

KANSAS FARMER

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Herd boars, Victor Hugo 41799 (sire imp.), Barkis 30040 (weight 800 lbs.), Prince Jr. 17th, from World's Fair winner. Choice pigs from five different strains. Also bred Shropshire sheep, M. B. turkeys and B. P. Rock chickens. Write.
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DIVERDALE HERD of 10 Chester White swine and Light Brahma poultry. J. T. LAWTON, BURTON, KAS., proprietor. All stock guaranteed. I can also ship from Topeka, my former place.

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

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of the fashionable prize-winning Chief I Know strain. Cheney's Chief I Know at head of herd. Pigs for sale. Prices low.

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Short-horn Cattle and Poland-China Swine Of the Best Strains.

Stock for sale. Correspondence and inspection invited.

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Herd Boars are Grand Sons of J. H. SANDERS and SHORT STOP, the World's Fair Prize Winners. Bred to 20 large mature sows of Corwin Black U. S. and Black Bess blood. We aim to produce the money-makers, not sacrificing size and feeding qualities to fancy points. Choice young stock for sale at reasonable prices.
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Fifty boars and gilts for this season's trade. My herd boars consist of Darkness Quality 14361, Princeton Chief 14548, Col. Hildebrecht 57847 and Standard Wilkes. My sows are splendid individuals and of the right breeding. Personal inspection and correspondence invited.
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BOARS, BOARS, BOARS.

July to September 1897 farrow, good condition and ready for service. All eligible. Poland-Chinas sired by Wren 17172, choice \$15.
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Ten choice fall boars and a number of fine spring boars sired by Knox All Wilkes 18179 S. and Highland Chief 18334 S. by Chief Tecumseh 2d. Young sows of same blood bred or open. Write us.
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Bulls in service: Kodax of Rockland 40731, who has won more first premiums at leading State fairs in past six years than any other bull in Kansas; Java 64045. Thirty-five yearling heifers and seven bulls 8 to 7 years old for sale.

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SHEEP FOR SALE CHEAP—Ten head of Cotswold ram lambs, \$5.00 each; ten head of fine Vermont Merino ewes, \$5.00; three fine heavy shearing Vermont rams—\$25.00 takes the three head. Write soon to E. H. Hague, Walton, Kas.

CATTLE.

CENTRAL KANSAS STOCK FARM.—F. W. ROSS, Alden, Rice Co., Kas., breeds pure-bred Short-horns, Poland-Chinas and Barred Plymouth Rocks. Stock for sale.

NORWOOD SHORT-HORNS—V. R. Ellis, Gardner, Kas. Rose of Sharons, Lady Elizabeths and Young Marys. Richest breeding and individual merit. Young bulls by Godwin 115676 (head of Linwood herd). Sir Charming 4th now in service.

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Registered Galloway Cattle. Also German Coach, Saddle and Trotting-bred horses. World's Fair prize Oldenburg Coach stallion, Habbo, and the saddle stallion, Rosewood, a 16-hand, 1,100-pound son of Montrose, in service. Visitors always welcome. Address
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A Short-horn Herd For Sale.

I will sell my entire herd of Short-horns, consisting of the herd bull, Buxom 11487, twenty-six cows 4 years and over, thirty-seven cows from 1 to 3 years old, five yearling bulls, forty calves (sexes about equal); in all, 109 head, seventy-four of which are registered or eligible. The offering will be sold cheap for cash. For further information, address
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Composed of breeders of Galloways in all parts of the United States and Canada. Stephen M. Winslow, President, Oskaloosa, Mo. Frank B. Hearne, Sec'y-Treas., Independence, Mo. For any information relating to the breed, write to the Secretary.

LIVE STOCK ARTIST.

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Agricultural Matters.

EXCERPTS FROM GOVERNMENT CROP REPORT FOR NOVEMBER.

The following estimates, based upon the November returns, are merely preliminary, and are subject to revision in the final report:

CORN.

The returns indicate an average yield of 24.8 bushels per acre, as compared with the preliminary estimate of 23.7 bushels in November last, and of 27.3 bushels in November, 1896. The indicated yield in bushels per acre in the principal corn-producing States is as follows: Pennsylvania, 32; Ohio, 36; Indiana, 36; Illinois, 30; Iowa, 32; Missouri, 26; Kansas, 19; and Nebraska, 21. The total crop has been largely increased by the high averages reported from the South and Southwest, South Carolina and Georgia being the only States throughout that entire region not reporting from 2 to 6 bushels per acre above their respective averages for a series of years. The average as to quality is 82.7 per cent., as compared with 86.3 per cent. in November last and 88.4 per cent. in November, 1896. It is estimated that 7.25 per cent. of the corn crop of 1897 was still in the hands of the farmers on November 1, 1898.

WHEAT.

The special wheat investigation is nearly completed, and it is believed that it will not only serve its primary purpose of indicating with approximate accuracy the wheat production of the present year, but will be of permanent value to the department in its bearing upon the existing methods of reporting this important crop.

BUCKWHEAT.

The estimated average yield of buckwheat is 17.3 bushels per acre as compared with an average of 20.7 bushels per acre in November last and of 18.7 bushels in November, 1896. The averages in New York and Pennsylvania, the two States of principal production, are 16.8 and 17.2 bushels per acre, respectively, as compared with 22 and 21 bushels per acre, respectively, in 1897. The average per cent. of quality is 85.2 as compared with 94.3 in November last and 94.7 in November, 1896.

COTTON.

The average indicated yield of lint cotton per acre is 219 pounds. The principal State averages are as follows:

North Carolina	227
South Carolina	245
Georgia	183
Alabama	195
Mississippi	229
Louisiana	272
Texas	213
Arkansas	230
Tennessee	181
Oklahoma	249
Indian Territory	325
Florida	117

In the determination of these preliminary figures reference has been had not merely to the number of pounds per acre as estimated by correspondents, but also to the separate quantitative comparisons made by correspondents with last year's crop, and to other criteria. An addition of about 150,000 acres has been made by the department to its preliminary estimate of the cotton acreage in Oklahoma and the Indian Territory.

TOBACCO.

No average yield per acre for the entire country can be established, but in nearly all the States of principal production the yield per acre in 1898 has been in excess of the average for a series of years. In Kentucky it is 825 pounds, as compared with the ten-year average of 728 pounds; in North Carolina, 550 pounds, against 500 pounds; in Virginia, 650 against 597 pounds; in Ohio, 875 against 770 pounds. Pennsylvania and Connecticut fall below their ten-year averages, the former reporting 975 and the latter 1,250 pounds per acre, as compared with ten-year averages of 1,214 and 1,485 pounds respectively. In point of quality, also, the crop is above the average, Pennsylvania and North Carolina forming the only notable exceptions.

IRISH POTATOES.

The indicated average yield per acre of Irish potatoes is 75.2 bushels, as compared with 64.6 bushels last year and 86.8 bushels in 1896. The average per cent. of quality is 84.7, against 81.3 in November last and 89.2 in November, 1896.

SWEET POTATOES.

The yield per acre of sweet potatoes has been considerably above the average in almost every State that is worthy of note in such connection. This is also true of the average quality of the crop, the only important exception being Texas, with an average of 84, as compared with a ten-year mean of 90.6.

HAY.

The indicated average yield of hay is 1.55 tons per acre, as compared with 1.42

tons last year and a ten-year mean of 1.23 tons. The present indicated average is the highest on record, and the crop of 1898 was unquestionably the largest ever gathered. The relatively high rate of yield was not confined to any particular section of the country, but from almost every State exceedingly favorable reports have been received. In point of quality the average is 95.3, against 92.8 last year and 92.9 in 1896.

SUGAR CANE.

The information in the possession of the department relative to the acreage in sugar cane is not sufficiently complete to warrant the establishment of an average yield per acre for the entire region, but the crop in Louisiana is reported as being 9 per cent. larger than that of last year and that of Florida as 2 per cent. larger. Almost every other State within which there is any production of the true sugar cane likewise reports an increase over the crop of last year.

SORGHUM.

This also is a crop for which it is impossible to establish an average yield for the entire country, but there is scarcely a State in which sorghum is grown to any considerable extent the returns from which do not indicate a yield in excess of the average for the last ten years.

FRUIT.

The returns on apples, grapes, and pears indicate light production as compared with a full crop.

FOREIGN CROPS.

The estimate of the Russian ministry of agriculture now out makes it 417,000,000 Winchester bushels, if the second-hand statements of it which have been received can be accepted as accurate. Reduced to Winchester bushels, the Hungarian estimate would become 387,000,000, and the difference between that and the present estimate is therefore 30,000,000 Winchester bushels. The estimates of the Russian ministry of agriculture are, however, admittedly based on very imperfect data. The estimates of the statistical central committee are regarded as more authoritative, but this body has not yet issued its estimate for 1898.

France.—The preliminary official figures for France make the French crop, in round numbers, 372,000,000 Winchester bushels.

Hungary.—An estimate credited to the Hungarian board [ministry?] of agriculture puts the Hungarian wheat crop at 36,000,000 metric centners, or 132,277,200 bushels of 60 pounds.

Germany.—An estimate, said to be the preliminary official one, puts the German wheat crop at 8,000,000 bushels more than the crop of 1897. This would make it, in round numbers, 115,000,000 bushels of 60 pounds.

Italy.—The official estimate of the Italian wheat crop, published in a late number of the Bollettino di Notizie Agrarie, puts it down at 47,000,000 hectoliters (133,371,900 Winchester bushels).

Spain.—The latest estimate of the Spanish wheat crop makes it a little less than 95,000,000 Winchester bushels.

England.—The London Times estimates the wheat crop of the United Kingdom at 9,440,000 quarters, or 77,900,000 Winchester bushels.

Roumania.—The official estimate for Roumania makes the wheat crop of that country 20,600,100 hectoliters, or 58,456,904 Winchester bushels.

Canada.—Official figures for Manitoba make the wheat crop of that province 25,913,155 imperial, or 26,729,808 Winchester bushels. Preliminary official figures make the crop of Ontario 32,819,000 imperial, or 33,028,079 Winchester bushels, the total for the two provinces being 57,932,155 imperial, or 59,757,887 Winchester bushels.

On the whole, the changes since last month's estimates would increase the total estimate of the world's wheat crop, but the conditions affecting the crops of the southern hemisphere are scarcely so favorable as they were commonly supposed to be when the estimates used in the table published a month ago were made. Australia has suffered severely from drought, but this is now broken, good rains having fallen throughout Victoria, South Australia, and New South Wales. If the Australasian wheat crop should fall short of the largest estimate (that of Broomhall), it may, in any case, equal, or perhaps exceed, the very moderate estimates of the other two authorities whose figures are now given. The Broomhall estimate was 54,000,000 and the Hungarian estimate only 37,000,000 bushels of 60 pounds, while the estimate of the Bulletin des Halles was 37,000,000 Winchester bushels. Severe frosts have been reported from Argentina, but the latest accounts as to the outlook for the wheat crop in that country are not unfavorable.

OTHER CROPS.

The preliminary official estimate for France published in last month's Crop

Circular covered wheat, rye, and maslin. The estimate for barley is 18,383,220 and that for oats 105,387,840 hectoliters. This gives 52,167,766 bushels of the former and 299,059,074 bushels of the latter.

The estimate of the Russian ministry of agriculture, which, however, can only be regarded as provisional, has been published in English trade journals, where the quantities are expressed in imperial quarters. These reduced to Winchester bushels give the following results: Winter wheat, 141,639,000 bushels; spring wheat, 275,811,000; total wheat, 417,450,000; rye, 717,786,000; barley, 320,141,000; oats, 606,861,000; maize, 42,779,000.

The crop report of the Austrian ministry of agriculture for the middle of October represents the oats crop as generally satisfactory in quantity and still more so in quality. Except in the mountain districts, maize is for the most part harvested, and is set down as hardly a medium crop. Buckwheat suffered partly from drought and partly from frost in the northern and eastern provinces, but in the middle zone gave more satisfactory results. The barley crop was somewhat deficient in quantity and quality. In general, however, the cereal crops were satisfactory, the kernels being for the most part full, heavy, and of a good color. In the mountain districts and in the South the yields of potatoes were below average, but elsewhere they were satisfactory, and especially so in upper Austria and part of Moravia and east Galicia, though in the last-named province the later part of the crop suffered somewhat from frost. Beet roots suffered from drought more than other root crops, and the yield is barely up to the average, but the quality is satisfactory. The fruit crop, though good in the middle zone and in some districts of Silesia and west Galicia, is on the whole disappointing. The vintage in lower Austria exceeded the estimates, and the quality of the must was quite good. In Karst and the coast districts the yield was only medium, but the quality, in general, was satisfactory.

Fall sowing was delayed by drought throughout a large part of Europe, but there is no reason to apprehend any material detriment to the crop from the delay, though in some countries the area sown may be somewhat smaller than it would have been under more favorable circumstances. In Russia sowing was effected under generally favorable conditions, but the weather at latest reports was too cold for the welfare of the young crops. No serious injury has, however, been reported, and in most other countries the grain, so far as sown, has been favored by subsequent rains and mild temperature.

Diversify and Rotate.

Paper read at the October meeting of the Bentonville, Ark., Horticultural Society, by Maj. Geo. Bill.

That substantial benefits are sure to accrue to the horticulturist-agriculturist by a proper rotation of crops is being yearly demonstrated by thousands of progressive and successful producers of fruit and grain. The benefits of diversified farming are chiefly three-fold: Increased fertility of the soil, greater profits in sale of produce, and more equal distribution of the producer's time in the planting and cultivation of his crops.

The average farm lands of this region, if properly managed, may be steadily increased in fertility and capability of increased production. It is gratifying to the lover of improved methods in tillage to observe that many farmers in this section of the State are appreciating the necessity of preventing further deterioration of the soil, and are making laudable efforts to bring their land into a good state of cultivation. On the other hand, it is lamentable that other so-called farmers are pursuing the same old, old ways—wheat after wheat, corn after corn—robbing the soil and cheating themselves.

It were well for tillers of the soil to heed the fact that the earth's surface is not all of one single substance, but that what we call soil is composed of many ingredients, i. e., clay, sand, marl, gravel, lime, potash, nitrogen, humus, and many other constituent elements form the mold that contains the plant food in the soil.

And again, it were well to consider that the various productions of the farm, grains, fruits and vegetables are each composed of different elements from the others, requiring and drawing from the earth certain specific substances for their growth and maturity. These facts admitted, we come now to determine methods to pursue that will be in accordance with nature's laws.

In looking about us we discover that the hills and valleys in their primitive state are already planted (propagated by nature) with a great variety of trees and an almost countless variety of shrubs, plants and grasses. Nature abhors nakedness. Her bosom if possible is ever clothed with verdure; she loves variety



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in dress. By her cunning arts in preserving the seeds of a vast number of plants and grasses from year to year there is a constant change in the kinds of vegetable growth. Nature's laws are inexorable. She never fails to inflict punishment for their violation. Diversity, variety, change, rotation—this is her rule and law on all soils that are suitable for general cultivation. If we attempt to change her method by planting wheat, corn, oats, or any one other ordinary crop, year after year, on the same piece of land to the exclusion of all other vegetation, the specific materials that are requisite to form and mature that one specimen become less and less with each consecutive planting until, if persisted in long enough, nature refuses to propagate that kind of a crop—or any other, for that matter—only the meanest kinds of weeds, and the land is said to be "worn out," and punishment has been visited on the violator of natural laws.

Dame Nature should not be accused of making unjust or arbitrary laws that we cannot understand. Her methods of diversified culture and the rotation of different varieties of vegetation are easily understood by all who will read her laws in the "Book of Nature."

The wild lands of the earth, the virgin soils untouched by the hand of man, have steadily grown richer in the elements that are essential food for plant life since the Creator rolled the seas together and dry land appeared.

The death and decay of one species of plants enrich the soil for succeeding varieties of vegetation. Decayed wood, grass and leaves mulch the young growth and soon form a vegetable mold for the reception of seeds for a rotating crop.

With these admirable lessons constantly before us—teaching of infinite wisdom—it becomes us as sensible, intelligent beings, to profit by the lessons taught. Geologists tell us that in the dawn of creation there was very little soil, that the earth was covered only with a waste of waters and rocks, and that soil has been subsequently formed by the decomposition of rocks and vegetation. We of this day know that the uncultivated wilds support a vast number of beasts, birds and other organisms, to say nothing of human savages, who feed largely upon the indigenous fruits of the forest. If, then, nature, from so unpromising a beginning, has by her methods wrought such wonderful results, we should profit by her example and wisdom.

The denizens of the forest partake of the bounties of nature, but they do not destroy the forest or violate her laws. Civilized, enlightened, scientific man hews down the forest and burns all, even raking the small twigs and leaves and burning them. He plants the land to corn; when the corn matures he cuts it at the ground and hauls it away, or if not cut, the ears of corn are harvested when dry and the stalks burned in the spring. This clearing off process is repeated year after year for say ten, perhaps twenty years, that corn follows corn; probably a crop of oats or wheat may intervene, but all the same the grain and straw are taken and the stubble burned.

All these years no manure, no green crop plowed under; it is all take, strip, burn, rob. If Mother Earth grows some grass and weeds (after corn is "laid by") to hide her nakedness, and restore something of fertility she is being robbed of, "the trash" is burned to clear off the ground. This process has been practiced more or less north, south, east and west, and thousands of farms practically ruined. * * *

Diversify and rotate; sow winter oats and rye in the fall for winter pasture. Keep plenty of sheep and cattle to convert all your roughness into manure. Keep your cattle and manure under shelter. Plow under the winter oats and rye in the spring, plant cow peas on all your stubble land, if possible, also in the corn as you lay it by, study the book of nature, be good and you will be happy.

It is true that farms sell best where the roads are the best.

The Stock Interest.

THOROUGHbred STOCK SALES.

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

NOVEMBER 22—George Bothwell, Short-horns, Nettleton, Mo.; sale at Kansas City, Mo.
NOVEMBER 23—W. P. Harned, Short-horns, Bunce ton, Mo.
NOVEMBER 30—Scott & March, -Belton, Mo., Herefords, Kansas City, Mo.
DECEMBER 8—Miles Bros., Poland-Chinas, Peabody, Kas.
DECEMBER 15 AND 16—C. G. Comstock, Albany, Mo., Herefords, Kansas City, Mo.

A PLEA FOR PIG PORK.

Waldo F. Brown, in Ohio Farmer.

The advantages of "pig pork" are so obvious that more farmers each year are shortening the period in which to produce a carcass that will sell in the market at the top price. Briefly stated, these advantages are: First, a cheaper product; second, a great saving of labor in feeding; third, reduced risk of loss from accident or disease; fourth, quick returns for money invested in labor and feed; fifth, that as it requires extra care and intelligence to enable a farmer to make profitable pig pork, he will by doing this be likely to be a better farmer in all respects.

I believe that each one of these points is well taken, but I will briefly argue each of them.

1. The pig that is kept growing and thrifty every day, and attains a weight of 200 pounds at or near six months old, must cost considerably less than if it is fed nine or ten months to attain this weight, because the food of support on which there is no profit will be much less, and because there need be no day that the pig is not gaining. Under the method of feeding followed when I was a boy, our hogs were fattened and sold at about twenty months old, and usually they made little or no gain through the winter, so that the food and care for some months were actually lost. Then, whenever any stock is so managed as to stop gaining there is a loss of time in getting it back to a thrifty condition, just as certainly as there is of power in running an engine when the fire is allowed to go down and the water in the boiler to get cold.

