butter was allowed to sit one-half hour when half worked.

All through the process of ripening the cream showed a very decidedly pleasant, delicate aroma, which became stronger as it became more acid; but, though the cream was ripened to a .7 per cent. of acid, it had even then anything but that sharp acid taste so common to raw cream, but was mild and smooth, as it were, and the unsalted butter granules were as sweet as a rose. It suited me to perfection and was everything I could expect.—H. E. Schuknecht, in Chicago Produce.

### Kansas Dairy School.

Manhattan, January 7.—The Agricultural College to-day begins a dairy school which will be in daily session for the coming three months and promises to be of much practical benefit to the farmers of Kansas.

The idea is to duplicate the conditions which prevail, or may be easily provided on the average farm, and to prove that with such conditions the Kansas cow may be made a much greater source of revenue than at present.

A herd of twenty average cows, none of them pure-bred, has been recently purchased in Lincoln county by Prof. Cottrell and Regent Daughters. The dairy room has been furnished with improved apparatus for purifying the milk, separating and churning the cream, and will be in constant use as a means of illustration and instruction.

In addition to this a series of lectures will be given upon the principles of agriculture, bacteriology, feeds and feeding, diseases of dairy cattle and related subjects, and the class has the use of the college library.

Tuition is free, and the only requirements are that students shall be at least eighteen years old and have sufficient knowledge to understand the topics treated. The lectures are given by Professors Cottrell and Fischer and Assistants Burtis and Otis.

The enormous sale of Dr. Bull's Cough Syrup has brought to the surface numerous imitations. Keep a sharp lookout when you buy.

### Iowa's Dairy Commissioner.

Mr. C. S. Gates has been appointed by Governor-elect Shaw as Dairy Commissioner of Iowa, to succeed W. K. Boardman, who filled the office with much credit to himself and the State for four years. Mr. Gates was selected from a large number of applicants, by reason of his fitness for the place, and is said to be endorsed by dairymen wherever he is known.

### Time Extended.

Editor Kansas Farmer:—The many readers of your valuable journal who are interested in Holstein-Friesian cattle will be glad to learn that the period set by the Holstein-Friesian Association of America for recording animals over one year of age at the same fee as for under one year of age extends to the 16th of March, 1898, and does not cease January 1, 1898, as many persons have evidently supposed. I shall be glad if you will make this fact known in your columns, for the convenience of many people who are remitting double fees to the Secretary, when but one is necessary, and to further inform those who may not be aware of the temporary reduction of fees for recording animals over one year old. The fees now stand, for non-members, cows \$2, bulls \$5; for members, cows \$1, bulls, \$3. Transfers, non-members, 50 cents; members 25 cents.

F. L. HOUGHTON, Secretary.  
Brattleboro, Vt.

### Tuberculous Milk.

Dr. Sims Woodhead has been trying to ascertain the precise amount of risk run by consuming milk and meat from tuberculous animals. He considers this an important source of infection, especially for children. Cooking and boiling very largely diminish the risk, as may be seen from the results of the following experiment: Twelve guinea pigs were inoculated, and twenty-one fed with a solution of tuberculous meat. Of these, eleven in the first case and sixteen in the second developed tubercule. When the meat had been cooked the same experiment resulted in two out of seventeen cases of tubercule from inoculation, and seven out of forty-six from feeding on the extract. Tuberculous milk retained its virulence when heated up to 75 degrees C., but lost it when heated up to 80 degrees. The time of heating is important, for a temperature of 70 degrees maintained for twenty minutes was proved to be as effectual as the higher temperature for a shorter time.

### Dairy Notes.

Warm bedding makes the cows comfortable and saves feed.

A cow that gives a good flow of milk all winter is worth twice as much as the summer cow.

If the cream is too warm the butter will come too soon and there will be a waste of flavor.

To secure the best quality of cream for butter the milk must be cooled as soon as possible after it is drawn.

While the milch cow should not be overfed, care must be taken that the large milker has all that she needs.

A lot of half-inch cracks in the cow stable are equal to a lot of mice holes in the feed bins; both cause a loss of feed.

If you put the cream in the churn a degree or two too cold it will take longer than necessary to churn it. It is a waste of time.

Milk with dry hands. It is better every way; you get cleaner milk and the cows' teats are not so liable to crack in winter.

Have you a box-stall for the cows to calve in? Put the cow in it a few days before she is due to calve, so that she will feel at home.

It costs just about as much to keep a cow that will only make six pounds of butter as it does one that will make nine or ten pounds.

Upon the fact of his having two or three poor cows in his herd can often be blamed the failure of a dairyman to make his business pay.

To make the most out of the cow, keep her warm and in a pure atmosphere, and keep her as quiet as possible while eating and while her food is digesting.

A rusted tin vessel will taint any milk left standing in it with an exceedingly disagreeable odor and taste, and this taint will pass into butter made from such milk.

Can't you see that if you judiciously put some of the cheap grain into your cows now, the 20-cent butter that it will make will pay you better than any other farm products? If you should so prefer, you can let a creamery do the

making for you, but the profits of this plan will depend largely on your own capability as a butter-maker.

In a majority of cases, from this time on, it will pay to increase the rations of the cows somewhat as the cooler weather coming on at this time will make it necessary.

Keep a can of vaseline in the stable and use it on every chafed or sore place the cows have; they shouldn't have many, but accidents are liable to happen in the best regulated cow stables.

If butter is overworked the granules are mashed, the grain ruined and the value of the butter harmed. Let not the hands come in contact with butter, for the warmth of them melts and injures the grain.

It takes about twice as much food and labor to produce the same amount of meat, butter or milk from scrubs as from pure breeds, and that is why poor farmers with scrub cattle fail to make the farm pay.

A Michigan paper gives an account of a milk dealer having gone insane, and says it is thought it was because he watered his milk. The paper publishes the item as an "Awful warning to adulterators."

In mixing two or more kinds of meal together it pays to do it thoroughly; put them down in layers on a floor and shovel over two or three times; you can't mix meals well in a feed bin unless in very small quantities.

The butter globules are not so large in the milk of any other cow as in that of the Jersey. For this reason the milk throws up the cream more readily and completely, and it churns more readily than any other. The Guernsey is its only competitor.

A dairy is entitled to credit for the by-products, and these will often change an apparent loss into a profit. Do not only count the cash for the butter, but the gain from the pigs and chickens which have been raised on the skim-milk and buttermilk.

If the garments of a dairyman are offensive his stable must smell worse. He has not learned his first lesson. However constructed, the stable can be kept nearly odorless, in both a practical and a sanitary sense, and will be at no time offensive. No one but a lazy milker will work in filth.

One quart of milk weighs 2.15 pounds, and a quart of cream containing 25 per cent. of fat should make a pound and three and one-half ounces of butter. One pound of butter fat should make 1.16 pounds of butter; that is, add 16 per cent. of the butter fat to estimate the butter. Of course, milk and cream vary, but the above is about correct for an average.

Advices from Michigan state that the law prohibiting the coloring of oleomargarine by the use of artificial coloring matter is being violated by many dealers in the State, by combining with the oleo enough highly-colored genuine butter to give color to the entire mass; dealers claim that the law is not violated in doing this, as there is nothing to prevent the using of butter in combination with oleomargarine.