2. The labor of feeding a lot of hogs is no light item, and while its money value may not be large, it is a tax on the farmer's strength, for he usually does a full day's work in the field and feeds his hogs for a resting spell.

3. We of course reduce the risk of loss by accident and disease in the proportion that the time of keeping the herd is reduced, but in reality we do more than this, for pigs well cared for and kept growing are very much less likely to contract disease than those that through neglect and insufficient food become unthrifty.

4. Pig pork is illustrative of the nimble penny, and enables the farmer to realize much quicker than on the old plan.

5. The fifth proposition needs no arguing, but I will add to what I have already said that this plan of producing pork enables the farmer to avoid fattening in the cold weather of winter, when it is so difficult to feed at a profit, as the spring litters can be sold before winter sets in, and if fall litters are raised the fattening need not begin until spring opens, and March and April are very favorable months for fattening.

How shall we manage our pigs so as to be sure to have them ready for market at six to eight months old? First, raise them from mature mothers and young sires. The mature mothers will not only have larger and more vigorous pigs, but will also give more milk, and so give a better start to the litter. It has been found that the use of a young sire increases the tendency to early maturity, and this is an important factor in producing pig pork. As constitutional vigor is most important, the breeding stock should be carefully selected and only the best sows saved. A sow that is a poor suckler or is not a careful mother should not be allowed to raise a second litter, while those with a combination of good qualities should be kept as long as they do well, which will be five years or more.

Feed the sows liberally during pregnancy, but not much corn. Roots, pumpkins, apples and bran should form the bulk of their diet, and these are all cooling and laxative. Be especially careful of the diet for a week after farrowing; feed no corn, but bran slop and milk—if you have it—safe and excellent. If you have no milk, give a little oil-cake meal with the bran.

After the sow has come to her milk, and is entirely well, you can scarcely feed too much while she suckles her litter, and corn may be fed freely, but in connection with slop. Feed the slop sweet, or nearly so; a slight fermentation will not hurt, but never allow the

slop to become really sour. Teach the young pigs to eat as early as possible.

In about four weeks you will find them beginning to crack corn, and you should at once fix a pen adjoining that of the mother which the pigs can enter, and begin feeding them. Corn will be their first food, but give milk in shallow troughs, and as they learn to eat, if you have not milk enough for them, use bran and oil-cake meal, and later add a little corn meal to it. The albuminoid ratio of milk is 1:3.3, and this is best for a young pig, but as it grows older it does not need so high a ratio, and we add bran, which has a ratio of 1:4.2, and a little later, when we wish a ration of about 1:5, we can easily make it with bran, oil-cake meal, and corn. What we want to do with our pigs is, first, to develop a good frame, with strong bone, healthy vital organs and blood, and especially good digestive organs, and to do this we must feed liberally and regularly; and later, when we wish to fatten, must make the food richer. If fed during the fattening period on corn alone, the period of safe and profitable feeding will be shorter than if some bulky and loosening food is fed with the corn, and usually about 100 days will be the limit. The reason of this is that corn develops fat rather than frame, bone and digestive organs; but if, with the corn, the pigs are fed liberally with pumpkins, or with the bran and oil-cake meal slop, growth will keep pace with the accumulation of fat, and the animals can be fed to a larger size and for a longer period. Pigs have been made to weigh 200 pounds at five months old, when milk formed a large part of their diet, but probably this could hardly be done without milk. To get the best results, the young pigs should be fed five times a day for a few weeks after weaning, and three times until marketed; they should never be fed so as to leave food by them, but only what they will eat clean. The meat from young pigs fed in this way is very superior to that from old, corn-fed hogs, as it contains more lean and is better flavored. I feel sure that when bran can be bought for \$12 to \$14 a ton, and corn costs 40 cents a bushel, cheaper pork can be made by feeding quite liberally with bran, and two to four pounds of oil-cake meal to each bushel of bran, than by feeding all corn. No man will succeed with pig pork who fails to feed regularly, both as to time and quantity, and to give his stock careful personal attention. Overfeeding one day and underfeeding the next, feeding at 5 o'clock one day and 7 the next, may suit the convenience of the feeder, but will never give the most profitable results.

The Breeds of Swine.

From Secretary Coburn's "Pork-Production."

The Poland-China breed originated in the Miami valley in Butler and Warren counties, Ohio, between 1838 and 1840, in the crossing of various families there known as Big China, Byfield, Bedford, and Irish Grazier, the offspring being a large and somewhat coarse black and white spotted swine called by various names, for which a national convention of swine breeders, in 1872, selected that of Poland-China. These were crossed with imported Berkshires to give refinement and propensity to early fattening, and incidentally they acquired much of the Berkshires' conformation, black color and white markings. The progress made in that region and at that time was in a measure due to the nearness to Cincinnati, which in those days was the greatest pork-packing point in the world. This popular breed, pre-eminently an American product, probably now numbers as many individuals as all other breeds combined in the United States.

The Berkshire in its improved form originated, as did the Essex, in England—Italian and Spanish swine being crossed with the coarser native stock—between 1780 and 1800. Although first introduced into North America about 1830, they did not obtain general or permanent favor until after 1870. The breed is widely disseminated in America, and justly a favorite, both to breed pure and to cross with other breeds.

Chester Whites are the result of mating some large white stock from Bedfordshire, England, with the white hogs common in Chester county, Pennsylvania, about 1818 to 1830; the descendants being swine that were gradually improved by selection, and have maintained their popularity in North America better than any other of their color. In later years hogs of a dark color are most largely reared, because of a belief that they are hardier and less susceptible to affections of the skin incident to sudden changes of temperature and the muddy quarters, severe winds and burning suns to which they are too often continuously subjected.

The Duroc-Jerseys are a breed of large, sandy hogs that are the result of a blend-

ing in recent years of families that first attracted prominent attention in New Jersey, where they were known as "Jersey Reds," with the possibly somewhat different type common in Saratoga county, New York, and locally known as "Durocs." The best of them are very easy feeders, full of quality, and in many instances carry extreme weight firmly on bones astonishingly fine.

The Essex are from England, and entirely black. Few of them are raised in the United States, and they are but a very limited factor in the pork production of this country.

The Yorkshires are entirely British, and in England three families of them are bred, known as the "Large White," "Middle White" and "Small White." The Small Whites so nearly resemble what Americans have known as Suffolks that an expert is unable to tell one from the other. The Large Yorkshires, or Whites, and the Tamworths, are the breeds so much doted on by the English and the Canadians as "bacon" hogs, yielding possibly not more lean meat but less of fat than is common to the swine of the corn-growing regions. They cut no appreciable figure whatever in the pork-production of the United States.

Tamworths are a slab-sided, long-legged, big-headed, lardless, unlovely, red, rusty or sandy, half-civilized sort, from England. Like the Yorkshires, their admirers in the United States are at present by no means numerous.

The Victorias, a modern composite sort, were originated in Lake county, Indiana, are white, of medium size, and comparatively unhonored and unsung.

Poland-Chinas, Chester Whites, Duroc-Jerseys, Large Yorkshires or Whites, and Tamworths are properly classed as large breeds; the Essex and Victorias and Middle Yorkshires as medium-sized breeds, and the Small Yorkshires and Suffolks as small breeds. As a matter of fact, few Americans are engaged in rearing any of the small breeds, preferring those suitable for slaughter at an early age, yet capable of further growth to any size wished.

The American Hereford Breeders' Association.

At the annual meeting of the American Hereford Cattle Breeders' Association, held at the Sherman House, Chicago, Ill., on Thursday, November 10, K. B. Armour, of Kansas City, and T. F. B. Sotham, of Chillicothe, Mo., were nominated for the Presidency. Mr. Sotham's relations with Mr. Armour, and his firm belief that Mr. Armour's name could bring greater prestige to the association than any other, led him to promptly withdraw his own name from the convention, and urge the unanimous re-election of Mr. Armour. Some comments were made about electing a President whose well-known vast business interests prevented his regular attendance at the meetings, after which, amid great enthusiasm, Mr. Armour was unanimously re-elected. Mr. Sotham was then unanimously chosen Vice President, and escorted to the chair to preside, in the absence of the President. "Tom" was so affected by the honor that when called on for a speech he could only say: "I have always up to this time, and shall continue to work night and day in the interest of the Hereford breed of cattle," and proceeded with the business of the meeting, among which was an appropriation of \$2,400, carrying \$200 in special premiums for Hereford cattle at each of the following State fairs: Texas, Nebraska, Iowa, Minnesota, Illinois, Wisconsin, Michigan, Indiana, Ohio, New York, West Virginia, and the St. Louis fair. Another appropriation placed \$5,000 at the disposal of the President and Executive committee, to pay premiums at a special grand Hereford show, to be held in October, at a place to be agreed on by the President and Executive committee. This show will probably be held in the new convention hall at Kansas City, as the Kansas City Commercial Club has offered to furnish the building—fit it with stalls, arena, heat, light and appliances—for the gate receipts of 25 cents per admission, leaving the whole \$5,000 to be divided in premiums for cattle. The Minnesota State fair offers big inducements to have the show held at the Twin Cities, and other places will doubtless bid high for a show that bids fair to eclipse horse, chrysanthemum, dog, poultry and similar fashionable shows. Wherever this show is held there will doubtless be thousands of dollars added in special premiums, and, if held in Kansas City, will receive aid from the influence and work of President Armour.

Chas. B. Stuart, of Lafayette, Ind., whose fifteen years' of service on the Executive committee has been productive of much of the prosperity of this opulent association, was re-elected to another three-year term, fulfilling which

Food Caused Pain

Catarrh of the Stomach Cured by Hood's Sarsaparilla.

"I was taken sick about a year ago with catarrh of the stomach. At times I would have a ravenous appetite and at other times could not eat. My food caused me excruciating pain. I was running down so fast I had to stop work. My friends urged me to take Hood's Sarsaparilla, I did so and soon began to feel better. The disagreeable symptoms of disease gradually passed away and flesh and strength returned. I owe it all to Hood's Sarsaparilla." MARY L. CUMMINGS, North Brookfield, Mass. Remember

Hood's Sarsaparilla

Is the best—in fact the One True Blood Purifier. Sold by all druggists. \$1; six for \$5.

Hood's Pills

cure Liver Ills; easy to take, easy to operate.

will complete for him eighteen consecutive years of faithful and appreciated service on the most important division of the organization.

The meeting was happy in its harmony and accomplished more than was ever before performed at one meeting. The report of the Treasurer, Mr. Chas. Gudgell, Independence, Mo., and the report and recommendations of the Executive committee were the most complete and satisfactory ever presented to the association, and the members believe no similar association ever was able to make so gratifying a record of prosperity and promise of up-to-date methods for future progress.

The assets of the association, in cold cash, are \$25,000 in registered 4 per cent. United States government bonds, and \$7,000 in currency. The annual income exceeds \$12,000, and promises to reach \$15,000 this year. There was hearty and practically unanimous indorsement of Secretary Chas. R. Thomas, Independence, Mo., whose intelligent management of the Secretary's office and constant tireless efforts in behalf of Hereford cattle and Hereford breeders have endeared him to the association above any other single member of it.

It is well understood that President K. B. Armour's heart is with the Hereford cattle and their interests. He has tried the Hereford in the crucible of personally conducted tests with other breeds and with scrubs and grades, and has chosen the Hereford as the most profitable medium in the economical conversion of grain and fodder cattle foods into prime beef. Mr. Armour is a well-wisher of all improved breeds of live stock, but he is also a merchant prince, one of the greatest merchants the world has produced, and knowing the grasp the world of business has upon his time, the Hereford breeders did wisely to elect active, loyal, earnest "Tom" Sotham to the Vice Presidency, for he has the interests of the Herefords at heart, and the confidence of Mr. Armour, who will doubtless confide in a large measure to the Vice President the more active duties of the Presidency, while at all times aiding the Hereford association by his advice and direction.

Farmer's Handy Feed Cooker.

Reader's attention is called to this device, which is sold at \$12.50 for 50-gallon capacity. By feeding poultry and animals cooked food during winter at least



one-third of the feed is saved; also having stock in a healthy condition, preventing hog cholera among your hogs and insuring the hens laying freely during the winter months. On application to the Empire Manufacturing Co., Quincy, Ill., a catalogue giving full description, may be obtained. They are made in all sizes.

'Tis none too early to put in occasional spare hours fixing for winter.

FORESTRY PROBLEMS OF THE WEST.

By E. D. Wheeler, Forestry Commissioner of Kansas, read before the National Forestry Association at its Omaha meeting.

Mr. President, Gentlemen of the Association: Forestry, when considered from the standpoint of conditions found in Europe and the eastern portion of the United States, presents few problems that are new and unsolved. That portion of the United States beginning with the great plains region and extending to the Pacific coast presents new and important problems. Hoping that it will be of interest, I will give you a brief outline of how we are attempting to solve the problems in Kansas. In the year 1887 the Legislature of the State established a Department of Forestry, with two experimental stations in western Kansas. The department was placed under a Commissioner, who was allowed a foreman for each station. Money was appropriated for salaries, and to equip the stations with necessary buildings and tools, and to establish experimental grounds, also to grow seedling trees for free distribution. The work has been continued up to the present time, and there are good reasons for expecting that it will still be continued. Realizing to some extent the folly of regular biennial change of management, the Legislature of 1897 made the term of the Commissioner four years, and increased the scope of experimental work to include experiments in horticulture, agriculture and irrigation. The appropriation was so small, and the time so short, that great results cannot be expected so soon, yet some advancement has been made in the face of difficulties.

Through reports, bulletins and public addresses the department is endeavoring to furnish practical solutions for the problems which present themselves under the different lines of experiments. A goodly portion of each publication is devoted to the growing of forest trees and to the many phases of forestry in the natural and artificial forest. One important problem that has presented itself is principally confined to the blue grass regions of Kansas and other States. The tendency to convert the wood lot into a blue grass pasture seems to be on the increase to an alarming extent. While it is doubtless within the power of the State or national government to protect the general welfare by protecting the natural forest conditions from fire or other destructive agencies, yet it would seem a hardship to the owners of woodlands to say that they should not use them as best suited to their pleasure or convenience. It is to be hoped that we may help to overcome the seemingly natural tendency by calling their attention to the facts that the destruction of the undergrowth and ground litter reduces the permanent water supply, increases the floods, and at no distant day it means the end of the forest. It is probably true that some who are following this destructive course are aware of the blighting curse which must fall upon a community, State or nation where it is commonly practiced. There can be but one reason for their continuance, and that a blindly selfish one. Instead of pasturing the wood lots, we suggest the feeding of ensilage or forage crops, and make such suggestions as will tend to make the forest more productive of valuable wood products. It is commonly understood that the men who are active in promoting the cause of forestry, and practicing the best methods of forest management, are public-spirited, yet whenever the elements of profit are in evidence in a powerful incentive has been added. For the foregoing and other reasons we believe that if the people had a more thorough knowledge of practical and scientific forestry, so they could practice it profitably, the results that would be obtained would justify the necessary outlay of money, time and effort.

Much can be accomplished through our national and State departments and associations, but in my judgment their efforts should be supplemented by the agricultural colleges teaching practical forestry and the sciences connected therewith, and the common schools teaching the rudiments of agriculture, horticulture and forestry. Who will say that it would not add value to our schools, and that the increased interest in those branches would be confined to the schools? Knowledge will furnish the necessary power to solve all the great problems which are connected with the development and welfare of the Great West.

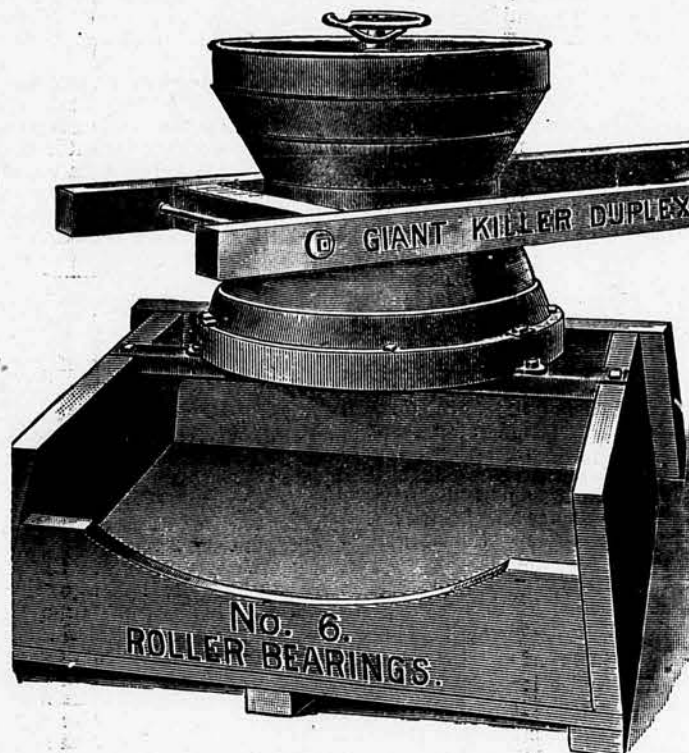
The amount of money, time and energy that have been wasted on the great plains in attempting to grow fruit and forest trees must be very great, yet it has at last been demonstrated that many kinds of fruit and several kinds of forest trees can be grown successfully, both with and without irrigation. Skillful irrigation means more assurance of success and

more rapid growth. Successful tree growing demands in either event a knowledge of varieties adapted to climatic and other conditions, and also the practice of the best methods of soil culture. Through department and individual investigation we have determined many foundation principles and necessary requirements, which determination has greatly encouraged the growing of trees. By continuing our investigations we expect to add very materially to our knowledge and thereby place ourselves in position to furnish still greater encouragement for individual effort. There are very few varieties of trees found growing successfully in any part of the United States that will not grow successfully in eastern Kansas, and very few that cannot be grown successfully in western Kansas where the necessary moisture and protection can be supplied. There are many valleys in western Kansas where the necessary moisture is found in the subsoil, and the protection in the bluffs or timber belts.

Where irrigation cannot be practiced on the upland in the more arid portions of the State—owing to the lack of water for any reason—there are few varieties of forest trees that can be grown successfully. Doubtless we may be able to increase the list by the importation of other varieties from arid or semi-arid climes. The honey locust, hackberry, white and green ash, elm and such hardy pines as the Austrian, Scotch and bull pine, with the cedars, nearly fill the list

attention. Unless there are good reasons why we should favor military supervision it would seem as though our recommendations would show more discretion, and be more productive of good results, if aimed in the direction of our agricultural colleges. One of the questions which a few years ago seemed hard to answer was, How can we arouse the people of the Mountain States and Territories to a realization of the fact that the preservation of their forests was of as great, if not greater, importance than any other public question? The question is evidently being answered.

At the recent meeting of the National Irrigation Congress, held at Cheyenne, Wyoming, one half day's session was almost entirely devoted to the subject of forest preservation. It was especially enjoyable to your humble servant, for the reason, among others, that he had addressed the congress at Denver four years before on forestry as it relates to irrigation, and secured the passage of a resolution similar to the one passed at Cheyenne. The first resolution was never acted upon by this association, but, as a member of both organizations, it would give me pleasure to see the association extend the glad hand, and in the future co-operate in the deliberations of the congress, and assist in making its sessions profitable. If the association is to be national, in fact as well as in name, we will expect that at the next annual meeting a number of delegates will be elected to represent the association



The Giant Killer Duplex Feed Grinder, manufactured by Davis Gasoline Engine Works Co., Waterloo, Iowa, is shown herewith. It is their number 6, with roller bearings, and is a big mill on a big box and has immense capacity for turning out a big amount of work. Three thousand mills were sold last season, and those who have

used it are quite well pleased. This mill was on exhibition at the Omaha Exposition and received the gold medal, which, in view of the large competition, is a big card in its favor. This mill will grind at the rate of twenty-five bushels of shelled corn or twenty bushels of corn and cob per hour. For further information address the company as above.

of the most hardy. The black locust would be equally as valuable a tree as the honey locust if it were not subject to the depredations of the borer.

We have learned that we should subsoil the ground the year before planting, and follow it up by fining and packing the subsurface soil. This will greatly increase its storage capacity. By practicing surface cultivation we can help to retain the moisture. Instead of the dry dirt mulch straw is often used with good results.

The wonderful development of the sentiment in favor of the preservation and supervision of our forests has helped to accomplish great results during the last two years, and these results have forced other problems upon us. Unquestionably, we have few men who are qualified to undertake the supervision of our national forest reserves. That they must be educated and trained for the work is very apparent. The action of Cornell University in inaugurating a school of forestry, and of the State of New York in putting its forestry reserves under the control of competent and scientific direction, is very encouraging, and it is to be hoped that other States will follow their lead. It is very difficult to understand why we should demand that West Point should include forestry in its course of studies, unless we intend to turn the reserves over to the supervision of the army, and it is very evident to my mind that there are a number of good reasons why that branch of public service should not be hampered with the care of forest reserves, which will demand constant and uninterrupted

at the next congress. The members of the association, and others who have joined in the good work, may well congratulate themselves on the rapid advancement of the cause of forestry in the United States, as indicated by the establishment of the great national and State reserves, also State organizations and departments. The near future, however, will be the most critical period in the history of this movement. Is it not a fact that the people are expecting good results where, in some instances, we cannot expect them, and that a reaction of public sentiment is almost sure to follow? If Western Senators and Congressmen continue to recommend politicians who are without any qualifications which fit them for the management of great forest reserves we may expect disaster. How may this threatening danger be averted? Is one of the questions that demands immediate answer. Is there any good reason why the national forest reserves should not be placed under the supervision of the National Forestry Department? Shall not patriotism rise above partisanship, and the victories of peace follow those of war?

Do You Intend Moving?

Why not investigate southwest Missouri, southern Kansas, northwest Arkansas, Indian Territory or the Texas coast country? The manufacturing, farming and stock raising industries of these sections are attracting considerable attention. The chief centers are reached via the 'Frisco line. For ticket rates and full particulars, address Geo. T. Nicholson, Gen'l Pass. Agt. St. Louis, Mo.

Only the tortures of the medieval rack are comparable to the agonies which many women suffer through



the peculiar weaknesses and diseases of their delicate, feminine structure. Nothing less than unbearable torment would induce sensitive-minded women to submit to the intolerable methods of the average doctor in dealing with diseases of this nature.

That there is "a better way" than these detestable "examinations" and "local applications" is a truth which some women have yet to learn, although thousands are already rejoicing in the knowledge. They have found in Dr. Pierce's Favorite Prescription the one unfailing remedy which heals feminine weaknesses at their very source. This marvelous "Prescription" restores absolute health to the internal organism; stops weakening drains and ulcerated conditions, gives elastic strength to the supporting ligaments, vitality to the nerve centers, and complete womanly vigor to the entire constitution.

It is the perfect fortifier and regulator of women at every critical period in their development; from the time when they merge into womanhood until the "change of life." It is the one medicine which makes motherhood safe and almost free from pain.

A lady living at 7 Park Avenue, Chicago, Ills., Mrs. Emily Howe, writes: "I, myself, suffered a long time from female weakness and seemed to be going into a decline. Took several bottles of your 'Favorite Prescription' and it saved me from a great deal of suffering. I now enjoy perfect health and will ever praise the wonderful efficacy of your medicine."

The best popular medical book in the world is Dr. R. V. Pierce's 1000 page illustrated Common Sense Medical Adviser. It will be sent free, paper-bound, for 21 one-cent stamps, to pay the cost of mailing only. Address the Doctor at Buffalo, N. Y., or send 31 stamps for cloth-bound copy.

B. & B.

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—2 clasp—stylish embroidery—these colors:—tan, mode, green, navy blue, white, pearl, black. Made to sell this season at a dollar a pair. Large cash buying got them to sell as above. Send your orders—say what size or sizes and colors you want—and save 25 cents on each pair.

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ever this store made—largest assortments of choice novel and useful gift goods. We're determined to do greater business—with less prices that will get it.

Any or all of these helps sent free—

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If you haven't already the 250-page illustrated store catalogue, ask for it, too. See by sample what handsome striped taffeta silks—65 cents yard—smart styles for waists.

BOGGS & BUHL,

Department G. G. Allegheny, Pa.

We PAY CASH each week if you sell Stark TREES. Outfit absolutely free. STARK Louisiana, La. Rockport, Ill. Danville, N.Y.

KANSAS ECONOMY INCUBATOR.

This incubator is a home product and has been in successful operation for ten years. It is still made and sold in No. 1, or 300 egg size, by the inventor and manufacturer, Jacob Yost, Arkansas City, Kas. Send for circular.

SAVE YOUR ORCHARD BY USING Jessup Tree Protectors.

Absolute protection from rabbits; keeps off borers and bark-lice and prevents sun-scalds; is indestructible and cheap. Write for circulars and prices.

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I AM an advertising agent who would be pleased to secure your order whether for one time or one year. I shall be pleased to quote you rates for any paper or a list of papers. Write me for my inside rates; your request will have my personal attention, and be promptly answered. Louis V. Urmy, fifteen years experience with Agricultural Publication, Times Building, N. Y.

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COMBAULT'S
Caustic Balsam
 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 Blotches from Horses and Cattle. **SUPERBES ALL CAUTERY OR FIRING.** Impossible to produce scar or bluish. 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.**

the Messrs. Clay are to be congratulated on their success and the buyers considered fortunate in securing some extra good things at very reasonable prices.

Gossip About Stock.

On November 16, at Springfield, Ill., the Elmwood herd of Berkshire swine, owned by Reuben Gentry, of Danville, Ky., was sold. Twenty females sold for \$853, an average of \$42.65; nineteen boars for \$1,835, an average of \$96.58, thirty-nine head bringing \$2,680, or an average of \$68.92. His herd boar, Columbia's Duke 33855, was sold for \$1,200 to John Juneman, Barkley, Ill. The range of prices on the other boars ran from \$11 to \$170. The females ranged in price from \$14 to \$85. The purchasers were from Illinois mainly.

The Comstock Hereford sale next month for those who are desirous of securing a lot of early, big, growthy long yearlings in car lots will find this the most favorable opportunity of any in recent years. The writer has not in years looked over as strong a lot both as to breeding and numbers on any one farm in the West. Lot 11, Anxiety Grove 6th 80796, is a mossy coated, good head, both quarters thick and deep, on short legs and straight top and bottom lines. In fact the sons and daughters of his sire the premier herd bull Anxiety Grove 2d 60624 possess very similar and desirable Hereford characteristics. In the herd division presided over by Christmas Gift 60625, a son of the World's fair winner Ancient Briton 55759, a very nice lot of sons and daughters have been catalogued. All these possess the characteristics of their sire, having well sprung ribs, wide backs, in fact, good all over with as fine coats as one could wish. There are far too many for special or even mere mention, and the story is briefly told by stating that every Hereford man will be agreeably inclined, if he will inspect the offerings a day or two before the sale day at Kansas City stock yards sale barn, December 15 and 16.

One of the Short-horn herds that has been established in Kansas in recent years is located at Burden, Cowley county. It is known as the Silver Creek herd, and J. F. Stodder is proprietor. Mr. Stodder has proven himself a progressive breeder, and has brought his herd into the front rank of Kansas Short-horns. The first purchases were made in 1891, and included among others such standard-bred families as the Young Marys, Duchesses, Floras, Bright Eyes, Blooms and Rose Marys. Aconite's Commander 61430 was secured to head the herd, he being a Cruickshank bull out of the imported cow, Aconite, by Prince of the Isles. Since then a few choice females have been added from time to time, some of them being of the pure Scotch and Cruickshank breeding. The second sire in service is Champion's Bert 114671, a Cruickshank of Messrs. Bellow's breeding, and a son of the renowned show and breeding bull, Valley Champion. Champion's Bert has proved himself a wonderfully impressive and successful sire, as evidenced by the uniform style and quality of the young things coming on. Gwendoline's Prince 130913 has recently been added as junior stock bull. This promising yearling was bred by Messrs. J. R. Crawford & Sons, of Newton, Iowa, and Mr. Stodder selected him after visiting most of the leading herds throughout Missouri and Iowa. He is also a pure Cruickshank, sired by Prince President 2d, he by Imp. Prince President. His dam is Gwendoline 5th, by Knight of the Thistle, granddam Gwendoline 3d by Imp. Henohman, Gwendoline 2d by Imp. Cupbearer, Imp. Gwendoline by Baron Violet. He is truly a royally-bred bull and used on the Champion heifers, we shall be greatly surprised if results are not more than satisfactory. Mr. Stodder is now offering ten as handsome, blocky red yearling bulls as can be found almost anywhere. Most of them are sons of Champion's best, and some of them are prize winners at the fall fairs.

Colonel Robert Holloway's sale of registered Clydesdale stock came off November 16 and 17, at his farm near Alexis, Ill. The forty-nine head sold for \$10,590, making an average of \$216.12. Henry George paid \$610 for Prince Consort 8455, the highest price paid at the sale. John Sparrowhawk, of Wakefield, Kas., bought two of the best stallions and three of the best mares sold. Sturdy Cairnbroggie 8702, and Prince Deserving 7197, bought by Mr. Sparrowhawk, are two as fine stallions as ever came to the Kansas. The buyers present at the sale came from Ohio, Indiana, Illinois, Nebraska, Michigan, Wisconsin, Minnesota, Missouri, Kansas, and Manitoba. The writer purchased the fine young stallion, Attractive McGregor 8392, sire, Prince Attractive 7195, that won first prize in a two-year-old at the World's Columbian exposition, and since exported to Scotland; dam, Imp. Lady MacGregor 5016. Colonel Holloway has imported many of the best and highest-priced Clydesdale horses ever brought to this country, and has done as much if not more than any other American to improve the stock of this country, and his guarantee always means just what it says. J. B. McAFEE.

Dr. Bull's Cough Syrup is a true friend to all suffering with coughs or colds. This reliable remedy never disappoints. It will cure a cold in one day and costs but 25 cents.

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Poland-China gilts sired by Wren 17172, Eberley's Model 2854, and Duke of Weston 16974, 1898 farrow. If you want a choice young animal, send for one of these—\$6 to \$10. I guarantee satisfaction on this kind. **J. W. HIGGINS, JR., HOPE, KANSAS.**

200 PURE-BRED POLAND-CHINA SWINE FOR SALE 200

By **GEO. CHANNON, Hope, Dickinson Co., Kas.,** Breeder of Poland-China Swine and Short-horn Cattle.

I must reduce my herds to the minimum on account of short feed and insufficient accommodations for winter, therefore will sell at prices that should be a big object to purchasers. My offering consists of tried brood sows, gilts and boars, all ages. Will sell singly or in lots to suit. The young stock is by my herd boars Prince Bismarck 1867, Seidom U. S. 18218, Duke of Weston and Corwin. Come now and get a bargain. Also, for sale thirty extra fine young Short-horn bulls, sired by Glendower 10338. None better in Kansas.

R. S. COOK, WICHITA, KAS., Poland-China Swine
 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.

Sir Charles Corwin 14520 and Harry Faultless, Jr. HEADS OF HERD.



We have been in the showing for the last three years, always winning the lion's share of the premiums. If you want prize-winners and pigs bred in the purple, we have them. All ages of Poland-China swine for sale. Write or come and see us. We have an office in the city—Rooms 1 and 2 Firebaugh Building.

ELM BEACH FARM, Wichita, Kas.,
C. M. IRWIN. **S. C. DUNCAN, Supt**

The Sunrise Herd of Large English Berkshires.

The largest herd of registered Berkshires in Kansas, and probably the largest in America. 360 head to pick from. As well bred and as good individual as you can buy anywhere. The great 1025 pound boar, Longfellow W. 33611, at head of herd. Seventy-five boars large enough for service and one hundred sows bred, or large enough to breed, for sale. Also one hundred and twenty-five pig- from two to six months old; prices very reasonable. I also have one hundred registered Hereford bulls ready for breeders and fifty females for sale cheap. Write for what you want.

THE SUNRISE STOCK FARM,
C. A. STANNARD, Prop'r, Hope, Dickinson Co., Kas.

LIVE STOCK AUCTIONEERS.

GEORGE W. BARNES, Auctioneer, Valencis, Kas. Lowest terms. Extensive experience both as breeder and salesman. All correspondence given prompt attention.

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S. A. SAWYER, FINE STOCK AUCTIONEER— Manhattan, Riley Co., Kas. Have thirteen different sets of stud books and herd books of cattle and hogs. Complete catalogues. Retained by the City Stock Yards, Denver, Col., to make all their large combination sales of horses and cattle. Have sold for nearly every importer and noted breeder of specialty. Large acquaintance in California, New Mexico, Texas and Wyoming Territory, where I have made numerous public sales.

ITALIAN BEES.

Bred from queens imported from Italy. Full colonies; two, three and four frame nucleus shipped anywhere and safe arrival guaranteed. We ship bees any time from March to November. Queens, hives and supplies generally.
A. H. DUFF, Larned, Kas.

RIDGEVIEW FARM HERD OF BERKSHIRES

Young boars old enough for service, also sows and gilts bred and unbred for sale. Sired by 2d Seven Oaks, Col. Mills 45718, Prince Majestic 45600 and others. Write for prices, or come and inspect stock.
MANWARING BROS., Lawrence, Kas.

CANCER

The following and many other reliable persons testify that I thoroughly cure Cancer without the knife. Hon. E. W. Jackson, president board of education Lima, Ohio, was cured seven years ago of lip Cancer. Prof. H. McDiarmid, Hiram College Hiram, Ohio, cured seven years ago of face Cancer. Had undergone several operations before with knife. Address, Dr. C. Weber, 121 W. 9th St., Cincinnati, Ohio, for further particulars and free book.

Texas! Texas!

The Missouri, Kansas & Texas Railway Company will sell low rate round-trip tickets on November 15, December 6 and 20, with final limit of return to twenty-one days from date of sale. An excellent opportunity for home-seekers, tourists and investors to view for themselves the great resources of the State. For further information, address Geo. A. McNutt, D. P. A., 1018 Union Ave., Kansas City, Mo.

When writing advertisers please mention **Kansas Farmer.**

Last Week's Cattle Sales.

In a series of five days of cattle sales held in Kansas City last week, two were for Herefords and three for Short-horns. The first day's Short-horn sale was from the herd of H. C. Duncan, Osborn, Mo., and the result was very gratifying to Short-horn breeders generally. The attendance was large and the bidding spirited. Forty-nine head were sold at an average of \$214. Forty-nine cows and heifers averaged \$197 and four bulls averaged \$406.25. The highest price, \$1,000, was paid for the Cruickshank bull, Baron Dudding 125042. He was bought by J. W. Smith & Son, Indianola, Iowa. He was sired by Godoy 116675, a twin brother to Godwin, the bull which stood at the head of the Norwood herd owned by V. R. Ellis, Gardner, Kas., and has since been returned to his former home at Linwood. One of the plums of the sale, Victoria of Maple Hill, a pure Cruickshank, was secured by T. K. Tomson & Son, Dover, Kas. The following comprises the list of purchasers:

Geo. Bothwell, Nettleton, Mo.; Joe Duncan, Osborn, Mo.; W. H. McCoy, Allerton, Iowa; H. F. Metcalf, Indianola, Iowa; J. N. Davis, Eve, Kas.; T. J. Wallace & Son, Bunceton, Mo.; T. K. Tomson & Son, Dover, Kas.; J. W. Smith & Son, Indianola, Iowa; Jule Gunter, Gainesville, Tex.; Randolph Bros., Indianola, Iowa; Jno. Morris, Chillicothe, Mo.; H. F. Brown, Minneapolis, Minn.; Nutter & Neville, Henrietta, Texas; Chas. McFarlin, Fort Worth, Texas; D. Tennyson, Frankfort, Kas.; N. M. Cooper, Page City, Iowa; Jas. Haston, Sterling, Kas.; Jos. Marzen, Lovelock, Nev.; Geo. P. Ross, Alden, Kas.; J. C. Salzer, Lexington, Mo.; F. M. Marshall, Blackwater, Mo. The Hereford sale by J. A. Funkhouser, Plattsburg, Mo., and Gudgell & Simpson, Independence, Mo., held at Kansas City, November 15 and 16, was largely attended and good prices were realized. The first day Funkhouser sold eight bulls for \$3,505, an average of \$438.12, and thirteen females for \$3,865, an average of \$297.30. Gudgell & Simpson sold fifteen bulls for \$3,580, an average of \$238.66, and fifteen females for \$4,590, an average of \$306. The second day Funkhouser sold eight bulls for \$2,220, an average of \$277.50, and twelve females for \$3,500, an average of \$291.83. Gudgell & Simpson sold sixteen bulls at an average of almost \$200, and ten females at an average of \$240. The results for the entire offering, including both days for Jas. A. Funkhouser, was sixteen bulls for \$5,125, an average of \$357.80; twenty-five females, \$7,865, average, \$294.60, or forty-one Herefords for \$13,090; general average, \$319.26. Gudgell & Simpson sold thirty-one bulls for \$6,750, average, \$217.74, and twenty-five females for \$7,080, average, \$283.20, or fifty-six Herefords for \$13,830, a general average of \$247.

The top prices of the sale were made by Funkhouser in the sale of the yearling bull Hesiod 50th 76440, to J. M. Curtice, of Kansas City, Mo., and the cow Ernia 68797 for \$750, to Walter Waddell, Lexington, Mo. The top price realized by Gudgell & Simpson was \$500 for Blanche 11th 71641, sired by Beau Brummel 51817.

The purchasers of the Funkhouser cattle were: Milne & Bush, Roswell, N. M.; Jos. Marzen, Lovelock, Nev.; S. L. Klevinger, Vibbard, Mo.; J. A. Larsen, Everest, Kas.; K. B. Armour, Kansas City; Henry Ackley, Wellsville, Kas.; Walter Waddell, Lexington, Mo.; O. Harris, Harris, Mo.; Scott & March, Belton, Mo.; M. W. Leonard, Fayette, Mo.; F. A. Baylis, Des Moines, Iowa; J. S. Lancaster & Son, Liberty, Mo.; J. B. Bell, Fayette, Mo.; G. W. Littlefield, Austin, Tex.; J. M. Curtice, Kansas City, Mo.; J. E. Farrell, Allerton, Iowa; C. G. Comstock, Albany, Mo.; Wm. Littlebridge, Hanover, Mo.; W. H. Stone, Las Animas, Col.; J. H. Klepper, Winston, Mo.; Chas. B. Smith, Fayette, Mo.