### Make Gold Dollars Selling Our Churn.

I want to add my testimony to the list of those who have used the Lightning Churn. It does all that is claimed for it; you can churn easily in one minute and get a large percentage more butter than with the common churns. I never took the agency for anything before, but so many of my neighbors wanted churns that I ordered thirty, and they are all gone. I think in a year every farmer will have a Lightning Churn; in fact, they can't afford to be without one, as they make so much more butter, and a good little bit of money can be made in every township selling those churns. By writing to Mound City Churn Co., St. Louis, Mo., you can get circulars and full particulars about the churn.

A READER.

## CREAM SEPARATORS.

De Laval "Alpha" and "Baby" Separators.

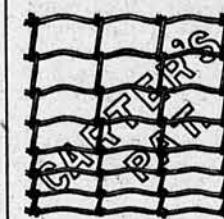
First—Best—Cheapest. All Styles—Sizes.

Prices, \$50.00 to \$800.00.

Save \$10 per cow per year. Send for catalogue.

THE DE LAVAL SEPARATOR CO.,

Randolph and Canal Sts., CHICAGO. 74 Cortlandt Street, NEW YORK.



**\$8.00 for a MACHINE**  
to weave your own fence of  
Colled Hard Steel  
Spring Wire,  
32 inches high, at  
25 Cts. per Rod.  
\$20 buys wire for 100  
rod fence. Agents  
Wanted. Catalogue Free.  
CARTER  
Wire Fence Mach. Co.  
Box 15, Mt. Sterling, O.

## Go By The Book

"Selip" comes to cure the uncured, pile-pestered individual who has tried everything—but Selip.

"SELIP" CURES PILES.

Selip is safe.

The price of Selip, what it does and how it does it, is in the book. The book costs nothing. Quicker you get it, quicker you'll be cured. Send your full address right away to

SELIP MEDICAL COMPANY  
Rochester, N. Y.

## Saved from Hog Cholera

Many farmers in the West, where hog cholera rages most, have saved their hogs

BY USING McCLEERY'S HOG CHOLERA PREVENTIVE.

Mixed with the feed it gets into the blood and destroys all cholera and disease germs, kills stomach and intestinal worms, regulates the bowels and stomach and promotes good health.

**Free Trial Package** Enough to treat 3 hogs mailed for 15c. to pay postage. One dollar's worth will treat ten average cases. Free circulars and testimonials.

T. C. McCLEERY, M. D., EXETER, NEB.

Send \$1.25 for Kansas Farmer one year and book, "Samantha at Saratoga."

**We PAY CASH** each WEEK the year round, if you sell Stark Trees. Outfit free.

STARK NURSERY, LOUISIANA, MO., Stark, Mo., Rockport, Ill., Danville, N. Y.

**SEEDS** 6 Pkts. Flower Seeds, Giant Cressman, Mammoth Gladiolus, Fairy Flower, Gay Flies, Gorgeous Poppy and California Glory, all for 5 Pkts. Vegetable Seeds, 10c. Red W. Onion Seed, 60c. per pound. 5 GERANIUMS, 25c. 5 ROSES, 25c. Catalogue FREE.

A. C. ANDERSON, LEIGH, NEB. PLANTS

**CATALOGUE FREE. HOME SEEDS GROWN SEEDS at Low Prices.**

SEND FOR OUR large, one CATALOGUE TODAY, mailed FREE. It tells all. Market Gardeners ask for Wholesale Price List.

ALNEER BROS., No. 17 Alneer Bldg., Rockford, Ill.



### Seed Raised

from carefully selected cabbage, onion, carrot, beet, &c., and yet at as low prices as seed raised from trash. Try the *Surprise Pea*, warranted to be the very earliest of all the wrinkled sorts. Try the *Enormous* potato (604 bus. per measured acre) the best of all the early beets, the new cabbage, cucumber, lettuce, etc. To have the best garden you will need our catalogue, it contains the best varieties of vegetable seed, many of them of our own raising. The Flower Seed page is of particular interest to wife and daughter. It is Free.

**JAMES J. H. GREGORY & SON,**  
Established 43 years. Marblehead, Mass.



**A Great Offer To Introduce KING'S SEEDS** Northern Grown. World's Fair Medal.

We give WATCHES, Books, Sewing Machines, and other premiums. Absolutely no money in advance, nor C. O. D. business. Simply write on postal "Please send me \$3 lot of Seeds, which I will try to sell for you, and if I fail will send money and unsold seeds in 60 days," and we will send the Seed, all charges paid by us. Say whether you want Flower or Vegetable Seeds. Boys and Girls, you can do this work. A nice Watch for selling \$3 collection. We refer to City Bank of Richmond.

**T. J. KING CO.,** Seedsmen, Richmond, Va.

# REID'S TREES

**ARE RELIABLE.**  
Everything grown in Reid's Nurseries is healthy, well-rooted and true to name. Every effort is made to save expense to customers. We sell direct and ship direct, saving fifty per cent. on Trees, Shrubs, Vines. Write for catalogue, estimates or suggestions. Try Star Strawberry, Eldorado Blackberry.

**REID'S NURSERIES,** Bridgeport, Ohio.



## The Poultry Yard

### The State Poultry Show.

The Kansas State Poultry show was held at Manhattan last week.

The basis for premium awards was as follows: Pen of five birds, first \$3; second \$1. Single specimens, first \$1; second, 50 cents. Pigeons, per pair, first 50 cents; second 25 cents. Pets, each, first 50 cents; second red ribbon. Aquatic class, first \$1 per pair; second 50 cents. Diploma in all classes for third premium. Premiums were awarded as follows:

Barred Plymouth Rocks.—E. Leighton, Effingham, first cockerel, first hen. J. K. Thompson, Topeka, second hen and third pen. W. Vesper, Topeka, first cock, third cockerel, first pen. J. P. Johnson, Junction City, first and second pullet, second cockerel and second pen.

White Plymouth Rocks.—M. L. Canfield, Belleville, first hen, first cockerel, first, second and third pullet, first pen. The Smiths, Manhattan, second cockerel.

Buff Plymouth Rocks.—F. W. Baker, Manhattan, first, second and third pullet. Silver-laced Wyandottes.—J. W. Gause, Emporia, first and second cockerel, first and third pullet, second and third pen. D. M. May, Emporia, first hen, second pullet, third cockerel and first pen.

Golden Wyandottes.—L. V. Marks & Son, Topeka, first cockerel and first pullet. W. A. Doolittle, Sabetha, first cock, first hen, second cockerel second and third pullet.

Buff Wyandottes.—J. W. F. Hughes, Topeka, first cockerel, first and second pullet. Ross Bros., Manhattan, third pullet.

Buff Cochins.—Chas. Steinberger, Topeka, first cock. C. S. Kistler, Topeka, first, second and third hen, first, second and third cockerel, first, second and third pullets, first and second pen.

Partridge Cochins.—Jas. Clark, Topeka, first cockerel, first, second and third pullet. Light Brahmas.—Jas. R. Young, Manhattan, third hen, first and second cockerel, first, second and third pullets, first pen.

Black Langshans.—T. V. Coddling, Quin-ton Heights, third cockerel, first, second and third pullets. J. W. F. Hughes, Topeka, first cock, second and third hen. B. F. Carson, Belleville, second cockerel. D. A. Wise, Topeka, second cock, first hen, first cockerel.

Single-comb Brown Leghorns.—The Smiths, Manhattan, second pullet, first pen. R. J. Beachum, Manhattan, third hen, first, second and third cockerel. E. C. Fowler, Topeka, second hen, first and third pullets. C. A. Sparks, Topeka, first hen.

Rose-comb White Leghorns.—Theo. Rick-enbocker, Topeka, second cockerel, first, second and third pullets. H. C. Short, Leavenworth, first cockerel, also won all premiums for Single-comb White Leghorns, and all premiums in Rose-comb Brown Leghorns.