The purchasers of the Gudgell & Simpson cattle were J. S. Lancaster & Son, Liberty, Mo.; Jas. Sparks, Reno, Nev.; Stewart & Hutcheon, Greenwood, Mo.; O. Harris, Harris, Mo.; J. A. McKittick, Greenwood, Mo.; Milne & Bush, Roswell, N. M.; W. T. Stoval, Jamieson, Mo.; Duncan Bros., Hagerman, N. M.; K. B. Armour, Kansas City, Mo.; J. M. Curtice, Kansas City, Mo.; Wm. Powell, Channing, Texas; G. W. Littlefield, Austin, Texas; Dennis Bros., Napton, Mo.; W. N. Rogers, McCook, Neb.; Frank Trigg, Lexington, Mo.; W. H. Stone, Las Animas, Col.; M. W. Leonard, Fayette, Mo.; Sam'l Wertzberger, Volland, Kas.; Geo. Washington, Manhattan, Kas.; Wm. Humphrey, Ashland, Neb.; H. C. Jones, New London, Mo.

On November 18, at Kansas City, W. T. and H. R. Clay, of Plattsburg, Mo., sold forty-seven head of Short-horns at an average of \$174, and among this number were several spring calves. The top price was \$400, for a Scotch cow, Orange Blossom of Wildwood 2d, to Geo. E. Ward, Hawarden, Iowa.

The two days' Short-horn sale closed for the Messrs. Clay on Saturday with the following results:

26 bulls sold for \$3,355, average \$129.03.
 68 females sold for \$9,715, average \$142.86.
 94 Short-horns sold for \$13,170; average \$139.03.

The fact should not be lost sight of that there were thirty-nine head out of the ninety-four sold that were under one year, and several of these not weaned. Besides this feature several of the cows were aged ones, having been dropped in the '80's. There were but fourteen yearlings, and only four two-year-olds. Notwithstanding the range of ages there were several individual animals that should have brought more money and doubtless would had they been fully fitted up in sale ring dress. However,

The Home Circle.

THY LOVING-KINDNESS.

Not always the path is easy;
There are thickets hung with gloom,
There are rough and stony places
Where never the roses bloom.
But oft when the way is hardest,
I am conscious of one at my side,
Whose hands and whose feet are wounded;
And I'm happy and safe with my Guide.

Better than friends and kindred,
Better than love and rest,
Dearer than hope and triumph,
Is the name I wear on my breast.
I feel my way through the shadows
With a confident heart and brave;
I shall live in the light beyond them,
I shall conquer death and the grave.

Often, when tried and tempted;
Often, ashamed of sin,
That, strong as an armed invader,
Has made wreck of the peace within;
That wonderful loving-kindness,
Patient and full and free,
Has stooped for my consolation,
Has brought a blessing to me.

Therefore my lips shall praise Thee;
Therefore, let come what may,
To the height of a solemn gladness
My song shall arise to-day.
Not on the drooping willow
Shall I hang my harp in the land,
When the Lord himself has cheered me
By the touch of His pierced hand.
—Margaret E. Sangster.

"Englishwoman's" Remarks to "Home Circle" Readers.

Ever since the arrival of the Kansas Farmer for October 6 it has been on my mind to answer Phoebe Parmelee. I do not recall the special letter to which she refers from "John's Wife." I wonder whether the editor knows what he is talking about, or whether I have been misinformed. Not more than three months ago I was told (upon what seemed very reliable authority) that "Phoebe Parmelee" was and is a middle-aged matron like myself with growing-up daughters around her.

I should certainly like to see our Home Circle more local than it is. Every word in it is generally good and interesting, still I do think it would be more welcomed by the average farmer's family (if not by the farmer himself) were the views, ideas and suggestions of our sisters on Kansas farms more often ventilated and discussed. There might sometimes be a superfluity of big "I's" or a want of periods and semi-colons, and this might trouble the editor, but I do not believe it would to any great extent. I know that our editor is a most courteous and genial gentleman—I wonder how many of the ladies call upon him when they visit Topeka. It seems to me that perhaps a year ago I received a request, from him personally, to write a sketch in few words on any Kansas farm subject. He said he had written to several of the old contributors. I fear he did not get much satisfaction, as, for some time, I carefully watched for articles from the old-time writers, but very few, if any, appeared. I know that I myself was very tardy in responding.

Surely, if all the cake recipes and crochet patterns are exhausted, we might well contribute ideas on some higher topic. "How to train our little children;" "How to advise our big children;" "How to be true helps to our husbands;" "How to help make the farm pay;" etc., etc. Or could we not talk of the temperance work in our midst—what we are doing to put down intemperance? By the way, I would like to hear from those who know how to sustain a prosperous W. C. T. U. in scattered communities. We have talked of starting a union here, but without result so far. Surely temperance is something in which all mothers must be interested. Then there are the Christian Endeavor societies. How many of our readers are members? How many of our children are members? Could we not give our experience along this line? Certainly the C. E. is going to be one of the best training grounds for our future citizens.

Does Mrs. Parmelee mean that we have had a new editor within the last two years. I supposed that the present one had been in office for seven years; perhaps I am mistaken. I think we ought to draw in more of the young wives and mothers than we do in our local societies, be they temperance, missionary or C. E. I am not a believer in a wife or mother neglecting her home and leaving her children uncared for in order to attend card parties or club entertainments, or even the most useful Christian society, but I maintain that every mother, however circumscribed her surroundings, could and ought to make time for some mental tonic other than ordinary bread and butter or hired help worries, which so often form the topic of conversation when housekeepers meet.

It does seem a barbarity for a young mother, with one or two babies, to keep away from all elevating and helpful gatherings, when perhaps previous to

marriage, she had been a worker, if not a leader, in all good things. Yes, I believe the husbands are partially to blame. They of necessity get their outings, and should, if need be, take their innings too, by perhaps caring for one baby while wife and the other go to missionary meeting, or by getting the horse and buggy ready and driving them all to the temperance convention, and then staying with them and helping mind the children. Some such recreation once or twice a month would do much to prevent the premature wrinkles on the girls' brows as well as do the "lords of creation" good, too.

These remarks have not had in mind the commandment, "Remember the Sabbath day to keep it holy," that I suppose every one knows all about, and pitied indeed are to be those who do not regard this command; pitied, not only for being so behind the times in man's duty to his Maker, but also because they cannot see, in obeying this precept, the safest road to health, wealth, happiness and heaven, to say nothing of the rest and refreshment afforded by attending the program of one day in seven.

Yet there are homes where the views are so one-sided that, although the men stay in from the fields, etc., that day, the women are expected to provide more elaborate meals for often a larger number, with, of course, the consequent addition of work both in preparing and cleaning up.

One short-sighted young wife I know made Sunday her baking time for "pies and cakes and extras." Poor thing! before long she had to leave her cakes and babies, who now are cared for by a second wife. ENGLISHWOMAN.

400 Pretty Homes and Gardens.

How general the use of photography is coming to be adopted by the modern magazine as a means of illustration is shown in the announcement of the Ladies' Home Journal that it is about to publish six new, distinct series of articles which will include not less than 400 photographs. The idea of the magazine is to present one hundred of the prettiest country homes in America, to encourage artistic architecture; one hundred of the prettiest gardens, to encourage taste in floriculture; seventy churches decorated for festival occasions of all kinds, such as weddings, Christmas and Easter services, etc.; some forty of the prettiest girls' rooms in this country; twenty-five floral porches and vine-clad houses; and the story of the native wild flowers in America, told in seventy-five photographs. Over 8,000 photographers, in every part of the country, were employed by the magazine to get these pictures, and several thousands of dollars were paid in prize awards for the best photographs. The choice was made out of over 10,000 photographs received by the magazine.

Dutch Wedding an Ordeal.

A Dutch wedding is a portentous business. Smart Holland does its devotions in barn-like French Protestant churches. The wedding service is mournful to a degree, and lasts two hours. The bridegroom, in full evening dress, and the bride, in orthodox white satin, sit upon chairs in front of the black-robed minister. He delivers an extempore address fairly bristling with personalities. Meanwhile the relatives sob in pews, until finally every one who can prove the remotest connection with the bride kisses her.

Next follows a tremendous breakfast in French style. It is "de rigueur" for all the friends of the bride to send her in the morning a bouquet or basket of white flowers plentifully ribboned. With numbers of these a very gay effect is produced, though the Dutch are lamentably behind the times in table decorations and posey making. With the advent of the "hors d'oeuvre" come speeches. The bride's brother or other delegate first rings a small hand-bell. Then, amid a silence broken by the cheerful clinking of knives and forks, a health is proposed. Then comes a quaint postscript to this very ordinary ceremonial. Ladies and gentlemen must alike arise from their seats, and, solemnly filing up to the person toasted, touch his glass with their own. After a score of speeches the thing gets monotonous, but it is carried out to the bitter end. Any person omitted would feel aggrieved. In Holland it is the family before everything. A leading barrister was recently compelled to throw up an important case in order to attend the birthday party of an aged father who lived three hours distant by rail.

The Dutch are excellent husbands, but quite preposterously jealous. An Englishman who found himself in a party consisting almost entirely of assorted, ventured to pay a few compliments and

mild attentions to a charming young married woman. He even had the assurance to include her in a general offering of roses made to the company. The husband was furious. He cancelled a previously given dinner invitation, and there were awful rumors that, though duels are now very rare, he desired to challenge the offender, who wisely placed the sea between himself and his would-be opponent.

Babies have a comfortable time enough in Holland, where the cramping swaddling pillow is replaced by English layettes. It is, however, expensive to know too many, for every woman who visits or is visited by nurse and infant for the first time must give the former at least five shillings.

Mourning is very long and very strict. Even the poorest leave off their gold cap pins and headpieces for more than a year after the death of a parent.—London Globe.

Bismarck's Memoirs—An Unfought Duel With Caprivi.

An international event of importance is the announcement of the impending publication of the genuine memoirs of Bismarck, written (or dictated) and revised by the late Prince himself. The work, edited by the well-known Bismarckian historiographer, Herr Horst Kohl, is to appear shortly under the title of "Gedanken und Erinnerungen." These "Recollections and Reflections" constitute not alone the autobiography of a great statesman, but the most important



PRINCE BISMARCK

After an engraving

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contribution to historical literature in the last quarter of a century.

It is very interesting to learn from the Berlin correspondence in the London Daily News that Prince Bismarck, as a man of 78, was about to send his successor, Count von Caprivi, a challenge to duel with pistols.

As is known, the German government under Count von Caprivi issued, on the occasion of Prince Bismarck's visit to Vienna to attend his son Herbert's wedding, a circular note to all the German Ambassadors abroad saying that Prince Bismarck was a private gentleman, and was to be treated accordingly, and that his views were no longer of any weight. With regard to this decree, Prince Bismarck once said:

"That Caprivi should assert that I knew nothing of politics, and that he should have officially communicated the statement to foreign countries, was nothing to me. It could only disgrace him. But that he should interfere with my social rights was too much. I at first wanted to challenge him, and had al-

ready thought about my seconds. I have still a very firm hand, and would soon have got into shooting again. But I considered the matter and asked myself what would happen. I am an officer. The matter will be brought up before a Court of Honor of old Generals. There will be a deal of talk, and finally unmeaning declarations will be exchanged. What would have been the use of this? So I gave it up."

It is probable that Prince Bismarck dropped his bloodthirsty plan because he knew that Count von Caprivi was only the executor of the Emperor's will.

Suggestions to Housekeepers.

One reason why housekeepers fall with salt-rising bread, says one who knows, is because they do not know that the rising should not be jarred or stirred after it begins to ferment.

A barrel of flour will make nearly double its weight in bread. Flour rapidly deteriorates with age unless kept dry. It absorbs moisture and this moisture impairs the gluten, which is indispensable to the lightness of the bread; besides, it changes some of the starch into sugar and a gummy matter, known as dextrine, and this makes the bread heavy and sodden.

On baking day, if you have some pie-crust left, take an equal quantity of bread dough from that ready to make into loaves and mix together. Beat it with your rolling-pin anywhere from three to more minutes, roll out rather thinner than for biscuit, let rise awhile, prick them with a fork, bake in a quick oven and introduce your family to them as Maryland biscuit.

A correspondent of an exchange gives a recipe for a soap which will clean wood-work or any painted surface without injury: Dissolve three ounces of borax in two quarts of warm water; add two bars of good white soap, shaved fine, and stir until the soap is melted. When cold it should form a jelly. A tablespoonful in a gallon of water will form a strong lather and is excellent for cleaning paint, windows, marble or silver. It washes colored clothes without fading them, and is generally useful.

"Our country, sir," roared the political speaker, "knows no east, no west, no north, no south." "Indeed?" said a visiting Englishman. "What a confoundedly ignorant country."

What is probably the most venerable piece of furniture in existence is now in the British Museum. It is the throne of Queen Hatsu, who reigned in the Nile valley some 1,600 years before Christ.

"How would you like to take a flyer in pork or wheat?" asked the broker. "Naw, I don't believe I keer to," replied the farmer. "I onst fell down a sixty-foot shaft in a coal mine in about three-fourths of a second, an' kinder reckon that's fast enough for me. I'm gittin' too old fer much excitement."

State of Ohio, City of Toledo, Lucas county, ss.

Frank J. Cheney makes oath that he is the senior partner of the firm of F. J. Cheney & Co., doing business in the City of Toledo, County and State aforesaid, and that said firm will pay the sum of ONE HUNDRED DOLLARS for each and every case of Catarrh that cannot be cured by the use of Hall's Catarrh Cure.

FRANK J. CHENEY.

Sworn to before me and subscribed in my presence, this 6th day of December, A. D. 1888.

A. W. GLEASON,

[Seal.] Notary Public.
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The Young Folks.

TO HIM WHO WAITS.

To him who waits amid the world's applause
His share of justice, tolling day by day,
All things will come now dim and far away,
To him who waits.

To him who waits beyond the darkness drear,
The morning cometh with refulgent light;
Bringing assurance of a day more bright,
To him who waits.

To him who waits, though tears may often fall,
And knees be bowed in sorrow and in prayer;
All grief will end, and everything be fair
To him who waits.

To him who waits and reaches out his hands
To aid a toiler up life's beetling crags,
Surcease will come from every ill that flags
To him who waits.

To him who waits and struggles not in vain
To overcome the evils that abound
Within his breast, sweet will the victory sound
To him who waits.

To him who waits there comes a wily throng,
Who sneer and scoff, and look with baleful eyes,
But what of them, they are but gnats and flies,
To him who waits.

To him who waits, there must be recompense
For useful work, whatever may betide,
A compensation reaching far and wide,
To him who waits.

To him who waits the stars are always friends,
The restless ocean and the azure sky,
All things in nature speak and prophesy;
To him who waits.

To him who waits true love will some day come,
And lay an offering at his blameless shrine,
Life will be love, and love will be divine,
To him who waits.

To him who waits the world will some day cheer
And sing his praise; Fame's mysterious gates
Will open for him; heaven seems more near,
To him who waits.

—Moses Gage Shirley, in Boston Globe.

Written for Kansas Farmer.

YOUNG FOLKS IN THE OLD COUNTRY.

BY ANNA MARIE NELLIS.

NUMBER 48.

A VISIT TO NORTHLAND.

The month of June and nearly the whole of July had been used by our Kansas party in visiting interesting places in Germany. My brother's vacation was drawing to a close and his Topeka friend had gone on a voyage to northern Norway to see the "midnight sun."

It was decided that I should accompany my brother on an excursion into Denmark and Sweden before he should sail for America. On Thursday, July 21, we took the train northward from Berlin. The northern part of Brandenburg is level and sandy, so there was but little of especial interest for us to see on the sixty-mile ride to Neustrelitz, in the province of Mecklenburg-Strelitz.

While this grand duchy, with its population of 10,000 inhabitants, has a history of its own, reaching back into the misty realm of tradition, yet there was only one point of interest connected with it which impressed itself on my attention, and that was the fact that Queen Louise of Germany was born here, and in 1810 died at the royal summer palace of Hohen Zeritz, about seven miles from the capital. I had gathered a collection of pictures and busts of this German Queen and was glad to have the opportunity to visit the city in which she was born and where she spent the first years of her short life.

Neustrelitz is situated about two miles north of Altstrelitz, and the place is paved with the roughest cobblestones to be found in all Europe, I do believe. The houses generally are quite small and very plain. The ducal palace is but a short distance from the railway depot, and we made that the principal point for our observation. It is not very large, nor does it present a very palatial appearance. It is three stories in height, and at first sight one feels considerable disappointment at the unroyal aspect. The park in which the palace is situated is called the "Thiergarten," and it would be considered beautiful in any country. German landscape gardeners must have been skillful for many generations, for of the many parks I have seen during the past year, whether centuries old or recently laid out, all are exceedingly fine.

From the palace we went to the market place, in the center of the city. From this center extend eight streets, so planned as to represent the rays of a star. In the market place is a handsome statue of Grand Duke George of Mecklenburg-Strelitz, who died in 1860.

We visited one old church, located only a short distance from the palace. The inside of the church is decorated with fine old paintings and much carved wood-work and the altar is one of the finest we had seen in Germany.

A couple of hours was all we could spare for Neustrelitz, and we were again speeding northward toward the Baltic sea. Our route lay through the province of Mecklenburg-Schwerin, and we passed through the towns, Kratzburg, Kargow, Waren, Lalendorf, Plaatz, Laage and Kavelstorf, all of which may not be familiar in name to many American readers, but I give them as samples of German nomenclature. We saw but little to interest us during the journey except men and women working in the harvest fields, and at two different places we saw women chopping the ground into great square chunks and piling them up to be used for fuel. This part of Germany lies quite low and it is supposed to have been covered with lakes or the sea in ages past; anyway, a deposit of some kind was formed there thousands of years ago and now the people of Mecklenburg call it peat and use it for fuel.

We reached the city of Rostock late in the night, but, intending to explore it on our return, we did not stop. It was long after midnight when we reached the seaport of Warnemunde, on the northern coast of Germany. Although summer time, it seemed very cold and dismal to us as we left the train at the dock and went aboard the steamer, which was to sail at 2 o'clock in the morning. I did not expect to find a very large ship, as the route we were about to travel is not in the direct line for summer tourists; but I was dismayed to find that we were to cross the sea in a steamer which would have appeared small for one of our American rivers. I went out on deck and looked toward the sea, and in the gray morning light I could see huge billows rolling in toward shore in a manner that suggested to me that my earthly voyage might easily be ended in this, our attempt to cross a sea that is very rough in the most pleasant weather. However, others had crossed in safety many times, we were assured, and why should we be afraid?

We wrapped ourselves in our steamer rugs and tried to be comfortable while we watched other passengers coming aboard and the preparations for getting under way. It was nearly 3 o'clock when the hawsers were thrown off and our little steamer began climbing the billows, which had been rocking us unpleasantly even while lying in the harbor. I gave one longing look at Germany's receding shores and then turned my attention to the numerous fishing vessels which were setting out for the day's work. These were so much smaller than our steamer that I felt somewhat safe in the thought that if they were in no danger certainly we would see Denmark in a few hours. The fishermen who were handling those small boats were smoking the never-falling Dutch tobacco pipe, and seemed actually happy. We passed near many sailing vessels which had left port at midnight. We soon passed the tall lighthouse on the farthest point of land from Germany, and then nothing was to be seen but "white caps" in all directions. The cold gray light of the early northern morning produces anything but pleasant reflections to one rolling on the rough waves of the Baltic sea.

The voyage from Warnemunde to the Danish coast can be made in a little over two hours in very pleasant weather, but our voyage lasted four hours, and it seemed to me as though it were four hundred hours. In crossing the Atlantic I had enjoyed the unpleasant pleasures of seasickness, but in the four hours on the Baltic sea I suffered twice as much as in the whole Atlantic trip. About 7 o'clock some one near me said: "Denmark," and I raised my head far enough to see a line of gray against the horizon; but that was all I saw until the steamer was "warped" into her landing place, and I could venture to stand on my feet again. We had come from one foreign country and now found ourselves in another, where a different language was spoken by everybody we met.

We were ushered into the little custom house and were addressed by an officious-looking man in military uniform. He spoke Danish, and of course I could not understand his words, but knew that he wanted to know if we had any goods upon which tariff duty should be paid. I had not yet recovered from my sea experience and was cross; I answered him in German with one word: "Nein," and did not speak it pleasantly, either; but I was anxious to get to the railway carriage where I could rest and gain my normal health. The custom house official was very kind and pleasant. He gave us a ticket which certified that we were not trying to smuggle goods

into Denmark, and this ticket we gave to the guard at the outer door and we were then permitted to enter the cars which were waiting for the steamer passengers desiring to go northward. We had been delayed in the custom house by a good-natured but resolute fat German woman, who had a lot of delft-ware which she was carrying into Denmark. She could not speak the Danish language and it required the whole force of custom house officers to convince her that she must pay "duty" on the stuff, which she finally did with much grumbling.

The little town on the Danish coast where we landed is named Gjedser, and it is the most southern point of the country in which it is situated. It is on the island of Falster, which is twenty-eight miles in length from north to south.

We found the coaches of a railway train in Denmark very much like those in Germany, only they appeared much more comfortable to me, possibly because I enjoyed them immediately after the rough voyage. The guards are much kinder and not so "officious" as in Germany. It seemed strange to me to see all the signs on stores and public buildings and the advertisements on the bulletin boards in a different language than German or English. The sound of the Danish tongue was as confusing to me as the German had been a year ago.

The sun was shining gloriously as we left the sea coast and the fields appeared to the very best advantage. To thoroughly enjoy solid ground one must suffer the inconvenience of seasickness. I think I never saw a country so beautiful as the island of Falster, in the Baltic sea. The little villages we passed seemed to differ very little in appearance from those in Germany, except that everything seemed to have been recently covered with a fresh coat of white paint and all the houses and door yards appeared exceedingly clean and pleasant.

The stations along the line are like those in Germany, but the official uniforms are different, being of dark blue, trimmed in silver-colored braid. I noticed at each station one or more men in bright red coats and duck trousers. I inquired of a lady in our carriage who they were, and she said: "Brieftraeger," which, being literally translated, would mean letter-carriers. I noticed that they always put the mail sacks into the car and took charge of those left by the agent on the train.

The island is quite sandy and flat, and there are very few forests to relieve the scenery. The capital of the island is Nykjobing, and it is just fourteen miles from Gjedser on the south and a like distance from Orchoved on the north coast of the island. It may not be necessary for an American to pronounce these names, but it is somewhat amusing to spell them. At Orchoved it was necessary for us to continue our railroad ride by sea. The narrow Masnjed sound separates the island of Falster from the much larger island called Sjælland, or Zealand, which is the largest of the Danish islands and upon which the capital of Denmark is located.

Our train was "switched" on board a large steamer and a twenty minutes' sea voyage brought us to Vordingborg, from which point we were soon speeding northward to Copenhagen, less than one hundred miles distant in a direct line, but the railway defects to "take in" the several towns of Nestved, Kjoerge and Roeskilde, all quite important places, so that our ride was considerably lengthened. It is a railroad owned by the government, and one must be sufficient, while a similar number of cities in Kansas of equal importance would have a separate railway for each city. On our way we became acquainted with a very intelligent young Dane, who could speak German quite well, and he gave us plenty of information, which helped us greatly in our visit to Copenhagen.

At 11 o'clock we reached the city of the Danish Kings, which is marked on the Danish maps as Kjobenhavn, but Americans write it Copenhagen. After leaving the station, our first errand was to visit the money changers, of which there were a dozen or more within a block. Here we received our first Danish money, and instead of "marks" and "pfennigs" of Germany we learned the value of "kron" and "ore" of Denmark. We paid ten marks for each nine kron, and each mark is worth about twenty-four cents of American money. The kron is nearly the same size as an American quarter dollar, or German mark. The five-ore piece is of copper and as large as an American dollar, and is equivalent to one cent. If one had a dollar's worth of Danish ore pieces in the pocket, one might feel as if owning all the ore in a Klondike mine, but it would scarcely "go around."

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ADDRESS

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THANKSGIVING.

The great American turkey is the only individual in this country who has not to-day something for which to give thanks. If successes in war are cause for national thanksgiving the people of the United States have more reason than has Spain for gratitude on account of events of the present year. Fair harvests, success in manufacturing, growing commerce—these may well be remembered with gratitude. Freedom from epidemic diseases, the progress of science, religious liberty, fraternity among the people of all sections—yes, there is a good deal to be thankful for. Expansion—well, expansion is apparently in the line of destiny for this country, and, whether or not we are now ready to give thanks that this is so, it may be remembered that the United States has in the past frequently expanded, increasing our area to several times the original, and that there is not to-day a citizen who would give back, or sell at any price any of the land acquired. Perhaps more than half the people of the United States are thankful for the expanding markets and expanding opportunities to extend our benign system of liberty of conscience and action and our system of self-government to peoples long oppressed. Perhaps we shall eventually be thankful for the benefits to ourselves derived from having done good to distant peoples.

The butter which secured the highest awards at the late exhibit at Topeka was salted with Kansas salt.

A valuable bulletin has just been published by the Illinois Experiment Station on the Chemistry of the Corn Kernel. This will be found valuable in determining the value of corn as a food for man and for domestic animals.

An article entitled "No Superfluous Women" is going the rounds, in which statistics are marshalled to prove that there is no superfluity; as if it required figures to prove that there can be too much of as good a thing as woman!

The Agricultural College has been awarded the silver medal for the collection of grapes exhibited by the Horticultural department at the Omaha Exposition. The department placed a handsome collection of fifty varieties on exhibition in the early part of September.

The Kansas Farmer has only a few copies of "The Future by the Past," by Mr. J. C. H. Swann, now deceased. It is considered an exceedingly valuable work by many, as Mr. Swann gave his life's work to weather and crop observations. Until the supply is exhausted, the Kansas Farmer will fill all orders at \$1, postpaid.

While the receipts of wheat in this country continue larger than ever before, exports average scarcely as large as last year. But the "visible supply," that stored in public elevators and warehouses, shows only the ordinary increase for the time of year and is still 12,800,000 bushels below that of the corresponding date last year and 41,900,000 below that of two years ago.

THE CHINCH BUG.

To bring up the bug of ill-smelling notoriety, at this season of the year, when the energies of Jack Frost are turned to the destruction of the sources of all bad odors, may be an offense against good taste. But, "in times of peace prepare for war." If a fall and winter fight against the odoriferous destroyers of wheat and corn can be made to conserve next season's crops, it may be the duty of the Kansas Farmer to "point a moral" if it does not "adorn a tale" by saying something about his majesty, the chinch bug.

Late investigations* point to the narrow neck of land adjoining North and South America as the place of abode of the chinch bug, from whence it migrated to the United States. Its course is mapped out along both coasts of Central America and Mexico. When the eastern grand division of the invading army from the south had proceeded along the Gulf coast until the bend towards the east becomes pronounced a great detachment set out for the north. With various effective forces sent out on either side, this invasion was pushed directly into Manitoba, across the lowlands of the Gulf country, through the swamps of the Red river, across the spurs of the Ozark mountains, through the timber of the Indian Territory, over the grassy plains of Kansas and Nebraska, across the Dakotas up into the northernmost regions in which the development of wheat culture was likely to occur. Another detachment followed along the north coast of the Gulf; cut across Florida, and proceeded along the coast country with many excursions to the interior from Florida to Maine. These two grand divisions completely covered the country from the Rocky mountains east. The Pacific coast division seems to have been less prosperous and to have reached only as far as central California.

The dates of these migrations are not fully known, but the chinch bugs were in the grass on the prairies of the West, ready to feast upon the farmer's wheat, before the farmer had sown it.

Some kinds of bugs lay eggs in the fall to be hatched with the recurrence of warm weather in the spring; some bugs' eggs are hatched into worms in the fall and lie dormant in this state until spring. It was formerly thought that in one or both of these ways was the chinch bug carried over from fall to spring. But the chinch bug is of tropical origin, and, while he has adapted himself to cold and storm, he has been particular not to subject his young to the vicissitudes of winter. It is the old bugs that live over in sufficient numbers to repopulate the fields in the spring. These old ones hide away in old straw, old grass, old leaves, old trash or old weeds. Where Osage orange hedges prevail some investigators have found that three-quarters of all the chinch bugs that live over live in the accumulated trash of the hedge rows. The chinch bug is a social individual—some may have even denounced him as a socialist. He seeks his kind, lives in communities, goes in droves, or flies in great flocks. One chinch bug can do no harm to a plant of wheat or corn, but a few millions of chinch bugs can save a farmer all harvest expenses. But, while sometimes rather lonesome in early spring, each female chinch bug proceeds to lay about 500 eggs which hatch out in about three weeks into organized appetites. A second brood produces about 500 times 500,000 for each thousand pairs that live over winter. The appetite is really the most notable thing about the chinch bug. Whether male or female not one of the race ever parts company with his appetite until the day of death. The drier and hotter the weather is the chinch bug's appetite in evidence. He manifests a fondness for wheat while that is juicy, but his opinion that growing corn furnishes a properly balanced ration is as pronounced as that of an agricultural chemist. When too young to fly he is perfectly content to march from the field he has devoured to pastures new. It is said that his military tactics extend to the posting of sentries—individuals possessed of a keen sense of smell—in such positions that the balmy airs fragrant with the perfume of the wheat field shall regale their olfactory, and that on proper assurance of new fields to conquer the march is duly ordered and taken up with alacrity and precision, under the stimulating influence of the voracious appetite.

As to the remedies for the chinch bug, the doctors are not fully agreed. That these, as other of our enemies, whether big bugs or little, have other bugs to bite 'em has been abundantly established by the entomologists. That the chinch bug,

* F. M. Webster, entomologist of the Ohio Experiment Station, in Bulletin No. 15, new series, United States Department of Agriculture, Division of Entomology.

at least since he has associated with civilized people, has been subject to bacterial diseases, which greatly impair his health and interfere with his happiness, has been fully demonstrated by Chancellor Snow, of our own University, and corroborated by other leading savants. The efforts to spread these diseases among the chinch bugs have met with some measure of success. But the sickness produced and the funerals observed among the bugs have not been of that epidemic nature which would have most delighted the owners of the wheat and corn fields which had fallen under the evil eye of the possessor of the hungry appetite.

The fact that the chinch bug is a tropical bird, or at least of tropical origin, and the further fact that the young do not hibernate, neither are the eggs deposited in safe places to be hatched in the spring; the fact that only old stagers, hardy and tough, can survive the winter where there is a winter, and that these are dependent upon the protection of old trash—all these lead to the suggestion, "No old trash, no chinch bugs next season." The entomologist who is not also a farmer immediately prescribes burning the old grass and old trash and immolating the chinch bugs alive. This might be effective as to the chinch bugs, but it might also be fatal to the fertility of the fields.

But there are perhaps some ways in which the farmer may, at the same time, avoid some of the destructive effects of the chinch bugs' appetite and avoid the impoverishment of his fields. Chinch bugs have a discriminating taste for what is good. They dote on grasses and grains. But they abominate the clovers, the beans and all the other legumes. It is therefore perfectly proper to grow alfalfa, red clover, soy beans, etc., and to be careless about the disposition of their trash while anathematizing the chinch bug. But corn fodder, Kafir corn, sorghum, wheat and oats straw should be removed from the fields and converted into beef, milk or wool while the weather is yet cold; the refuse from them should be so composted as to destroy the oldest and toughest chinch bug before warm weather; the stubble, with any stray weed that may have gotten in among the stubble, should be plowed under so deep that old Mr. and Mrs. Chinch Bug will have no idea of the arrival of spring and the south wind.

The hedges—well, there may be some people who so much prefer hedges to woven wire fences that they will prefer to give over wheat and corn to the chinch bug rather than do without hedges. But it is worthy of serious consideration whether clean culture, feeding all roughness, deep fall plowing of every field except those devoted to alfalfa and clover; late sowing of fall wheat, so that it shall be too small to afford shelter to the chinch bug; clean fence rows and road sides, will not prove more profitable than feeding so many chinch bugs.

TO FINE STOCK BREEDERS.

The ninth annual meeting of the Kansas Improved Stock Breeders' Association will be held in Topeka, January 9, 10 and 11, 1899. All railroads make an open excursion rate of one and one-third fare for round trip, good coming January 7 to 12 and good for return until January 17. During the week there will also be held the annual meeting of the Kansas Swine Breeders' Association, the Kansas State Poultry Show and the Kansas State Board of Agriculture.

Every breeder and farmer interested in pure-bred stock or more profitable agriculture, cannot afford to miss any of these meetings.

All breeders intending to be present should notify, in advance, H. A. Heath, Secretary, Topeka, Kas.

CHARLES S. CROSS.

The tragical death, on the 16th inst., of Charles S. Cross, the proprietor of Sunny Slope Herefords and President of the First National Bank, of Emporia, caused universal sorrow throughout the West and was a great shock to his numerous friends, especially among those identified with improved stock interests. Mr. Cross was a man of unbounded energy and enthusiasm and did more, in the few years that he devoted to fine stock, to encourage and advance the material interests of pure-bred stock than any other breeder. He was exceedingly popular and generous and never failed to give his fellow breeders help at every opportunity. His genius and enterprise with Hereford cattle has been of vast benefit to the entire Hereford breeding fraternity in America, and it is sincerely to be hoped that his last projected sale of 100 Herefords, the very "tops" of Sunny Slope, to be held at

Kansas City on December 7, 1898, will be made an occasion of a fitting recognition of his success as a breeder.

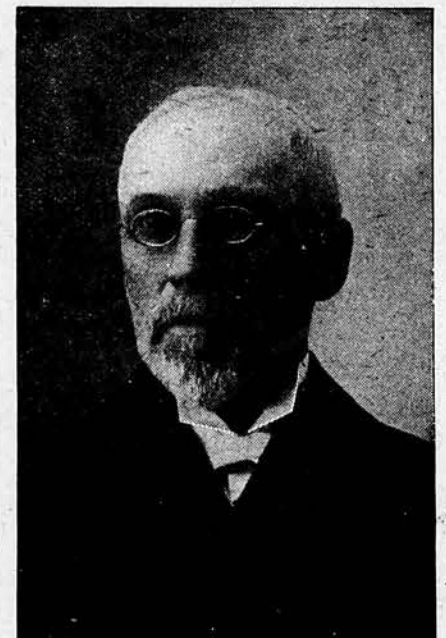
STATE DAIRY ASSOCIATION.

The twelfth annual convention of the Kansas State Dairy Association was held in Representative hall, at the State house, in Topeka, during three days of last week. A program containing papers of exceptional value was presented. The interest was sustained from the first call to order until the final adjournment. The exceedingly practical nature of the subjects assigned and the common sense treatment they received—common sense without being commonplace—assured the success of the meeting.

The annual address by the President, C. F. Armstrong, of Clyde, was brief and to the point, a delightful variation from the tiresome generalities sometimes inflicted by presiding officers.

The Secretary's report was concise and sufficiently comprehensive.

A feature of the convention consisted in the examination of classes of persons engaged in the several branches of the dairy industry. The first of these was the creamerymen's class. This was composed of the most prominent creamerymen of the State. These were first excluded from the hall and then admitted and examined one at a time. The questions were put by Professor Cottrell, of Kansas State Agricultural College, and



D. W. WILSON.

were the same for every member of the class. The answers were judged by Professor McCay, of the Iowa Agricultural College. In a similar way a patrons' class was examined, with W. H. Phipps, of Abilene, as examiner and Professor Cottrell as judge. The last of the classes was the butter-makers' class, examined by Prof. Cottrell and judged by Professor McCay. Many of the questions were such that only persons well versed in the particular branch of dairying under consideration could answer them. Lively discussions followed the examinations.

A fact which became prominent at almost every stage of the convention is that the creameries are all anxious to enlarge their supplies of milk. No question was raised as to the prices paid being as close to the market prices for butter as can be afforded, although it was stated that where daily receipts of milk are large it is possible for the creamery to make the margin closer than where but small quantities of milk are received. But it was recognized as a fact that to increase the supply of milk the profits to the farmer must be increased. The way to do this was brought out with considerable force by Prof. Cottrell in various of the discussions as well as in his address on feeds and feeding. The selection of the dairy cow and her feed and management are matters of such variation that from some the returns are several times as large as from others, while from some there are handsome profits, from others there can be but losses as they are managed.