Black Minorcas.—The Smiths, Manhattan, second cockerel, first and third pullets, first pen. W. H. Hepler, Manhattan, third cockerel. Richard Meyer, Riley, first cockerel, second pullet.

Golden Polish and Houdan.—E. G. Rader, Manhattan, won all premiums in these two classes.

Blue Andalusians.—The Smiths, Manhattan, first cockerel, first, second and third pullet.

Cornish Indian Games.—The Smiths, Manhattan, first cockerel. Ross Bros., second cockerel.

Black-breasted Red Games.—A. D. Wood-ruff, Manhattan, first cockerel.

Any Other Colored Games.—A. D. Wood-ruff, Manhattan, first cockerel, first pullet.

Pit Games.—Geo. B. Harrop, Manhattan, second cockerel, first, second and third pullet. A. D. Woodruff, Manhattan, first cockerel.

Silver Seabright Bantams.—J. W. F. Hughes, Topeka, all premiums in this class.

Golden Seabright Bantams.—J. K. Thompson, Topeka, first hen. L. V. Marks & Son, Topeka, second cockerel, second and third pullet.

Pigeons.—Wm. Vesper, Topeka, all premiums in this class.

Aquatic Fowls.—Perry Bros. All premiums in this class.

Peacocks.—A. Simons, first and second. Dressed Poultry.—All to Perry Bros.

### Officers of the State Poultry Association.

At the annual meeting of the State Poultry Association, held at Manhattan, January 6, the following officers were elected: A. M. Story, Manhattan, President; Col. J. W. F. Hughes, Topeka, Secretary; Thos. Owens, Topeka, Treasurer. Fourteen Vice Presidents were chosen. Board of Directors: A. M. Story, Manhattan; Col. Hughes, Topeka; Thomas Owens, Topeka; C. F. Kistler, North Topeka; Dr. P. M. Lewis, Leocompton. C. H. Rhodes, North Topeka, judge. The next show of the association will be held in Topeka, the second week in January, 1899.

### How's This!

We offer One Hundred Dollars Reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure.

F. J. CHENEY & CO., Proprietors, Toledo, Ohio.

We the undersigned have known F. J. Cheney for the last fifteen years, and believe him perfectly honorable in all business transactions and financially able to carry out all obligations made by their firm. WEST & TRUAX,

Wholesale Druggists, Toledo, Ohio.

WALDING, KINNAN & MARVIN,

Wholesale Druggists, Toledo, Ohio.

Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Price 75 cents per bottle. Sold by all druggists. Testimonials free.

### Gossip About Stock.

The annual meeting of the National Delaine Merino Sheep Breeders' Association will be held at the Central hotel, at Canonsburg, Pa., on Wednesday, January 19, 1898.

John Brazelton & Son claim as a sale date for a brood sow sale of Poland-Chinas, Saturday, February 26, 1898. Detailed announcements will appear later in the Kansas Farmer.

Notice the gerat brood sow sale of Poland-Chinas, to be held at Ottawa, Kas., February 3, 1898, by Dietrich & Spalding and advertised this week. Look for full particulars next week.

Of course, the babies must be cared for, and baby pigs are no exception. M. H. Alberty, of Cherokee, advertises something in their interest, viz., an instrument for pulling their teeth. See his announcement in "Want Column."

The thirty-second annual report of the Union Live Stock Yards, Chicago, for 1897, give receipts of that market for the year as follows: Cattle 2,554,924, calves 122,976, hogs 8,363,724, sheep 3,606,640, horses 111,601, cars 279,662. The value of these receipts make the snug sum of \$216,305,396. The only class of stock that surpassed previous years was sheep.

Messrs. Kirkpatrick & Son, Connor, Kas., Winn & Son, Thornton, Mo., W. P. Goode, Lenexa, Kas., and John Bollin, Kickapoo, Kas., announce a combination sale of Poland-China bred sows, to be held at Twenty-third and Grand Ave., Kansas City, Mo., on Monday, February 7. Evidently this will be considerable of an event, because they state in their invitation to breeders that the offering consists of "sows only in full dress." Watch out for their announcement next week.

The Garden City Poultry and Pet Stock Association, organized January 3, 1898, will hold a show in the near future. Garden City is gaining a solid reputation in the West for the fine quality of poultry shipped, both alive and dressed. Nearly all the standard breeds are represented by specialists who have spent considerable time and money on their breeding stock. The geographical location is specially suited to the raising of healthy and vigorous stock. Watch the Kansas Farmer for advertisements. A. S. Parsons, of Garden City, Kas., is Secretary of the association.

The Kansas Farmer notes with special pleasure the upward tendency of the horse industry, as shown by the advertisement of Henry Avery, Wakefield, Kas., one of the foremost breeders of Percheron and Coach horses in the West. He very truthfully states that prospects were never so good nor prices so low for this class of horses as at the present time. Mr. Avery has never, during the depression of the horse industry, lost faith or wavered from his standard of excellence. He has, perhaps, curtailed in numbers, but never in quality during this period, and therefore is certainly deserving of the patronage of our readers who may desire first-class stock.

Geo. Topping, of Cedar Point, Chase county, Kansas, writes: "Have just returned from the poultry fairs held at Sedgewick City, Wichita and Cottonwood Falls. The premiums won on my poultry were as follows: Barred Plymouth Rock fowls, first breeding pen, second and third cock, first, second and third on hens. Pekin ducks, first and second adult drake and duck. M. B. turkeys, second trio. At Wichita exhibit, first and second on cock and third on hen in Barred Rocks. M. B. turkeys, second young cock, third hen. Cottonwood Falls, in Barred Plymouth Rocks, first breeding pen, first on cock, first, second and third on hen; Pekin ducks, first and second pair, and took first premium at each show on Prairie State incubator and brooder. Twenty-one premiums in three shows on poultry. Send and get prices on stock and eggs. You want some of it."

### Publishers' Paragraphs.

SUGGESTIONS FOR SOWERS OF SEED.—Probably a majority of the farmers and gardeners of the country know something about the work of Mr. James J. H. Gregory, of Marblehead, Mass., and many of them have been gainers by his discoveries of new varieties of squashes, cabbages, potatoes and peas. Mr. Gregory is the head of the great seed house of James J. H. Gregory & Son, and his strong common sense and careful experiments have done a great deal to make the Gregory "home-grown" seeds thoroughly relied upon wherever they are sown, from the Atlantic to the Pacific, and abroad. The most recent catalogue of the firm con-

## Quinn's Ointment



is a boon to suffering horse flesh and yield of profit to man. It cures all diseases of the legs and feet, making lame horses sound, thus converting loss into profit.

All Druggists Sell It.....

If by chance you should not find it there we'll mail you package for \$1.50. Smaller size 50 cents.

W. B. EDDY & CO., WHITEHALL, N.Y.

tains a lengthy list of improved new varieties in vegetables, small fruits and flowers, and a vast number of practical farm and garden facts, acquired on the experimental farms at Marblehead. As this book will be sent free to any one who writes for it, no one who plants seed, whether in a very small garden or on a very large farm, need be without its helpful suggestions.

A VALUABLE NURSERY CATALOGUE.—The Harrison Nurseries, at Berlin, Md., whose large stock of peach, apple and plum trees, asparagus roots, strawberry plants and other specialties were recently pronounced by the State authorities to be wholly free from insect pests and diseases, have just issued a handsome catalogue for 1898, which they will send free to any one writing for it. The Harrisons have met with extraordinary success in raising the specialties enumerated above, a success that has extended to the growers of these plants purchased from the Harrison nurseries.

With this issue we start the 1898 advertising of the Acme Pulverizing Harrow, Clod-crusher and Leveler, which is manufactured solely by Duane H. Nash, Millington, N. J. For a number of years past these announcements have appeared regularly in our paper each season, and we know that through this means many of our readers have bought and are now using the Acme harrow. That they have found much satisfaction and profit in the use of this implement is evidenced from the fact that we have had no complaints from those who are using them. Mr. Nash has dealt so fairly and openly with the people that there could be no possible cause for complaint. The harrow does all he claims for it, and he lives up to the letter of every offer he makes. We do not know what more any one could ask. We wish to call the attention of our readers to the trial offer of this "ad." and to suggest that all those who contemplate the purchase of a harrow this season will do well to write Mr. Nash for circulars, price list, etc., before buying.

**SILOS**  
HOW TO BUILD ASK  
WILLIAMS MFG. CO., KALAMAZOO, MICH.

MARK STOCK WITH JACKSON'S EAR TAGS. ALWAYS BRIGHT, CAN'T COME OUT. JACKSON'S FRANCIS, ARK.

NORTH TOPEKA, KAS., Nov. 11, 1897. Geo. M. Jackson:—Send me some more ear-markers. They are the best of all kinds I ever tried, and I am sure I have used all ever gotten up. I have the first one to lose out of ear yet, and they are so handy to put in. O. P. UPDEGRAFF, Secretary Kansas Swine Breeders' Association.

## HOUSE PAINTS

Victory Implement and Wagon Paints, Nonparel Carriage Paints. Home-made and the best made for all purposes. Window and Picture Glass, Hot-bed and Greenhouse Glass.

If your dealer does not carry these goods send direct to

CUTLER & NEILSON PAINT AND COLOR CO., Manufacturers and Jobbers, N.W. Cor. 11th and Mulberry Sts., Kansas City, Mo.

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of the best quality. Rich soil. On railroad. Streams and Lakes. Coal. Big crops. Your last chance to secure a Government free homestead of 160 acres. Also rich, low-priced lands in North Dakota, Minnesota, Wisconsin

and Michigan.

LOOK THIS UP. It will pay you. For free maps and descriptive books write to

D. W. CASSEDAV,

Land and Industrial Agent, "500" Railway, Minneapolis, Minn. Mention this paper.

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Specialist. Female and Chronic Diseases. Thl years experience. 524 Quincy St., Topeka, Kas.

#### HOUSEKEEPERS

Having some spare time can make money by advertising and introducing VIAVI, the greatest known remedy for female troubles. If we have no representative in your community it will pay you to write us. Send for terms and particulars. KANSAS VIAVI CO., Topeka, Kas.

## THE STRAY LIST.

FOR WEEK ENDING DECEMBER 30, 1897.

Butler County—S. G. Pottle, Clerk.

HORSE—Taken up by Wm. Newman, in Pleasant tp. (P. O. Iowaville, Sedgewick county), one sorrel horse, 5 years old, white spot in forehead, a few small white specks on right side and some roan on upper part of neck and hips, both hind legs white half way to hocks; valued at \$21.

Sumner County—Chas. Sadler, Clerk.

MULE—Taken up by H. S. Ridenour, in Walton tp., November 15, 1897, one mare mule, thirteen hands high, dark brown, collar marks on top of neck; valued at \$20.

Lyon County—M. Q. Starr, Clerk.

HEIFER—Taken up by J. F. Bamsberger, in Americus tp. (P. O. Americus), November 25, 1897, one red and white heifer, 3 years old, indistinct brands; valued at \$15.

Pawnee County—James F. Whitney, Clerk.

STEER—Taken up by G. L. Eddy, in Pleasant Ridge tp., September 23, 1897, one black yearling steer, no marks or brands; valued at \$23.33.

Chase County—M. C. Newton, Clerk.

STEER—Taken up by P. B. McCabe, in Bazaar tp. (P. O. Bazaar), November 10, 1897, one steer, 2 years old, no marks or brands distinguishable.

FOR WEEK ENDING JANUARY 5, 1898.

Wilson County—T. D. Hampson, Clerk.

STEER—Taken up by Evert Leslie, in Guilford tp., December 18, 1897, one pale red dehorned two-year-old steer, square crop off of right ear and slit in same; valued at \$30.

Butler County—S. G. Pottle, Clerk.

STEER—Taken up by M. G. Guinty, in Fairmount tp. (P. O. Ebbing), about September 1, 1897, one pale red steer, about 2 years old, white face, white on belly and small white streak on shoulder, no marks or brands; valued at \$15.

Montgomery County—J. W. Glass, Clerk.

MULE—Taken up by S. T. Doggett, in Independence tp., December 11, 1897, one light brown mare mule, 4 years old, white nose, black stripe across shoulders; valued at \$25.

MARE AND COLT—By same, one bay mare with sucking colt, 8 years old, branded F on left shoulder, tail bobbed off; valued at \$15.

Greenwood County—J. F. Hoffman, Clerk.

COW—Taken up by H. P. Owen, in Fall River tp., December 30, 1897, one red cow, 12 years old, white under belly and white face, no marks or brands; valued at \$15.

STEER—Taken up by John Niewurger, in Janesville tp. (P. O. Hamilton), December 20, 1897, one red steer, 2 years old, some white, left ear cropped, right half under-cropped; valued at \$12.

STEER—By same, one red and white steer, 1 year old, right ear cropped, two slits in left; valued at \$12.

Labette County—J. F. Thompson, Clerk.

MARE—Taken up by A. A. King, in Elm Grove tp. (P. O. Elm City), December 14, 1897, one bay mare, fifteen and a half hands high, weight about 1,000 pounds, branded 4 on left shoulder; valued at \$20.

FOR WEEK ENDING JANUARY 13, 1898.

Greenwood County—J. F. Hoffman, Clerk.

HEIFER—Taken up by C. E. Tippet, in Salt Springs tp. (P. O. Fall River), December 20, 1897, one red heifer, white on belly, 1 year old, underbit in right ear; valued at \$14.

**DON'T WAIT** until you have grown old and bent with your struggles to secure a home free from incumbrance, and give to your family some assurance for their comfort. Get these things now, and quit paying all your earnings to some one else.

## GET A FREE FARM

in the Canadian Northwest. The best land under the sun. Fit for dairying, cattle ranching or grain raising. The country is rapidly filling up with excellent settlers. Railroads, churches and schools, and markets. Apply to the Department of the Interior, Ottawa, Canada, for information, or to

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### SOLD ONLY DIRECT TO THE FARMER

By adopting this plan we are enabled to save the farmer all the middle man's profit, and as we pay the freight he's that much ahead. AS GOOD AS THE BEST WOVEN WIRE fence made. Price way down. Better trials at once for free circulars and extra special discount. ADVANCE FENCE CO., 203 E. Second St., Peoria, Ill.

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Second-hand Lumber, practically as good as new, from World's Fair Buildings and other buildings, also new lumber at less than mill prices. Nails, Iron Roofing, Doors, Windows, Eave Troughs. Second-hand material of all kinds. Send for catalogue, FREE. Chicago Housewrecking Co., W. 35th & Iron Sts., Chicago, Ill. Largest Second-Hand and New Material Depot in the World.

### WE SELL DIRECT TO THE FARMER.

Steel Landside Double Board Plow, hard as glass, 16-in., \$90.