The butter exhibit was in every way creditable. Following are the scores made by the judges:

BUTTER.	
Name and address.	Score.
P. J. Smith, Waverly.....	82
R. P. Chandler, Wellsville.....	83
F. H. Teator, Wellsville.....	81½
Kansas Creamery Co., Emporia.....	82
Jensen Creamery Co., Beloit.....	82½
Cawker City Creamery Co., Cawker City.....	95
St. Paul Creamery, St. Paul.....	90
Louisville Creamery Co., Louisville.....	94
Hoyt Creamery Co., Hoyt.....	94
Keats Creamery Co., Keats.....	88
Melvorn Creamery Co., Melvorn.....	82
Claffin Creamery Co., Claffin.....	89
Washville station, Washville.....	89

Name and address.	Score.
Spivey station, Spivey.....	89 1/2
Milton station, Milton.....	89 1/2
Anthony station, Anthony.....	90
Duquoin station, Duquoin.....	90 1/2
Harper Creamery Co., Harper.....	90
Wellington station, Wellington.....	88
Angonia station, Angonia.....	90
Hazelton station, Hazelton.....	89 1/2
Attica station, Attica.....	91 1/2
Kiowa station, Kiowa.....	90 1/2
J. H. Dickson, Edgerton.....	90 1/2
Wm. Hoefflin, Edgerton.....	90 1/2
Chas. Dill, Edgerton.....	93
J. B. Ainsworth, Edgerton.....	90
Edgerton Creamery Co., Edgerton.....	90
F. Jeogensen, Ottawa.....	90 1/2
Ottawa Creamery Co., Ottawa.....	90 1/2
M. M. Alspaugh, Floral.....	93
Jonas Beltz, Floral.....	92 1/2
Richmond Creamery Co., Richmond.....	93
Sedgwick Creamery Co., Sedgwick.....	94 1/2
Lyndon Creamery Co., Lyndon.....	93
Larned Creamery Co., Larned.....	93
White City Creamery Co., White City.....	90
Esbridge Creamery Co., Esbridge.....	92
M. O. Awe, Esbridge.....	92
Beattie Creamery Co., Beattie.....	94
Rock Springs Creamery Co., Riley.....	91
Turon Creamery Co., Turon.....	91
Elk Creek Creamery Co., Larkin.....	93 1/2
Admire Creamery Co., Admire.....	94
Manchester Creamery Co., Manchester.....	92 1/2
Kansas Creamery Co., Topeka.....	93
Kansas Skim Station, Oskaloosa.....	95 1/2
Fairview Skim Station, Fairview.....	95 1/2
D. Hall, Claffin.....	91
D. S. Tweed, Olathe.....	91 1/2
T. J. Ewing, Olathe.....	90 1/2
J. H. Ratzluff, Canton.....	94
Sabatha Creamery Co., Sabatha.....	91 1/2
S. E. Brune, Lawrence.....	91 1/2
Douglas County Creamery, Lawrence.....	92
G. G. Eye, Clay Center.....	92
Geo. W. Hanna, Clay Center.....	94
Midland Creamery Co., Miltonvale.....	92
Jarbalo Creamery Co., Jarbalo.....	90
Hillsboro Creamery Co., Hillsboro.....	93 1/2
Garnett Creamery Co., Garnett.....	95
Tonganoxie Creamery Co., Tonganoxie.....	91
Fred Hedinger, Roxbury.....	91
Lewis Larson, Spring Valley.....	92
J. M. Niles, Moundridge.....	95
Ozawkie Skimming Station, Ozawkie.....	96 1/2
McLouth Skimming Station, McLouth.....	95 1/2
Meriden Creamery Co., Meriden.....	95 1/2
Valley Falls Skimming Station, Valley Falls.....	95
Boyle Skimming Station, Boyle.....	90
Solomon Skimming Station, Solomon.....	90 1/2
Jacob Meyer, Enterprise.....	90 1/2
J. E. Musser, Enterprise.....	95
Spring Hill Creamery Co., Spring Hill.....	95
Wm. Flannery, Glen Elder.....	95 1/2
C. H. Goble, Osborne.....	95
Geo. Huckstead, Beloit.....	95
W. F. Jensen, Sunflower.....	95
O. M. Lewis, Scottsville.....	95 1/2
R. W. Robinson, Overbrook.....	95 1/2
F. T. Stewart, Overbrook.....	95 1/2
Mound Valley Skimming Station, Mound Valley.....	94 1/2
Potwin Skimming Station, Potwin.....	94 1/2
Peabody Skimming Station, Peabody.....	94 1/2
Towanda Skimming Station, Towanda.....	94 1/2
Buhler Skimming Station, Buhler.....	94 1/2
Friesen Skimming Station, Friesen.....	92 1/2
Medora Skimming Station, Medora.....	92 1/2
Burton Skimming Station, Burton.....	92 1/2
Ebenfeldt Skimming Station, Ebenfeldt.....	93 1/2
Elbing Skimming Station, Elbing.....	95
Newton Skimming Station, Newton.....	93
Halstead Skimming Station, Halstead.....	95
Goessel Skimming Station, Goessel.....	94
Eldorado Skimming Station, Eldorado.....	94
Whitewater Skimming Station, Whitewater.....	94
Cherryvale Skimming Station, Cherryvale.....	95
Hesston Creamery, Newton.....	95 1/2
A. L. Beltz, Ramona.....	95 1/2
J. P. Moll, Ramona.....	93
Thos. Parker, Inman.....	95
A. W. O'Brian, Shady Grove.....	95
Jos. Fitzgerald, St. John.....	94 1/2
J. B. Dunlop, Fort Scott.....	95
Great Bend Creamery, Great Bend.....	95 1/2
LaCygne Creamery, LaCygne.....	94 1/2
Langton Creamery, Langton.....	90 1/2
Cawker Creamery, Cawker City.....	91
Haven Creamery, Haven.....	92 1/2
Kansas Creamery Co., Wichita.....	91
Kansas Creamery Co., Belleville.....	92 1/2
A. S. Pyke, Abilene.....	95
H. G. Hoffman, Abilene.....	90 1/2
Fred Pross, Abilene.....	95 1/2
P. G. Hoffman, Abilene.....	94 1/2
Jno. Eisenhower, Abilene.....	89 1/2
C. O. Musser, Abilene.....	89
J. G. Engle, Abilene.....	95
Ben Jury, Abilene.....	95
D. J. Eisenham, Abilene.....	95
H. L. Book, Abilene.....	90 1/2
B. F. Engle, Abilene.....	91 1/2
C. D. Hall, Abilene.....	90
Clear Creek Creamery, Lincolnville.....	90
C. E. Austin, Burlingame.....	92
L. A. Ellis, Burlingame.....	90
Clyde Creamery Co., Clyde.....	95
Acme Creamery, Abilene.....	96
A. Jensen, Manhattan.....	96

the Secretary, in his endeavor to give the farmers the benefit of the best information to be had on all branches of agriculture.

The following officers were elected for the coming year: President, F. S. Hurd, Meriden; Secretary and Treasurer, W. F. Jensen, Beloit; Assistant Secretary, E. H. Forney, Abilene.

Those who expect to attend the coming meeting of the national association at Sioux Falls organized with J. E. Nissley, of Topeka, as Secretary and Treasurer. It is expected that a good crowd of Kansas creamerymen will start from Topeka to attend the national meeting in a body. Those who have not yet done so will find it to their advantage to communicate with Secretary Nissley, who may remind them that he is also Treasurer of the expedition.

MISS ANNA MARIE NELLIS.

This week the Farmer presents a picture of Miss Nellis, a Kansas girl who never forgets Kansas. Her admirable and interesting letters, "Young Folks in the Old Country," which have appeared in this paper for several months, have been widely copied by the daily and literary press, and best of all, the expressed



MISS ANNA MARIE NELLIS.

appreciation of so many of our readers has, of course, been gratifying to the publishers. It is due Miss Nellis and our readers that an opportunity be given to see her portrait, as shown this week.

The Kansas City Journal editorially says:

"Miss Anna Nellis, daughter of ex-Judge D. C. Nellis, of Topeka, has just matriculated as a student in the Berlin University, the greatest educational institution in Germany. But few women are numbered among the 6,000 students of this great college, and those who do gain entrance are usually women of a greater age than 25 years. Miss Nellis graduated from the Topeka high school in 1897, when less than 18 years of age. For a year or more she has been in Berlin preparing herself to pass the necessary examinations, a thorough knowledge of the German language being made a condition necessary."

Discussing the occupations now open to women, a writer asks why more of them do not engage in agriculture, own and manage farms. There are more women so occupied than that writer supposes; and some of them have to manage a husband as well as a farm.

Fall plowing is a moisture conserver.

Hessian Fly in the United States.

This is the title of Bulletin No. 16, new series, Division of Entomology, soon to be issued by the United States Department of Agriculture. It was prepared, under the direction of the Entomologist, by Herbert Osborn, Professor of Zoology and Entomology, Agricultural College, Ames, Iowa, and contains many facts concerning the life history, food habits and parasitic enemies of this farm pest.

The bulletin states that the Hessian fly probably ranks next to the chinch bug as a farm pest in the United States, and its ravages in other countries have long been known and appreciated. It received its name in the belief that it had been introduced into this country by the Hessian soldiers during the war of the Revolution.

An account of its original habitat, its very wide distribution throughout the wheat-growing regions of Europe and America, and the means of distribution are given in the bulletin, together with descriptions of the male and female insects, the eggs, the larval forms and development, food plants, natural enemies and remedies.

It also contains a list of all the im-

We Will Give One Thousand Dollars

To the agent sending us the largest list of subscribers up to April 15, 1899; \$500 to the next largest, and so on. 500 of our agents will share in the distribution of \$11,500, BESIDES receiving a good commission for all work done. Send for particulars.

The Curtis Publishing Company Philadelphia, Pa.

abnormal state of affairs is due to the fact that most of the large coffee plantations are owned by German stock companies, and the profits produced by the capital employed go to Germany in the form of dividends. German interests in the republic, it is stated, are valued at more than 150,000,000 marks (\$35,700,000), yet the number of Germans residing in the country does not exceed 500."

A Copy Free.

A subscription to the Gentlewoman, New York, the popular dollar woman's monthly magazine, is offered with the Kansas Farmer, both papers for \$1.10 per year. As some of our readers may not be familiar with the Gentlewoman the publishers have agreed to send a free sample copy if applied for at once. Readers who would like to examine the magazine before sending their subscription to the Farmer will receive a free copy of the Gentlewoman by sending a postal card asking for same, mentioning the Kansas Farmer, to the Gentlewoman Co., German Herold Bldg., New York city.

Important Change in Time on Nickel Plate Road.

Commencing Sunday, November 13, the New York and Boston express will leave Chicago daily at 10:20 a. m., instead of 10:35 a. m., as formerly. Other trains will leave daily at 2:55 p. m. and 10:15 p. m., as heretofore. The same high standard of through train service and excellent equipment will be maintained, as in the past. No extra fares will be charged on any train. Rates always the lowest. Sleeping car space may be reserved for any future date. Chicago passenger station, Van Buren street and Pacific Ave., on the Loop. City ticket office 111 Adams St. 76

Absolute Safety in Peach Trees.

In accordance with the Maryland law all the trees in the Harrison's Nursery, at Berlin, Md., are now disinfected with a solution of 25 grains of potassium cyanide, 98-99 per cent. pure; 1 1/2 oz. sulphuric acid (liquid measure); 1 1/2 oz. water (liquid measure), for every 100 square feet of space. After using this mixture, with skilled attendants to apply it, there is no possible chance for the survival of any insect pest on the trees. While there has never been known a case of San Jose scale or yellows in the county where the nurseries are situated, yet they are using this method with much satisfaction, and it enables them to give their customers an absolute guarantee that all trees purchased are free from any taint of disease or insects that might be transferable from the nursery to the orchard. Peach trees form one of the specialties of the Harrison's Nurseries, and their list of budded trees will interest every grower of peaches in any part of the country.

Tremendous Rainfalls.

A recent remarkable rainfall of 31.76 inches in twenty-four hours, which occurred in northern Ceylon, leads a correspondent of Nature to recall other records of heavy rains. The greatest annual rainfall known occurs, it is said, in the Khasia Hills, in India. It amounts to 600 inches, or fifty feet. On one occasion two and one-half feet of rain fell in the Khasia Hills every twenty-four hours for five successive days. Gibraltar has been drenched with thirty-three inches of rain in twenty-six hours, and Genoa with thirty inches in the same length of time.

portant papers on the Hessian fly that have appeared in America and such of the foreign works as are of value to the American student.

The bulletin is illustrated with a frontispiece, two plates and eight text figures.

Balance of Trade.

In his latest circular, Henry Clews makes the following showing for the United States, of exports over imports:

"For the twelve months ending October 31, the surplus of exports over imports, for the last twelve years, compares as follows:

Twelve months 1897-8.....	\$598,078,000
Twelve months 1896-7.....	336,482,000
Twelve months 1895-6.....	261,318,000
Twelve months 1894-5.....	21,022,000
Twelve months 1893-4.....	182,634,000
Twelve months 1892-3.....	66,260,000

The October Bulletin of American Republics has the following explaining a similar condition in Guatemala:

"The French 'Moniteur Officiel du Commerce' says that for years the exports of Guatemala have far exceeded the imports. In 1896 the exports represented a total of 23,085,000 plasters (\$11,373,980) against imports valued at 9,143,000 plasters (\$4,503,756). At first sight the situation would appear to be advantageous to Guatemala, and yet the annual deficits show the contrary. This

Horticulture.

Books and Business.

The practical farmer and horticulturist has a much greater regard for books than he had a few years ago; but this is chiefly because the books have a much greater regard for the practical man than they formerly had. Men who write agricultural and horticultural books nowadays are, for the most part, those who have spent years of hard work among plants. They are thus able to give facts when they write, and, if they find it necessary to make theories for the explanation of certain phenomena, these theories are likely to be intelligible and reasonable because they are drawn from personal experience. At the present time no horticulturist thinks it smart to sneer at books. There are lots of books that he would like to have. And the few which he feels able to buy are carefully studied and often referred to. He would like to own more if he could afford it. He is always interested in anything which pertains to his profession. Even if he finds a mistake in a book he remembers that probably the author was a mortal man like himself.

AMONG STRANGE VEGETABLES.

A very interesting and useful and comparatively modern work which is known to but few gardeners in this country is "Le Potager d'un Curieux." Of course this strange French title explains why most of us are unacquainted with it. It is all we can do to keep up with American literature. But this is really a very valuable book; and if you knew it well, and kept an eye on the bulletins and journals in this country, you would recognize many of the strange and wonderful discoveries as familiar extracts from the work of Messrs. Paillieux and Bois. The title of the book, as nearly as it may be translated into English, means "The Garden of a Curiosity Collector." In it one may find full descriptions of many rare and curious vegetables not in general cultivation, with extended historical notes of their discovery and introduction. There are some vegetables which have become better known since the publication of this book, and we have found it necessary several times to go back to this work to discover the origin of new things which have been re-introduced through the seed trade. The so-called Chinese cabbage and Chinese mustard are described and figured, as are also the little chorogi or artichoke, Stachys affinis (properly Stachys Sieboldii) which we have seen in recent catalogues. The soy bean, now furnishing more or less excitement for the men who experiment with all sorts of leguminous crops, is also treated quite fully. We may have occasion to refer to this interesting book again some time.

THE STONELESS PLUM.

It is odd how the old things turn up again and again. The other day Luther Burbank sent me, among a number of other specimens, a stoneless plum. It had no stone at all save a slender, brittle thread at the back. There was a good, plump seed, but it lay naked in a large cavity in the flesh. The plum was small and blue, and looked like a Damsen and tasted much like a good specimen of that class. I thought it was quite a wonder, and while I was still speculating as to whether this was one of the "California wizard's" productions, I came across a fine colored plate of the same identical variety in Poiteau's Pomologic Francaise, a large and magnificent work on French fruits, written in 1846. And then, to multiply coincidences, the very same day I happened onto a figure and description of the same thing under the name of "Prunier sans noyau" in Duhamel's great work, Traite des Arbres Fruitiere, written in 1763. Since then I have found that the same plum was known by De Candolle and probably by Linnaeus. It is a very curious and interesting fruit.

PRINCIPLES OF FRUIT-GROWING.

A new edition of Prof. Bailey's "Principles of Fruit-Growing" is just off the press. This means that the first edition has been sold, we suppose. The second edition has a new chapter in the appendix, devoted to the subject of describing and classifying fruits. It has also, as its preface, an essay written from Europe and comparing European with American fruit growing. Prof. Bailey says that we are very much better at commercial fruit culture in this country than they are across the water, but he thinks they beat us when it comes to supplying the home market. There may be a valuable suggestion in this. The general fruit market in the large centers seems to be pretty heavily crowded with stock most of the time; but there are thousands of small local markets unsupplied.—The Bookman, in American Gardening.

Raising Timber in Western Kansas.

Editor Kansas Farmer:—Being somewhat of a crank in timber planting, I feel it to be my duty to the farmers of central and western Kansas to give, what I consider, the benefits of my experiments to my brother farmers. First, there are just two timbers that will grow on all kinds of land, namely, Osage orange and honey locust. For me they have proven impervious to dry weather and insects. The mulberry does well. My black locusts mostly died and are troubled by the borer. Any of the above varieties may be raised profitably on a small scale by our farmers. Plant on low, rich land if you have it, otherwise where the water will run onto the ground when it rains, 2,000 trees to the acre. Plow deep. Cultivate for three or four years. Mulch well. Keep your pruning-knife off. Eleven or more years from planting you can cut from 1,200 to 2,000 small posts, worth \$100 or more. Mulberry, black locust and catalpa have this advantage over other timbers, that saplings no larger than your ankle used for posts will not rot. Do not use staples. Saw notch in post opposite barbed wire; put short piece of smooth galvanized wire in notch; pull barbed wire against post; with pincers twist ends of small wire so as to hold barbed wire against post. Catalpas can only be grown successfully where moisture is close to surface or by constant cultivation. Lee's hybrid is best. Got my nursery stock from nursery in Nebraska, eleven or twelve years ago. Don't remember place. To keep rabbits from destroying forest trees, use this dope: One-half or two-thirds soft soap, with one-half or one-third coal tar. Make thin enough to work easily. Have a mitten made of two or three thicknesses of drilled cotton, let it come well up on the wrist, dip hand in mixture and rub on trees. I keep rabbits, mice, etc., from fruit trees thus: Take paper, tarred on one side; cut a piece large enough to go round the tree; wrap it round, tarred side out; tie with binding twine; leave on from year to year. This keeps 2 o'clock sun from killing trees in winter and enables sap to run more freely in summer.

J. J. JOHNSON.
Success, Russell Co., Kas.

Bishop's Witty Retort.

The bishop was very fond of a cigar, but the archdeacon detested smoking, and denounced it as unclerical. Perhaps modern taste may consider a cigar and a shovel hat, or a yard of clay and a silk apron, rather incongruous. Anyhow, the bishop usually retired to a secluded part of the Episcopal garden to enjoy his weed. Here he was detected one day by the vigilant archdeacon, who, surveying him from the terrace above, exclaimed: "Ah, bishop, so I have caught you burning incense to the devil!" The bishop expelled a great whiff of blue smoke and exclaimed in his deep, resonant voice: "But I didn't know he was so near!"

The Most Valuable National Scepter.

Russia possesses the most valuable national scepter in the world. It is three feet in length, is made of solid gold and ornamented with 268 diamonds, 360 rubies and 15 emeralds. The scepter, which forms part of the regalia, is handed to the Czar on his coronation as the emblem of sovereignty. At the coronation of the present Czar, which took place in Moscow cathedral, in May, 1896, the Metropolitan of the Russian church handed the scepter to the Czar with these words: "God-crowned Czar, and Grand Duke Michael Feodorovich, Autocrat of All the Russias, receive the scepter that the Lord gives you to govern the great dominion of Russia, and take care of it, for it is thy strength and thy power."

The Driver Thawed.

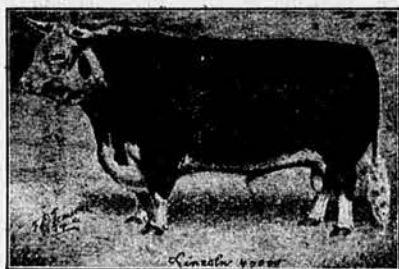
A delegate from the far west to a recent educational convention told an incident that happened some years ago when he was making a trip on a pioneer stage. All one-half the first day he sat beside the driver and endeavored to engage him in conversation. The driver was not to be engaged. He was not exactly surly, but he evidently didn't care to be talked to. The stage stopped for dinner at a little eating house, and when it rolled away again the driver seemed like another man. He talked, he told stories, he was the soul of affability. Later he explained the matter to the teacher. "I didn't take a shine to you nohow this morning," he said. "I thought you was one of these psalm-singing gospel fellows, and I ain't got no use for that kind. But when I seen you setting there and a-eating pie with a fork I changed my mind. I knowed right away you was a gambler."—New York Tribune.