Sulky Plows, \$25. Riding Gang Plows, \$35. 3-in. Wagon, \$39. 1000 other articles. Catalogue free. HAPGOOD FLOW CO., Box 485 Alton, Ill.

### Christmas! New Year!

"Done gone" The next thing to think about is feeding. Our new catalogues are ready, catalogues are ready, everything is ready here. Are you? Ask anything you want to know. See "ad" in next issue.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.



## MARKET REPORTS.

## Kansas City Live Stock.

KANSAS CITY, Jan. 10.—Cattle—Receipts since Saturday, 7,113; calves, 185; shipped Saturday, 258 cattle; 224 calves. The market was steady to 5c lower. The following are representative sales:

SHIPPING AND DRESSED BEEF STEERS.			
No.	Ave. Price	No.	Ave. Price
20.....	1.475 \$4.90	89.....	1.510 \$4.75
1.....	1.760 4.50	61.....	1.222 4.35
23.....	1.152 4.40	66.....	1.095 4.30
20.....	1.151 4.20	1.....	1.620 4.25

WESTERN STEERS.			
No.	Ave. Price	No.	Ave. Price
42.....	1.352 \$4.25	110.....	1.144 \$4.15
56.....	1.213 3.90	16.....	1.003 3.90
20.....	906 3.70	104.....	937 3.65
101.....	923 3.65	1.....	940 3.05

NATIVE HEIFERS.			
No.	Ave. Price	No.	Ave. Price
46.....	789 \$3.95	1.....	620 \$3.85
17.....	885 3.80	2.....	880 3.85
1.....	550 3.60	13.....	598 3.45

NATIVE COWS.			
No.	Ave. Price	No.	Ave. Price
1.....	1.337 \$3.85	1.....	1.550 \$3.65
16.....	993 3.40	2.....	1.120 3.35
3.....	1.094 3.25	5.....	816 3.10
1.....	1.070 2.85	1.....	990 2.75

NATIVE FEEDERS.			
No.	Ave. Price	No.	Ave. Price
1.....	1.120 \$4.40	4.....	1.040 \$4.20
18.....	1.016 4.20	53.....	1.015 4.20
15.....	1.145 4.20	1.....	1.060 3.25
1.....	1.260 4.10		

NATIVE STOCKERS.			
No.	Ave. Price	No.	Ave. Price
2.....	455 \$4.40	22.....	632 \$4.35
1.....	420 4.10	1.....	740 4.10
1.....	622 4.00	3.....	643 4.00
4.....	807 3.95		

Hogs—Receipts since Saturday, 12,845; shipped Saturday, none. The market was steady to 5c lower. The following are representative sales:

88...225 \$3.60	75...243 \$3.60	73...217 \$3.60
51...224 3.60	39...262 3.55	138...231 3.55
51...270 3.55	18...242 3.52 1/2	81...258 3.52 1/2
65...211 3.50	95...211 3.50	83...210 3.50
67...258 3.50	2...300 3.50	63...230 3.50
84...203 3.47 1/2	21...200 3.47 1/2	71...238 3.47 1/2
51...181 3.47 1/2	70...259 3.47 1/2	79...179 3.45
58...182 3.45	91...206 3.45	19...221 3.45
77...234 3.40	16...294 3.40	72...201 3.37 1/2
44...187 3.37 1/2	62...315 3.37 1/2	109...159 3.37 1/2
50...282 3.37 1/2	46...105 3.35	91...205 3.35
61...362 3.35	51...165 3.35	80...189 3.35
106...137 3.35	37...281 3.30	97...158 3.25
26...174 3.25	4...177 3.20	43...108 3.20
89...157 3.20	10...134 3.15	14...119 3.15
22...112 3.15	13...114 3.15	39...122 3.15
4...342 3.10	6...350 3.10	41...113 3.10
4...302 3.10	3...403 3.10	4...355 3.10

Sheep—Receipts since Saturday, 2,859; shipped Saturday, 120. The market was active and steady. The following are representative sales:

679 Col. lbs....	91 \$5.67 1/2	486 W. lbs....	67 \$5.00
856 Ut. sh....	108 4.50	14 sw. sh....	97 4.10
31 stk....	60 2.85	1 cull....	@ 2.50
4 stk....	82 2.00	8 culls....	@ 75

Horses—Receipts since Saturday, 117; shipped Saturday, 93. Receipts continue very light. There was little inquiry for stock from outside buyers and the local demand was unusually light.

## St. Louis Live Stock.

ST. LOUIS, Jan. 10.—Cattle—Receipts, 5,200; market steady for natives and slow for Texans; native shipping steers, \$4.40@5.30; butcher steers, \$3.50@5.00; stockers and feeders, \$2.10@4.15; cows and heifers, \$2.00@4.50; Texas and Indian steers, \$3.40@4.25, mostly at \$3.65@4.00; cows and heifers, \$2.50@3.15.

Hogs—Receipts, 7,500; market steady; light, \$3.30@3.45; mixed, \$3.45@3.55; heavy, \$3.50@3.60. Sheep—Receipts, 500; market slow; native muttons, \$4.00@4.25; lambs, \$4.75@5.50.

## Chicago Live Stock.

CHICAGO, Jan. 10.—Cattle—Receipts, 19,000; market steady to 10c lower; beefs, \$3.80@5.40; cows and heifers, \$2.00@4.40; Texas steers, \$3.25@4.30; stockers and feeders, \$3.20@4.25.

Hogs—Receipts, 41,000; market active, strong to 5c higher; light, \$3.45@3.65; mixed, \$3.50@3.70; heavy, \$3.40@3.67 1/2; rough, \$3.40@3.45.

Sheep—Receipts, 30,000; sheep 10c lower, lambs 10 to 20c lower; native, \$2.80@4.60; western, \$3.50@4.30; lambs, \$4.00@5.60.

## Chicago Grain and Produce.

	Jan. 10.	Opened	High'st	Low'st	Closing
Wh't—Jan....	92 1/2	92 1/2	91	91	
May.....	90 3/4	91 1/2	90 3/4	90 3/4	
July.....	81 1/2	81 1/2	81 1/2	81 1/2	
Sept.....	75 3/4	75 3/4	75 3/4	75 3/4	
Corn—Jan....	26 1/4	26 1/4	26 1/4	26 1/4	
May.....	29 1/4	29 1/4	29	29	
July.....	30 1/4	30 1/4	30	30 1/4	
Oats—Jan....	22	22	22	21 3/4	
May.....	22 3/4	22 3/4	22 3/4	22 3/4	
July.....	22 3/4	22 3/4	22 3/4	22 3/4	
Pork—Jan....	9 25	9 25	9 17 1/2	9 17 1/2	
May.....	9 40	9 40	9 30	9 32 1/2	
Lard—Jan....				4 67 1/2	
May.....	4 85	4 85	4 77 1/2	4 80	
Ribs—Jan....	4 55	4 55	4 55	4 55	
May.....	4 70	4 72 1/2	4 67 1/2	4 67 1/2	

## Kansas City Grain.

KANSAS CITY, Jan. 10.—Receipts of wheat here to-day were 85 cars; a week ago, three days, 219; a year ago, 33 cars.

Sales by sample on track: Hard, No. 1, nominally 86c; No. 2 hard, 1 car 61-lb. 86c, 1 car 59 1/2-lb. 85 1/2c, 1 car 60 1/2-lb. 85c, 1 car 59 1/2-lb. 84 1/2c, 1 car 59-lb. 84 1/2c, 2 cars 58 1/2-lb. 84 1/2c, 4 cars 58 1/2-lb. 84c, 1 car 58-lb. 84c; No. 3 hard, 1 car 58 1/2-lb. 84 1/2c, 3 cars 57 1/2-lb. 83c, 2 cars 82 1/2c, 12 cars 82 1/2c, 5 cars 81c; No. 4 hard, 2 cars 81 1/2c, 3 cars 80 1/2c, 1 car 80c, 1 car 78 1/2c. Soft, No. 1, nominally 90 1/2c@91c; No. 2, nominally 89@90c; No. 3, 1 car 57 1/2-lb. 87 1/2c, 1 car 56 1/2-lb. mixed 84 1/2c; No. 4, nominally 84@85c, 1 car 58-lb. 88c; rejected, nominally 78@80c. Spring, No. 2, nominally 81@82c; No. 3, 1 car 56-lb. 82c, 1 car 55-lb. 81c, 1 car 54-lb. 80c; rejected, nominally 75@77c.

Receipts of corn here to-day were 183 cars; a week ago, three days 261 cars; a year ago, 128 cars.

Sales by sample on track: Mixed, No. 2, 7 cars 24 1/2c, 10 cars 24 1/2c, 3 cars 24 1/2c; No. 3, 1 car 24 1/2c, 2 cars 24 1/2c; No. 4, nominally 23 1/2c@24c; no grade, nominally 23c. White, No. 2, 15 cars 24 1/2c, 2 cars 24 1/2c, 2 cars special 25c, 8 cars special 25 1/2c; No. 3, nominally 24 1/2c; No. 4, 1 car 24c.

Receipts of oats here to-day were 12 cars; a week ago, three days 24 cars; a year ago, 24 cars.

Sales by sample on track: Mixed, No. 2, 1 car 22 1/2c; No. 3, nominally 22c; No. 4, nomi-

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GOMBAULT'S



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A Safe Speedy and Positive Cure  
The Safest, Best BLISTER ever used. Takes the place of all liniments 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.

nally 21@21 1/2c. White, No. 2, 2 cars 23 1/2c; No. 3, nominally 23c; No. 4, nominally 22@22 1/2c. Rye, No. 2, 1 car 42 1/2c; No. 3, 1 car 42c; No. 4, 1 car 41c.

Receipts of hay here to-day were 87 cars; a week ago, three days 110 cars; a year ago, 56 cars. Quotations are: Choice prairie, \$7.00@7.25; No. 1, \$6.25@6.75; No. 2, \$5.50@5.75; No. 3, \$5.00; choice timothy, \$8.50@8.75; No. 1, \$8.00@8.25; No. 2, \$7.00@7.25; choice clover, mixed, \$6.50@7.00; No. 1, \$6.50@6.00; pure clover, \$6.50@6.00; packing, \$4.50.

## Kansas City Produce.

KANSAS CITY, Jan. 10.—Butter—Extra fancy separator, 17c; firsts, 14c; seconds, 14c; dairy, fancy, 14c; choice, 12c; country roll, 11c; store packed, 9@10c; fresh packing stock, 8c.

Eggs—Strictly fresh, 16c per doz. Poultry—Hens, 6c; springs, 6c; roosters, 12 1/2c; 15c each; ducks, 5 1/2c, geese, 5@6c; turkeys 8c; pigeons, 50c per doz.

Apples—Jonathan, \$5.00@6.00 in a small way; Bellefleur, in car lots, \$4.50@5.00 per bbl.; fancy Missouri Pippin, \$3.75@4.00; fancy Ben Davis, \$2.75@3.25; Winesaps, \$3.75@4.25; Willow Twigs, \$3.75@4.00; Huntsman Favorite, \$4.00. In a small way varieties are selling at 40@50c per half bu.

Vegetables—Cabbage, northern stock, \$1.00 per 100-lb. crate. Beets, 25@40c per bu. Tomatoes, Texas, \$1.00 per 1/4 bu. Green and wax beans, \$2.50@3.00 per crate. Onions, new Spanish, \$1.00@1.25 per crate; others, 70c@81.00 per bu. Potatoes—Greely stock, fancy Rural, 75c per bu.; choice Pearl, 68c per bu.; Iowa, 55@60c. Sweet potatoes, 50@60c per bu.

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RIVERDALE HERD of Chester White swine and Light Brahma poultry. J. T. LAWTON, BURLINGTON, KAN., proprietor. All stock guaranteed. I can also ship from Topeka, my former place.

**ON TIME AND AGENCY**  
to the first applicant in each locality  
A PAIR OF THE  
**FAMOUS O. I. C. HOGS**  
two of which weighed  
**2806 LBS.**  
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125 head in herd. Hard boars, King Hadley 16766 S. and Turley's Chief Tecumseh 2d 17978 S. 85 pigs to select from, some of which are by Short Stop 16885 S., Silver Dick 14180 S., Heyl's Black U. S. 84985, What's Wanted Jr. 17919 S., Standard U. S. 18271 S. and King Fisher 18877 S.  
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BREEDER OF

The Prize-winning Herd of the Great West. Seven prizes at the World's Fair; eleven firsts at the Kansas District fair, 1893; twelve firsts at Kansas State fair, 1894; ten first and seven second at Kansas State fair, 1895. The home of the greatest breeding and prize-winning boars in the West, such as Banner Boy 28441, Black Joe 28603, World Beater and King Hadley. For Sale, an extra choice lot of richly-bred, well-marked pigs by these noted sires and out of thirty-five extra large, richly-bred sows. Inspection or correspondence invited.

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The home of the great breeding boar, SIR CHARLES CORWIN 33095. Our 1897 crop of pigs are by six different boars and out of fashionably-bred sows, including such grand individuals as the prize-winning \$600 Lady Longfellow 34099 (S.), that has eight pigs by the prize boar, King Hadley. STOCK FOR SALE at all times and at very reasonable prices. We also breed Short-horn cattle. Write or come and see us.

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1000 Box Elder & Ash \$1.25.  
Rus. Mulberry and Osage Hedge at about same price.  
100 APPLE, 3 to 4 ft. \$6  
Cherry, 3 to 4 ft. \$10  
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We pay the freight  
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Growers of hardy, first-class evergreen and deciduous trees for shade, ornament or timber. Largest stock, lowest prices. Write for free catalogue, and let us know your wants.

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OF KANSAS CITY STOCK YARDS, KANSAS CITY, MO.

Sell on commission horses and mules of all grades, singly or car-load lots. Barns also at Fort Scott, Kas., where we carry from 800 to 600 head of horses and mules. Regular auction sales every Tuesday and Friday. Private sales every day. Special attention to the selection of breeding stock and well-broken family, saddle and draft horses. We are prepared to fill orders promptly by wire or mail. Liberal advances on consignments. Condition of market furnished on application.

## The Kansas City Stock Yards

are the most complete and commodious in the West,

and second largest in the world! The entire railroad systems of the West and Southwest centering at Kansas City have direct rail connection with these yards, with ample facilities for receiving and reshipping stock.

	Cattle and Calves.	Hogs.	Sheep.	Horses and Mules.	Cars.
Official Receipts for 1896.....	1,814,698	2,605,575	993,126	57,847	113,594
Slaughtered in Kansas City.....	933,916	2,263,143	663,069		
Sold to Feeders.....	510,433	593	124,547		
Sold to Shippers.....	295,678	334,635	66,354		
Total Sold in Kansas City, 1896..	1,739,925	2,598,371	873,950	46,067	

CHARGES: YARDAGE, Cattle, 25 cents per head; Hogs, 8 cents per head; Sheep, 5 cents per head. HAY, 80 cents per 100 lbs.; BRAN, \$1.00 per 100 lbs.; CORN, 60 cents per bushel.