ON THE BIAS.
That's the secret of the S/A Bias Girth Horse Blankets. The girth is on the bias—that means crossed. It works automatically. The blanket can't slip. If you pull one side, the other side keeps the blanket from sliding, and yet it doesn't bind the horse. He couldn't displace it if he rolled in it.

S/A Bias Girth
Horse Blankets are made in all styles—to fit any horse—to suit any purpose. Ask your dealer for S/A Bias Girth Blankets, and look for the trademark. A book on the subject sent free.

WM. AYRES & SONS, Philadelphia.



SPRING VALLEY HEREFORDS.

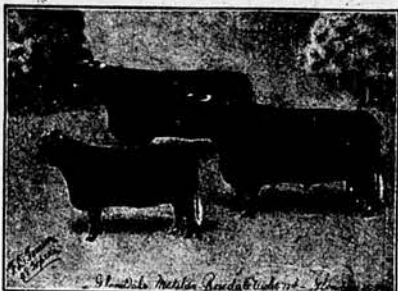
Lincoln 47085 by Beau Real and Klondyke 42001, at the head of the herd. Young stock of fine quality and extra breeding for sale. Personal inspection invited.

ALBERT DILLON, Hope, Kas.



CEDAR HILL FARM.

Seventy head richly-bred Short-horns. The leading families represented. Golden Knight 108086 and Baron Ury 2d 124970 in service. Twelve young bulls of serviceable age for sale. Also 100 head high-grade bulls, 100 high-grade heifers and fifty head yearling heifers, 100 well-bred roadster horses. Address C. W. TAYLOR, Pearl, Dickinson Co., Kas.



GLENDALE SHORT-HORNS, Ottawa, Kas.

Leading Scotch and Scotch-topped American families compose the herd, headed by the Cruickshank bulls, Glendon 119870, by Ambassador, dam Galanthus, and Scotland's Charm 127264, by Imp. Lavender Lad, dam by Imp. Baron Cruickshank. Young bulls for sale.

C. F. WOLF & SON, Proprietors.

ELDER LAWN HERD SHORT-HORNS.



THE Harris bred bull, **GALLANT KNIGHT 124466**, a son of Gallahad, out of 8th Linwood Golden Drop, heads herd. Females by the Cruickshank bulls, Imp. Thistle Top 83876, Earl of Gloster 74523, etc. Size, color, constitution and feeding qualities the standard. A few good cows for sale now, bred to Gallant Knight.

Address
T. K. TOMSON & SONS, DOVER, KANSAS.



SHORT-HORN CATTLE.

I have combined with my herd the Chambers Short horns and have the very best blood lines of the Bates and Cruickshank families. Herd headed by Baron Flower 114852 and Kirklevington Duke of Shannon Hill 126104. The Cruickshank Ambassador 110811 lately in service.

Best of shipping facilities on the A. T. & S. F. and two branches of Mo. Pac. Rys. Parties met by appointment.

B. W. GOWDY, Garnett, Kas.



O. K. FEED MILL.
Diamond Cut Steel Burrs.
Cheapest and Best feed mill on the market. Write for prices and circulars.

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We make Steel Windmills, Steel Towers and Feed Grinders and are selling them cheaper than the cheapest. Our productions are standards; are first-class in every respect and are sold on trial. Send us a postal and we will tell you all about them.

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Large inside burr revolves twice to sweep's one. Ordinary length sweep.

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Sold under an absolute guarantee to do double the amount of work of any other mill of same size or money refunded. Write for circulars and prices.

DAIN MFG. CO., Carrollton, Mo.



Ideal Double Geared Grinder
Grinds all kind of grain.

New Principle New Results

Double motion, immense capacity, easy draft, enclosed gear, runs in oil which absorbs friction and wear. Big advantage over all others. Ask for particulars.

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The Blue Valley Sweep Feed Mills

The Only Practical Mill for farmers' use. Made in two sizes. Power applied direct to grinding plates. No gears to wear, get out of order or increase the draft. The fastest grinding mill made. Grinds all kinds of grain and lasts a lifetime.


THE BLUE VALLEY MFG. CO., Manhattan, Kas.

PURE-BRED HEREFORDS
FOR SALE. THIRTY-FIVE HEAD OF BULLS AND HEIFERS.
They are extra good ones. Prices as low as any responsible breeder. Farm adjoins the city.

Address **H. L. LEIBFRIED, Emporia, Kas.**

VALLEY GROVE SHORT-HORNS.

THE SCOTCH BRED BULLS
Lord Mayor 112727 and Laird of Linwood 127149
HEAD OF THE HERD.



LORD MAYOR was by the Baron Victor bull Baron Lavender 2d, out of Imp. Lady of the Meadow and is one of the greatest breeding bulls of the age. Laird of Linwood was by Gallahad out of 11th Linwood Golden Drop. Lord Mayor heifers bred to Laird of Linwood for sale. Also bred Shetland ponies. Inspection invited. Correspondence solicited. A few young bulls sired by Lord Mayor for sale.

Address **T. P. BABST, PROP., DOVER, SHAWNEE CO., KAS.**

In the Dairy.

Conducted by D. H. OTIS, Assistant in Dairying, Kansas Experiment Station, Manhattan, Kas., to whom all correspondence with this department should be addressed.

HANDLING DAIRY PRODUCTS FROM THE WEIGH-OAN TO THE CHURN.

Paper prepared by A. Jensen, proprietor of the Manhattan creamery, Manhattan, Kas., and read before the Kansas State Dairy Association, November 18, 1898.

In our Western States there is at present a great change in progress, namely, the attempt of turning our former cattle-raising farmers into dairymen. A large percentage of our Kansas farmers have come from Eastern States, and more or less were raised on dairy farms, but since moving West have not kept up with the dairy industry, and in many instances have forgotten it altogether. But of late years, crop failure and consequently the family's support, have caused many farmers to turn their attention to ways of getting ready cash into their hands, and here creameries and cheese factories have proven to be the best medium, of which a great number are now in operation in our State. However, we must all admit that dairying in Kansas is only in its infancy, in a general way, and the drawback seems to lay with the inexperience of our farmers to select and care for dairy cows. I think the creamery manager has a great task to perform in this line, and to accomplish the most possible the creameryman should never lose sight of his patron's interest, even where the patron does not see his own profit. Dairy literature and discussion of dairy interests should be sent to the patron with the showing of the records of the best ones, also the importance of the proper care of milk and the loss to patron and creamery alike from sour and undesirable milk. The creamery manager should have his patrons' unquestionable confidence and always be ready to explain all questions asked by them.

The milk should be delivered early in the morning to the creamery and instantly weighed and sampled. The test jars should be shaken every day until no cream sticks to the sides of the bottle. The experiment of taking samples before weighing and after weighing, as well as from the top and surface and bottom of weigh can, was tried at my creamery by the Dairy department of the Agricultural College, but nothing was found in the favor of any certain method. I thoroughly stir the milk before taking my sample and have no complaint of the test to speak of. The same man weighs the milk at my creamery and he soon learns who has questionable milk from day to day. I give strict orders to reject all undesirable milk and never favor any patron, but take time to explain how impossible it is for me to make fine butter from bad milk, and with the patron try to find the cause for the milk's being off.

I guarantee to all my patrons 90 per cent. of sweet sterilized skim-milk in return for the whole milk; and one sour can of milk would curdle nearly the whole batch.

In looking over my record for rejected milk, I find that I returned sour cans of milk as follows:

Month.	Received pounds milk.	Returned sour cans.
April	91,000	23
May	117,000	24
June	153,400	47
July	153,400	31
August	130,000	18
September	82,500	6
October	75,000	9

This table shows that in the early part of the season, or before the warm weather sets in, I had comparatively more sour milk than during the hot summer months, and I can see no other reason for this than the strict rule I follow in not receiving bad milk, and the patrons soon find that they have to take better care of their milk or not make anything out of it.

It may also be of some interest to state at what temperature my milk came in during the summer months, and copying this from my daily records, it shows as follows:

Month.	Highest daily temp.	Lowest daily temp.	Average temp. for month.
June	80	70	78
July	80	70	75
August	80	69	74
September	80	61	71
October	75	46	58

This demonstrates clearly the necessity of the patrons using coolers and aerators, but it also shows that the warmer the weather the better care was taken of the milk.

After the milk is weighed and sampled, it is emptied into the receiving vat. It

would be a very good idea to have a screen over this vat to keep out flies, and the milk should also be strained through perforated tin and metal gauze before separated. It is quite important to separate the milk at the same temperature from day to day, mainly to have the cream the same for ripening. My favored temperature in winter is from 65° to 70°, and in summer I separate at the temperature I receive the milk. The separator should always be filled with water before starting and should have plenty of time to get full speed. I stop and clean my separator as soon as it shows signs of clogging; which generally I have to do for every 5,000 pounds of milk in summer and 10,000 pounds in winter.

Now comes the much-discussed Pasteurizing. I do not care to be a crank on this subject, but know what I am talking about. I can make a much better quality and more uniform butter by Pasteurizing than by the usual way. I have experimented with Pasteurized butter all summer, and in all instances have got better results. I have to-day offers of one-half cent more for Pasteurized butter than raw cream butter, and have it so arranged now that there is no extra expense attached to Pasteurizing my cream but the cleaning of the apparatus. I am not afraid to say it is the coming method. We cannot compete with our Danish or Swedish butter-makers in any market until we produce as good a quality as they do. Did you ever see American butter come within 2 cents of the Danish make on the same market? And just think what 2 cents for the season means. Pasteurizing insures uniform, clean-flavored butter. When fresh it appears rather flat and undesirable, but the flavor seems to appear in from one to two days, and keeps increasing for a long time. From the Pasteurizer the cream passes through a closed tin tube to the cream cooler, and the temperature is lowered to from 75° to 60°, as desired.

There are different methods in use for ripening cream. I have tried what I call quick and slow ripening with raw cream and quick ripening with Pasteurized cream only. I use Hansen lactic ferment as a starter, and have twice tried the Douglas culture. For raw cream, I use one part of starter to six of cream, and for Pasteurized cream I use one part of starter to nine of cream. I always add my starter about 11 o'clock in the forenoon, and make a practice of stirring the cream every thirty minutes until about 6 o'clock in the evening. In using the quick ripening process, I keep my cream at 75° or 60° for six hours after the starter is added, when I fill my ice-box around the cream vat with crushed ice and cold water and keep stirring it until I get the temperature down to 69°. By this time my day's work is done, with the exception of making one more trip to the creamery to stir the cream. In the morning the cream will stand at about 60°, when I cool it down for churning by putting clean crushed ice into the cream. Let me state that 70° is the danger point for cream; once or twice during the summer my cream got up to that temperature, when I thought it was all right, but I soon found my mistake. The cream curdled in a very short time, and besides making mottles in the butter, I lost six pounds on that day's churning. Nearly all the creamerymen who operate skimming stations have seen such cream after a hot day, when the cream is emptied at the factory and will not pass through the strainer with holes four inches in diameter.

Pasteurized cream I keep at 76° to 77° the first six hours, when I cool it to about 69° to 70°, and leave enough ice around the vat so as to find it at 59° in the morning. To speak of the slow ripening process, I leave my cream at 66° to 68° from the time the starter is added to 5 o'clock in the afternoon, when I put a small quantity of crushed ice in the water, so as to leave the cream at 60° to 65° in the morning, when it is cooled down immediately for churning. The slow ripening process is by far the most economical and labor-saving way, as it takes only one-third the ice that the quick process does, but which method gives the best result I am unable to say. I am a strong advocate of commercial starter; it always insures uniform flavored butter. I tried to make my own starter out of selected milk, but found that three batches out of every four failed. The starter should never be allowed to get over-ripe, as the curdled casein will not dissolve after it is put into the cream, but will stay in small lumps and show in the butter after it is made.

I use the Disbrow combined churn and worker in my creamery and use the following method: To churn as cool as possible gives the best body to the butter and makes it easier to handle afterwards.

My average churning temperature for the summer months was as follows:

Month.	Starting temp.	Stopping temp.	Mean taken in minutes.
May	46	56	45
June	42	53	50
July	42	54	50
August	42	54	52
September	43	56	51
October	46	52	54

I usually churn my butter to the size of wheat kernels, when the buttermilk is drawn off. I use two ways in washing my butter. If shipped any great distance, I use about half as much water as there was cream; the water I keep at 50° in summer. I revolve the churn twice at slow speed, leave it stand for two or three minutes, when I revolve it once more before letting out the water. In case the butter is used, say within ten days, I just sprinkle the butter with cold water and don't revolve the churn at all. This last method gives higher-flavored butter but it will not keep as long, there being some milky brine left.

When thoroughly drained, I distribute my salt as evenly as possible and revolve the churn eight to eleven revolutions with the rollers in motion; it is then left to drain for thirty minutes, while I attend to my tubs. I revolve the churn the second time eight to ten revolutions and let it drain from five to ten minutes, when I finish working it by eight more revolutions. I pack the butter immediately, and after getting the exact net weight, place it in the refrigerator.

No well-managed creamery can be without a refrigerator, where the temperature can be maintained at 50° or lower all the year round. I have an overhead ice system, the ice-box holding eight tons, and only have to fill it four or five times during the summer.

Artificial refrigeration seems to be favored by many creameries, but personally I have only little experience in that line. The testing of the milk is usually done twice during the month, and should be done by the most trustworthy person about the creamery, but better by the manager. I have certain days every month to do my testing, namely, the 1st and 15th of every month, from 1 p. m. until finished. All my patrons know my days of testing and have invitations to come and see how it is done, but during one whole year only three or four have attended.

No place should look more attractive and have neater and cleaner surroundings than our creameries. There should be no hog pens within one hundred and fifty yards of the creamery, unless a cement or stone floor is used which is kept clean. Open sewerage is very objectionable. The inside appearance should far exceed the outside in cleanliness. There should be no bad odors, no fly roosts, no grease spots, no dirty utensils, no trash, no shiny, dirty butter-maker to leave finger and knee impressions about the creamery. All apparatus and utensils should be cleaned every day and the floors scrubbed. I have screens on all my windows and doors, and whenever the season allows it, I keep free air passage through my creamery. I have the front platform, where all my weighing is done, screened off to keep out flies, and do not allow any one to walk into my cream and churn room without permission. I keep signs over the doors prohibiting smoking and loafing. I require my butter-maker not to smoke or chew as long as in my employ, and would not keep any man that would not keep himself and my plant clean. I have a bath tub in my creamery, with hot and cold water, to the free disposal of my help.

All creameries should be equipped with the best apparatus obtainable, for no butter-maker can work to any advantage with defective machinery, and on the other hand, no up-to-date machinery can produce good work with incompetent butter-makers. I think there is room for many and great improvements among the creameries of Kansas. It has long been said that we have the best climate and cheapest feed in the world, but we are far from reaching the standard on butter. It must be admitted that our farmers as a rule do not have sufficient education in dairy matters to make dairying profitable, and I hope all creamerymen of Kansas will unite in the effort of getting sufficient appropriation

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from our next Legislature to erect and equip a modern dairy building at the Agricultural College of Kansas, for the purpose of educating all dairy interested people of Kansas and to provide for a sufficient number of cows to carry on extended experiments for the benefit of our creamery patrons.

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But no matter how well formed an animal we may have, or how good that animal may be individually, we may ruin her as a milch cow if we do not give her proper surroundings. We are told that the primitive horse went down into the lower Rhine, where food was plenty and conditions favorable, and we have developed the large, heavy Flanders horse. The primitive horse went down into western Asia, where the climate was dry, and food less plentiful, and we have a different type of a horse, namely, the running and spirited Arabian. It has been under conditions similar to these, but perhaps more intensified, that our different breeds of live stock have been developed. Selection, breeding and individuality has much to do with the development of a breed, but the value of all these factors may be greatly reduced, or even annulled, by the failure on the part of the breeder to furnish those conditions of surroundings as to feed, shelter and care that will tend to enhance those qualities for which the animal was selected. We cannot expect to succeed with pure-bred, or even well-bred animals, under scrub conditions.

D. H. O.

Dairy Institutes.

The following persons of the Kansas Experiment Station will take part in dairy institutes:

Prof. H. M. Cottrell—Meriden, November 28; Ozawkie, November 29; McLouth, November 30; Boyle, December 1; Valley Falls, December 2.

Dr. Paul Fischer—Russell, December 13.

F. C. Burtis—Nortonville, December 12; Lawrence, December 13; Belvoir, December 14; Paola, December 15 and 16; Mound City, December 16.

D. H. Otis—Narka, November 28; Scandia, November 29; Smith Center, November 30; Phillipsburg, December 1; Dresden, December 2; Colby, December 3.

GENERAL INSTITUTES.

Miss Minnie Stoner and Prof. H. M. Cottrell, of the State Agricultural College, attend the following general institutes: Overbrook, December 13; Lyndon, December 15; Osage City, December 16; Admire, December 17.

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Breeding Bees for Improvement.

One would naturally suppose that there is but little, if any, difference in bees, and that one hive of bees was just as good as another. More particularly would this supposition exist when the bees are of the same variety or race. While it is true that certain races of bees, as a whole, are much superior than other races, yet it is also a fact that some colonies of any race are far superior to other colonies. As it is now conceded that the Italian bees are superior to all other races as a whole, it is also a fact that we not only find some colonies of this variety in any apiary far superior to others of the same variety, but we can find whole apiaries considerably in advance of others in usefulness.

The expert apiarist understands this fully and knows it is brought about by careful breeding. The breeder of fine stock of any kind selects his best specimens to breed from, and therefore improves his herd. Now, the apiarist is not behind in the least in this respect, but selects his best stock in breeding and makes as rapid strides in this direction as anybody.

The principal points in breeding bees centers upon the queen. The apiarist has under his control the breeding of queens and can rear them from any other queen he has in his apiary, but he cannot control her matings with the male bee, as this is beyond his reach. As it is well known that the queen is the only female bee in the hive, and lays all the eggs that produce each and every bee therein, to change the entire stock of the hive it is only necessary to introduce a new queen to the colony.

Two colonies of bees having the same traits of character, markings, etc., cannot be found, but all hatched from eggs of the same queen will have peculiarities of their own as a colony not found in another. For an example, some colonies are more industrious and will store more money than others, even with a less number of bees. Some are cross, and some gentle; some are robbers and some good citizens; some incline to swarm, others do not under the same conditions; some breed more rapidly and become very strong in numbers, while others do not attain great strength; some are good comb honey producers, while others are better at filling the extractor. These are but a few of the numerous different characteristics found in bees, hence the breeder may rapidly develop and attain to a marked degree—in a short time, too—any of these points sought for.

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MARKET REPORTS.