NO YARDAGE CHARGED UNLESS THE STOCK IS SOLD OR WEIGHED.

C. F. MORSE, E. E. RICHARDSON, H. P. CHILD, EUGENE RUST,  
V. Pres. and Gen. Manager. Secretary and Treasurer. Assistant Gen. Manager. Gen. Superintendent.  
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Its Very Economical, Simple, Safe and Reliable.  
and Weber Gasoline Engines require no engineer. His salary goes in your pocket.  
For information address  
Weber Gas & Gasoline Engine Co., 459 Southwest Boulevard, Kansas City, Mo.



## The Apiary.

Conducted by A. H. DUFF, Larned, Kas., to whom inquiries relating to this department should be addressed.

### How I Managed the Decoy Hives.

Editor Apiary Department:—I here give you my plan of managing the decoy hives and securing the swarms of bees. In the winter of 1896, that I lost so many bees, as a matter of course I had quite a number of hives full of empty combs. I cleaned up the combs and hives nicely and then placed two or three of them up in the forks of trees, about ten or fifteen feet from the ground. I kept watch of them frequently, and when the first swarm entered I took the hive down and put another in its place.

After the second swarm took possession of a hive, I placed an empty hive on top of it, and left them remain in the tree. In a short time a swarm entered it, and I had two working colonies, one sitting on top of the other, and both up in the tree. I left those two colonies there until late in the fall, and they were then so heavy with honey I had the assistance of three men to help me take them down.

Some swarms came and clustered on trees near those hives, and I secured them and hived them in the usual way. My neighbor had a similar experience two years ago. He had a swarm to come and enter an empty hive in his apiary, and also a second one to come and light on the same hive. He sent for me, and I went and hived them for him.

I use the old "Simplicity" hive, and also another hive made in Fairbury, Neb. My first swarm last spring came out on the 15th of April, and while I was away from home my wife hived them; but they came out and left. This is the earliest that I have had swarms to come out in this locality. I came here nine years ago, and the following summer I found a swarm in a tree, transferred them to a hive, and from that swarm I increased up to forty colonies. These bees were originally the black bees, but in time became mixed with the Italians, and are what are called hybrids. I have now two colonies of pure Italian bees, and will stock up with them, being located near large alfalfa fields. My bees are doing better every year.

Talmo, Kas. JOHN W. WILSON.

### Temperature of Bee Cellars.

Forty-five degrees above zero is about the temperature desirable for cellars that contain bees. The temperature may vary from 40 to 50 degrees, but it is best if possible to keep it within these limits. Oil stoves and large kerosene lamps are sometimes used to regulate the temperature in cellars, but it requires great caution, as considerable harm may be done by getting the temperature too high. Indeed, much more harm is done by thus getting it too high than is done by too low a temperature. A thorough warming up of the bees in the cellar will almost necessitate moving them out. On very cold nights the temperature may be kept pretty well regulated by setting a large pail of hot water in the cellar. This will be found to be quite effective, and more or less of it may be used as required. Stoves, lamps, or all such as produce light, should be inclosed so as to exclude the light.

### When to Unite Bees in Spring.

There are usually some colonies in early spring that are best united, or put with other colonies. Some colonies come out in spring without queens, they having died or become lost during the winter. Such ones as these should be put with those having queens. Some colonies are so weak and have so few bees that they cannot pull through to build up to amount to anything, and these, too, should be put with others. It often occurs that these very weak stocks have choice queens, which will be lost if put with others, and when we have colonies that have lost their queens, we can thus put the weak ones containing good queens with those that are queenless.

If the bees are healthy and in good condition, fairly weak stocks may build up and make good colonies, hence only those that we are absolutely certain cannot come through to do any good, should we thus take up. I simply unite my bees by putting one colony with another at once, without any prolonged method. A very good way is to place the colonies to be united, by setting one hive on top of the other, allowing the bees to come together without any further molestation, which they will do in a few hours, when the upper hive may be removed and the bees driven down into the lower one. Uniting may be done on the first warm days in early spring.

### Wired Frames of Honey Comb.

Wired frames of comb are now in general use by a large number of leading apiarists. Wiring is done by drawing three or four wires of very fine quality through the center of the frame where the base of the comb is to occupy. The frames are first wired, and then the foundation comb is placed directly on the wires, and a little roller is run over the wire, imbedding it in the foundation. The object of this is to strengthen the comb, and it does it to perfection, as such combs will stand considerable knocking around without breaking. Handling combs as the present process of manipulating demands, require combs to stand considerable rough usage, and especially so when heavy with honey and used for extracting. Wired combs are of good service in shipping bees, and will withstand the usual rough treatment which is given them in transit.

### Dead Bees in Winter.

All colonies lose largely of bees during winter, and this is no cause for alarm. If colonies have been confined for a long time in the hive, the first day they get a fly they will carry out of the hive perhaps a handful of dead bees. It is no sign of a bad colony of bees to thus see quite a number of dead bees at the entrance, for it is the best colonies that thus clean them out, and the weak ones that do not.

All good, strong colonies will engage in general house-cleaning on every warm day in winter. If they can get one whole day's work at it, they will usually put things in good order, but two days in succession are much better, and always put them in first-class condition to withstand another long confinement. Such times as these we can greatly assist the bees in cleaning up their hives, by opening them and removing the dead bees and filth of any kind that has accumulated in the hives. We can also at such times inspect the amount of stores they have on hand, and if some are very near out, we can supply them with candy or frames of honey. In removing combs from the hives at this season, great care must be exercised to place back the combs in the same place, and in the same position that they formerly occupied.

### It Costs You Nothing to Test Its Wonderful Merit.

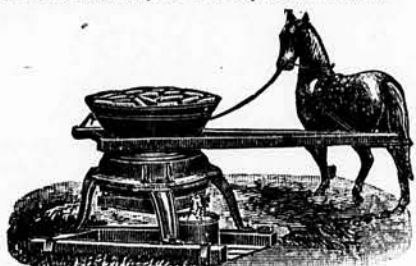
Dr. Kilmer's Swamp-Root is the discovery of the eminent physician and scientist and as such is not recommended for everything. It is distinctly a kidney and bladder remedy and has been so wonderfully successful in quickly curing even the most distressing cases of these disorders that if you wish to prove its wonderful merits you may have a sample bottle and a book of valuable information both sent absolutely free by mail. Mention Kansas Farmer and send your address to Dr. Kilmer & Co., Binghamton, N. Y. This liberal offer appearing in this paper is a guarantee of genuineness. The regular sizes are sold by druggists, price 50 cents and \$1.

### Summer Land in Winter.

Southern California; the California Limited takes you there in 54 hours over the Santa Fe Route. Most luxurious service.

### THE "TIGER" FEED MILL

Costs a little more than some others, but is strictly first-class in all respects, and is guaranteed to grind more corn and cob, shelled corn, wheat, rye, oats, barley or kafir corn in a given time, and to please you better than any other sweep mill on earth.



I also have the "BOSS" sweep mill and a full line of power mills. Write for descriptive circulars and prices. A. G. BODWELL, Agent, 1218 Union Ave., Kansas City, Mo.

\$5 Cash (50 egg size) On Trial \$5.75. "Hatches with Bantam, 20, 37 and 48 chicks from 50 eggs." Jacob Whippert, Cecil, O. Large size cheap. Send for No. 39 catalog. Buckeye Incubator Co., Springfield, O.

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# Farmer Hopkins' Evidence.

## HE TELLS ABOUT THE SUFFERING OF HIS DAUGHTER.

### A Victim of Nervous Prostration and Neuralgia, Saved After Her Physician Abandoned Hope.

From the Republican, Columbus, Ind.

While in the neighborhood of Rugby, Indiana, recently, a reporter was told that Miss Clara Hopkins, daughter of Mr. Dennis Hopkins, a prominent farmer of Bartholomew County, had been the subject of a remarkable transformation. The reporter decided to investigate and learn the particulars. He was driven to Mr. Hopkins' splendid country home, where he had an interesting conversation with that gentleman regarding the illness of his only daughter.

"You have been correctly informed," said Mr. Hopkins, "for Clara has indeed had a severe siege. She tried Dr. Williams' Pink Pills for Pale People and they did her more good than all other medicines together that she ever took. A few boxes of that medicine accomplished the cure of a case in a few months which had baffled physicians for years."

"About three years ago her health began to fail. The doctor who attended her said this was caused by weak digestion. This produced nervousness, which was accompanied by neuralgic troubles, which at first was located in the nerves about the heart. Of course this was a dangerous location for any such trouble, and she rapidly grew worse, notwithstanding that the physician was treating her. This continued till a year ago last November, at which time she was almost constantly confined to her bed."

"The neuralgia became gradually worse, and finally she was a confirmed victim to it."

"Nervous prostration set in, and she was soon all run down. Her blood was impure

and watery, and her complexion became sallow and colorless. She had no strength, and the least noise irritated her, she was so nervous. We had another physician, and he treated her steadily for a year without doing her any good. In fact, it seemed that she was continually becoming worse. He finally gave up the case as hopeless, and advised us to get Dr. Williams' Pink Pills for Pale People for her, as he said that they were the only thing that would benefit her."

"I procured a couple of boxes of the pills, and found that their use helped her considerably. She kept on taking them till she used about a dozen boxes, with the result that she was entirely well, and since then there has been no symptoms whatever of her old trouble. Dr. Williams' Pink Pills are certainly a wonderful medicine, which did a wonderful good in Clara's case, doing what several physicians failed to accomplish."

All the elements necessary to give new life and richness to the blood and restore shattered nerves are contained in a condensed form, in Dr. Williams' Pink Pills for Pale People. They are an unfailing specific for such diseases as locomotor ataxia, partial paralysis, St. Vitus' dance, sciatica, neuralgia, rheumatism, nervous headache, the after effect of la grippe, palpitation of the heart, pale and sallow complexions, all forms of weakness either in male or female. Dr. Williams' Pink Pills 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.

\$5 Hand Bone, Shell, Corn & Grit Mill for Poultrymen. Dally Bone Cutter, Power Mills. Circular and testimonials free. WILSON BROS., Easton, Pa.

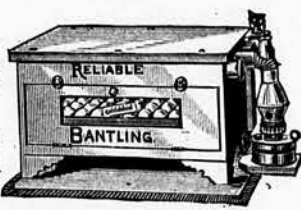
THE IMPROVED VICTOR Incubator. Hatches Chickens by Steam. Absolutely self-regulating. The simplest, most reliable, and cheapest first-class hatcher in the market. Circulars FREE. GEO. EITEL CO., QUINCY, ILL.

HATCH Chickens BY STEAM—With the MODEL EXCELSIOR Incubator. Simple, Perfect, Self-Regulating. Thousands in successful operation. Lowest priced first-class hatcher made. GEO. E. STALL, 114 to 122 S. 6th St., Quincy, Ill.

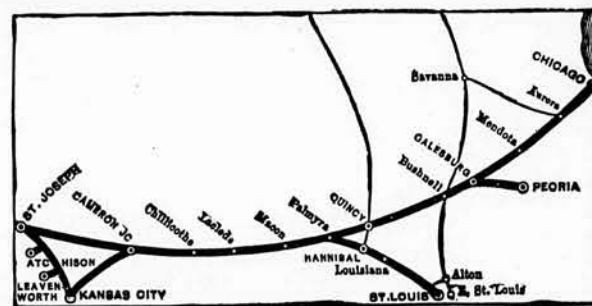
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The following and many other reliable persons testify that I thoroughly cure Cancer without the knife. T. E. C. Brinly, Louisville, Ky., maker of Brinly Plows, cured ten years ago of Cancer in the mouth. Prof. H. McDiarmid, Hiram College, Hiram, Ohio, cured five years ago. Had undergone several operations before with knife. Rev. W. H. Sands, Southport, Indiana, whose father was cured 8 yrs. ago. Address, Dr. C. Weber, 121 W. 9th, Cincinnati, O., for further particulars and free book.



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Hay or Straw 48 Inch Feed Opening  
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**KIMBALL BROS.**  
STEEL RYDER  
STEEL RYDER  
SCALE BRASS BEAM  
NOT IN ANY COMBINATION OR TRUST  
Manufactured by **KIMBALL BROS.,**  
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**VICTORY FEED MILL.** Grinds corn and all kinds of small grain. Made in four sizes, for 2, 4, 8 and 10 horse-power. Send for catalogue and prices.  
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CIRCULARS FREE  
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**FREE** For a 2-cent stamp to cover cost of postage, we will send you one of our handsome 1898 steel-engraved, gold-embossed "F" calendars. Our "F" calendar is a beauty.  
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"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!

**SPECIAL.**—Until further notice, orders from our subscribers will be received at 1 cent a word or 7 cents a line, cash with order. Stamps taken.

**FOR SALE.**—Cheap, if taken soon, a few choice fall pigs. Chief Tecumseh 2d, '96 Model and Look Me over blood. John Howat, Haven, Kas.

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**99 PER CENT TEST SEED CORN.**—100 bushels per acre. For particulars as to how to get one bushel free, address J. B. Armstrong, Pleasant Valley Seed Corn Farm, Shenandoah, Iowa.

**TO EXCHANGE.**—304 acres of timber land in Henderson county, Texas, for farm, live stock or land in Kansas. S. L. Pope, Goddard, Kas.

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## A GREAT COMBINATION SALE OF POLAND-CHINA BRED SOWS.

FEBRUARY 7, 1898, 23d St. and Grand Ave., KANSAS CITY, MO.

Nothing but red-hot up-to-date stuff will be offered. Look for particulars in this paper later.

## BROOD SOW SALE!

At Skating Rink, Ottawa, Kansas, February 3, 1898, at 1 o'clock.

There will be 50 POLAND-CHINAS, the get of Chief I Know, U. S. I Know, Nox All Wilkes, Silver Chief, he by Ideal Black U. S.; Highland Chief, he by Chief Tecumseh 2d, and Champion. Among the sows is Sanders' Bounty, by J. H. Sanders. Also a few fall, choice toppy boars, including Dandy Jim Jr. Sale will be held under cover in warm building. Write for catalogue.

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**SIXTY HEAD OF THE CREAM DE LA CREAM OF THE POLAND-CHINA 400.** sired by thirty-one princes of hog aristocracy—four by Short Stop, three by Roy Wilkes, three by Joker Wilkes, eight by Chief Tecumseh 2d, one by Look Me Over, one by Chief I Know, one by Kiever's Model, one by Hadley, one by One Price, and others by equally noted boars. They are mostly safe in pig for early farrow to Allerton's Tecumseh, the great 1896 ribbon-eater, Short Stop, Dorsey's Hidestretcher, Ring-leader, and Royal I. X. L., first-prize winner at Illinois State fair in 1897. Send for catalogue.  
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