Kansas City Live Stock. Kansas City, Nov. 21.—Cattle—Receipts since Saturday, 7,732; calves, 140; shipped Saturday, 3,216 cattle, 465 calves. The market was slow, but generally steady. The following are representative sales:

Table with columns: No., Ave. Price, No., Ave. Price. Rows include DRESSED BEEF AND SHIPPING STEERS, WESTERN STEERS, NATIVE HEIFERS, NATIVE COWS, NATIVE FEEDERS, NATIVE STOCKERS.

Hogs—Receipts since Saturday, 8,090; shipped Saturday, none. The market was steady to 2 1/4 higher. The following are representative sales:

Table with columns: No., Price, No., Price. Rows include various hogs and sheep.

Sheep—Receipts since Saturday, 4,175; shipped Saturday, 1,918. The market was steady to strong. The following are representative sales:

Table with columns: No., Price, No., Price. Rows include various sheep.

Chicago Live Stock. Chicago, Nov. 21.—Cattle—Receipts, 15,500; market weak to 10c lower; beefs, \$3.80@5.70; cows and heifers, \$1.75@4.60; Texas steers, \$2.85@4.15; westerns, \$3.50@4.40; stockers and feeders, \$2.90@4.40.

Hogs—Receipts, 38,000; market slow; prices steady to strong; light, \$3.15@3.47 1/2; mixed, \$3.20@3.55; heavy, \$3.20@3.55; rough, \$3.20@3.30; yorkers, \$3.40@3.45.

Sheep—Receipts, 10,000; market strong; natives \$2.50@4.50; westerns, \$2.80@4.35; lambs, \$3.50@5.40.

St. Louis Live Stock. St. Louis, Nov. 21.—Cattle—Receipts, 3,500; market easier for natives, with Texans steady; native shipping steers, \$4.10@5.20; light and dressed beef and butcher steers, \$3.00@5.00; stockers and feeders, \$2.90@4.40; cows and heifers, \$2.00@4.50; Texas and Indian steers, \$2.70@3.90; cows and heifers, \$2.15@3.35.

Hogs—Receipts, 5,500; market steady; yorkers, \$3.20@3.35; packers, \$3.35@3.45; butchers, \$3.45@3.55.

Sheep—Receipts, 3,000; market steady; native muttons, \$3.75@4.25; lambs, \$4.50@5.75.

Chicago Grain and Provisions. Nov. 21. Opened High'st Low'st Closing

Table with columns: Nov. 21, Opened, High'st, Low'st, Closing. Rows include Wheat, Corn, Oats, Pork, Lard, Ribs.

Kansas City Grain. Kansas City, Nov. 21.—Wheat—Receipts here to-day were 357 cars; a week ago, 377 cars; a year ago, 285 cars. Sales by sample on track: Hard, No. 1, nominally 62 1/2c; No. 2 hard, 62@62 1/2c; No. 3 hard, 58@57 1/2c; No. 4 hard, 54@53c; rejected hard, 54@55 1/2c. Soft, No. 2, nominally 66@67c; No. 3 red, nominally 61@60 1/2c; No. 4 red, 55@59c. Spring, No. 2, 57c.

Corn—Receipts here to-day were 43 cars; a week ago, 37 cars; a year ago, 145 cars. Sales by sample on track: Mixed, No. 2, 30c; No. 3 mixed, 29 1/2c; No. 4 mixed, nominally 29c; no grade, nominally, 23c. White, No. 2, 29 1/2c; No. 3 white, 29c; No. 4 white, nominally 28 1/2c.

Oats—Receipts here to-day were 13 cars; a week ago, 12 cars; a year ago, 17 cars. Sales by sample on track: Mixed, No. 2, 25 1/2c; No. 3 mixed, nominally 24 1/2@25c; No. 4 mixed, nominally, 21c. White, No. 2, 26 1/2@28 1/2c; No. 3 white, 2@26 1/2c.

Rye—No. 2, 48@48 1/2c; No. 3, nominally 47@47 1/2c; No. 4, nominally, 46c.

Hay—Receipts here to-day were 65 cars; a week ago, 66 cars; a year ago, 88 cars. Quotations are: Choice prairie, \$7.00; No. 1, \$6.25@6.75. Timothy, choice, \$7.00. Clover, \$4.00@5.50. Alfalfa, \$7.00.

Kansas City Produce. Kansas City, Nov. 21.—Eggs—Strictly fresh, 18c per doz.

Butter—Extra fancy separator, 20c; firsts, 18c; seconds, 15c; dairy, fancy, 15c; country roll, 11 1/2@13c; store packed, 11c; packing stock, 9@11c.

Poultry—Hens, 5 1/2c; broilers, 6 1/2c; medium

spring, 50c; roosters, old, 15c each; young roosters, 20c; ducks, 60c; geese, 60c; turkeys, 80c; pigeons, 50c per doz. Apples—Home grown, 12 1/2@3.00 per bbl. Vegetables—Navy beans, \$1.85 per bu. Lima beans, 4 1/2c per lb. Onions, red globe, 45@55c per bu.; white globe, \$1.00 per bu. Cabbage, home grown, 40@50c per doz. Celery, 30@45c per doz. Pumpkins, \$1.00 per doz. Squash, 75c per doz. Turnips, home grown, 15@25c per bu. Potatoes—Home grown, 25c per bu.

Special Want Column.

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

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FOR SALE—A limited number of the last edition of Prof. J. C. H. Swan's great book, "The Future of the Past." Price \$1.00; postage paid until the supply is exhausted. Address Kansas Farmer Co., Topeka, Kas.

BARGAINS in Duroc-Jersey males. Five to eight months old. Two yearling males, cannot use longer. All recorded or eligible to record. Address M. H. Albery, Cherokee, Kas.

FOR SALE—Five yearling boars. Also fine line of spring boars and gilts by Chief Editor 17985, Tecumseh Short-Stop 14750 and High Hadley 20220. Choice blood. Call or write. E. T. Warner, proprietor Franklin County Herd Poland-China Swine, Princeton, Kas.

FOR SALE—Pure-bred Polands and Berkshires from weanlings up, at very low prices. O. P. Udegaff, North Topeka, Kas.

POLAND-CHINA PIGS—Three dollars to five dollars each, eligible to record and choice breeding; no feed and must sell. M. C. Hemenway, Hope, Kas.

WANTED, AGENTS—We want an agent in every county in Kansas. Those acquainted with the farmers and threshers preferred. Liberal commission. For particulars, address The Victor Oil Co., Cleveland, Ohio.

BLOCKS OF THREE—Two new subscriptions for one year free to any old subscriber who sends two new subscriptions and \$2 in one order. Kansas Farmer Co., Topeka, Kas.

ALFALFA SEED WANTED by F. Farteldes & Co. Lawrence, Kas. Correspond with them.

SHORT-HORN BULLS FOR SALE—Forty-six cows and 8 heifers, Cruickshank, Young Marys, Rose of Sharon and others; an extra lot. Nearly all were sired by that grand Cruickshank, Royal Prince 100646. Six bulls ready for service, sired by Young Mary bull, Glendon 118371. Parties met by appointment. Theodore Saxon, 222 West Eighth St., Topeka, Kas.

WE WANT RELIABLE MEN in every locality at once to sell to farmers, threshermen and mills our high-grade lubricating oils, greases and specialties. Makes an excellent side line for farm implement dealers. We are manufacturers, and with our instructions an inexperienced man can become an expert oil salesman. Write at once for terms. Malone Oil Company, Cleveland, Ohio.

DAIRY WAGON FOR SALE—Good two-horse covered dairy wagon, custom made. A. E. Jones, Topeka, Kas.

TO STOCKMEN—Feed Mills and Corn-Shellers used as samples and at fair, special bargains. Write or see us. Sandwich Mfg. Co., 1235 Union avenue, Kansas City, Mo.

RICHLAND HERD—I want to close out the entire herd of Poland-China sows and herd boars, including Klever's 1st Model 18245 S., What's Wanted Jr. 2d 18534, and B's Black U. S. 19957. The breeding and quality of these boars ought to suit anybody. Come and inspect, the only way to get suited. F. W. Baker, Council Grove, Morris Co., Ka.

FOR SALE—My Poland-China herd boar, Gold Bug 18098. Also some choice young boars and sows. Will sell for the next fifteen days at almost pork prices. M. C. Vansell, Muscotah, Kas.

FOR SALE—Extra fine young Red Polled bull calf, \$50, if taken soon. Wilkie Blair, Beulah, Crawford Co., Kas.

FOR SALE—Improved farm of 160 acres with irrigation plant. Unsettled estate. Box 662, Abilene, Kas.

FOR SALE—Grade Shropshire ram lambs, also fifty ewe lambs, at \$5, and 160 ewes at \$6 per head. Address E. W. Melville, Eudora, Kas.

MACLEAN FARMERS' SUPPLY CO., Kansas City, Mo. (Between Union Depot and Stock Yards.) Sell machinery and other supplies to farmers direct, saving the consumer middlemen's profits. Send now for 1898 Spring Price List.

J. G. Peppard MILLET CANE SEEDS. 1400-2 Union Avenue, GLOVERS TIMOTHY GRASS SEEDS. KANSAS CITY, MO.

ALFALFA SEED FOR FALL SOWING. McBeth & Kinnison, Garden City, Kansas, Wholesale and Retail Seedsmen. Send for Our Free Manual on the King of Forage Plants.

BERKSHIRES—Choice bred sows by Imported Lord B Comely, and boars ready for service. Wm. B. Sutton & Son, Kas.

FOR SALE OR TRADE—A Belgian stallion and Arabian jack. Write me. H. Harbaugh, Agenda, Republic Co., Kas.

SHORT-HORN BULLS—Cruickshank-topped, for sale. Choice animals of special breeding. Address Peter Sim, Wakarusa, Shawnee Co., Kas.

BERKSHIRE-ANGUS BULLS—Three individuals of serviceable ages; registered. Wm. B. Sutton & Son, Russell, Kas.

FOR SALE—Thirteen fine Poland-China boars. Call on or address H. W. McAfee, Topeka, Kas. (Farm three miles west of Kansas avenue.)

SINGLE COMB PURE WHITE LEGHORN COCKS—Sirels for sale at \$1 each. A. F. Huntley, Paxico, Kas.

WRITE TO ALEX RICHTER—Hollywood, Kas how to sub-irrigate a garden, etc., and cost of same. Send him the size or dimensions of your garden, and he will give full information.

COTTSWOLD RAMS FOR SALE—W. Guy McCandless, Cottonwood Falls, Kas.

WANTED TO EXCHANGE—The pure-bred Cruickshank bull, My Lord 11852, bred by Col. Harris; sire Imp. Spartan Hero 7782; dam Imp Lady of the Meadow (Vol. 30, p. 615), for a pure-bred Cruickshank bull—can't use him any longer in my herd. H. W. McAfee, Topeka, Kas.

BLOSSOM HOUSE—Opposite Union depot, Kansas City, Mo., is the best place for the money, for meals or clean and comfortable lodging, when in Kansas City. We always stop at the Blossom and get our money's worth.

WE MAKE A GOOD FARMER'S SPRING WAGON, two hay-backs and let-down end-gate, for \$55. Warranted. We will ship on approval to responsible parties. Kinley & Lannan, 424-426 Jackson street, Topeka, Kas.

MINNESOTA BURBANK POTATOES, PER BUSH—el, 55 cents; Michigan cabbage, per cwt., \$1; Michigan onions, per bushel, 50 cents; native Early Ohio potatoes, per bushel, 40 cents; native sweet potatoes, per bushel, 35 cents. For sale by Cope & Co., 117 Kansas Ave., Topeka, Kas. Country produce taken in exchange. Write us.

When writing advertisers please mention Kansas Farmer.

THE STRAY LIST.

FOR WEEK ENDING OCTOBER 27, 1898. Allen County—C. A. Fronk, Clerk.

BULL—Taken up by David Catton, in Cottage Grove tp., one red bull, 2 years old, with white on belly and brush of tail, no marks except it be a small notch out of upper side of right ear near the point. Coffey County—Dan K. Swearingen, Clerk.

COW—Taken up by Bowman Bros., in Lincoln tp. (P. O. Lebo), September 8, 1898, one red cow, 3 years old, dehorned, hole in each ear, slit out, white face, no brands. CALVES—By same, one red spring heifer calf, with white face, and one black spring heifer calf. Sumner County—W. E. Wood, Clerk.

HORSE—Taken up by Abe Muma, in South Haven tp., October 4, 1898, one bay horse, left fore foot white out; valued at \$18.

FOR WEEK ENDING NOVEMBER 3, 1898. Montgomery County—D. B. James, Clerk.

PONY—Taken up by John Dunham, in Caney tp. (P. O. Havana), one light bay pony, 4 years old, 5 feet 2 inches high, left hind foot and left fore foot white to pastern joint.

FOR WEEK ENDING NOVEMBER 17, 1898. Wyandotte County—Leonard Daniels, Clerk.

COW—Taken up by John Saxe, in Quindaro tp. (P. O. White Church), October 19, 1898, one black, fawn and white cow, dehorned, 7 years old; valued at \$10. Cowley County—S. J. Near, Clerk.

STEER—Taken up by W. C. Lunneison, in Otter tp. (P. O. Cedar Vale), October 22, 1898, one three-year-old steer, pale red with white spots, (E) on right side; valued at \$30.

FOR WEEK ENDING NOVEMBER 24, 1898. Osborne County—F. A. Dawley, Clerk.

HEIFER—Taken up by Hannah S. Applegate, in Jackson tp. (P. O. Cheyenne), October 27, 1898, one dark red heifer (yearling), no marks or brands; valued at \$15. Cherokee County—S. W. Swinney, Clerk.

MARE—Taken up by L. A. Johnson, in Spring Valley tp., October 21, 1898, one dark bay mare, fourteen hands high, star in forehead, scar on left fetlock, branded T on left shoulder, weight 750 pounds.

THE KANSAS CITY STOCK YARDS

—ARE THE— FINEST EQUIPPED, MOST MODERN IN CONSTRUCTION AND AFFORD THE BEST FACILITIES For the handling of Live Stock of any in the World.

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Table with columns: Oattle and Calves, Hogs, Sheep. Rows include Official Receipts for 1897, Sold in Kansas City 1897.

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FREE \$50.00 FREE

To the person sending us the best name for our new tooth powder. Each person sending us a name must also send 25 cents for a sample box of the powder. This offer is open till January 1, 1899. After the \$50 is awarded each name will be notified of the name selected and the name of the party who gets the \$50. Address THE BELLEFONTE CO., P. O. Box 676, Louisville, Ky.

Administrators' Sale of Real Estate.

Pursuant to the will of the late David R. Youngs, I offer at private sale all the real estate belonging to his estate, as follows: 1. The "Home Place," w. hf. of nw. qr. sec. 26, and e. hf. of ne. qr. sec. 27, t. 12, r. 15, 160 acres. Contains good house, barn and sheds, outhouses, corrals, wells and cisterns, wagon scales, three orchards, and all appurtenances constituting a first-class farm. About 130 acres plow land, 12 acres clover, 5 acres alfalfa, remainder pasture land, timber land and creek, all well and conveniently fenced. Price, \$3,000. Terms, one-third cash, one-third in two years and balance on long time. Interest on deferred payments 7 per cent. per annum, secured by mortgage. 2. Also the e. hf. of nw. qr. of said sec. 26, 80 acres. About 40 acres first-class plow land and about 40 acres hay land. Well and separately fenced. Price, \$3,200. Terms same as above. 3. Also about 101 acres of pasture land in one body, well fenced and well watered, being nw. qr. of ne. qr. frl. and sw. qr. of ne. qr. frl. of said sec. 27, and about 24 acres off the east side of the nw. qr. frl. of said sec. 27. Price, \$20 per acre. Terms same as above. 4. Also about 101 acres of good prairie hay land, being w. hf. of nw. qr. frl. of said sec. 27, and about 34 acres off the west side of the e. hf. of nw. qr. frl. of said sec. 27. Price, \$25 per acre. Terms same as above. 5. All of the above described land lying contiguous and constituting one large and complete farm and situated about seven miles southwest of Topeka near the Burlington road, will be sold together for \$15,000, on the same terms already stated. 6. Also 42 acres in se. qr. of sec. 9, t. 12, r. 15, near Six Mile creek. Mostly first-class plow land; well fenced. Small house and some other improvements. Price, \$1,250. Terms same as above. For further information write or call on the undersigned at his office, Bank of Topeka building, Topeka, Kas. CHAS. F. SPENCER, Administrator, with will annexed, of said estate.

Publication Notice.

Case No. 19727. In District Court in and for the county of Shawnee, State of Kansas. W. H. Wilson, vs. Iro L. Wilson. To the above named defendant, Iro L. Wilson: You are hereby notified that the plaintiff, W. H. Wilson, has, on the 4th day of November, 1898, filed his petition in the District court of Shawnee county, State of Kansas, against you, praying for a decree of divorce from you, and unless you answer or demur by the 21st day of December, 1898, his petition will be taken as true and judgment rendered accordingly. THOMAS ARCHER, Plaintiff's Attorney. Attest: E. M. COCKRELL, Clerk District Court.

BED-WETTING CURED. Sample FREE. Dr. F. E. May, Bloomington, Ill.

The Poultry Yard

Conducted by C. B. TUTTLE, Excelsior Farm, Topeka, Kas., to whom all inquiries should be addressed. We cordially invite our readers to consult us on any point pertaining to the poultry industry on which they may desire fuller information, especially as to the diseases and their symptoms which poultry is heir to, and thus assist in making this one of the most interesting and beneficial departments of the Kansas Farmer. All replies through this column are free. In writing be as explicit as possible, and if in regard to diseases, give symptoms in full, treatment, if any, to date, manner of caring for the flock, etc. Full name and postoffice address must be given in each instance to secure recognition.

KANSAS STATE POULTRY ASSOCIATION.
President, A. M. Story, Manhattan.
Secretary, J. W. F. Hughes, Topeka.

Poultry Show—At Topeka, January 9 to 14, 1899. C. H. Rhodes, Judge.

CLEANLINESS IN FEEDING FOWLS.

Every point, however small, in the various details of poultry keeping, must be strictly attended to if the undertaking is to be a success. Many failures may be traced directly to the failure to attend to the small things. In fact, the entire business of poultry raising is largely made up of a constant round of small things, which must be attended to, and promptly, if the greatest measure of success is to be attained.

True, there is such a thing as partial success, and many are satisfied with this; but we wish to inspire all Kansas Farmer readers with the desire not to be content till they have reached the highest profitable point.

It is not intended to induce a greedy or selfish spirit, but rather a determination to conquer all difficulties in the way of making poultry keeping a real profitable business.

As has been said, it is sometimes the omission of small things either ignorantly or intentionally which causes many of the failures as to profit. One of these is cleanliness, which many think only of secondary consideration, but which has often been found, when neglected, to produce a scarcity of eggs, disease and death. We believe where fowls are kept there should be constant efforts to have every place and everything in the cleanest and most perfect state. It may entail extra trouble, but there will be sufficient reward.

We have read somewhere (can't recall the magazine at present) of a dairy farm on the plains of a Swiss mountain where cow barns were so sweet and clean that the owners used part of them for sitting rooms in the winter when the cold was intense, and a visitor on being told about it was horrified, but later was obliged to confess after seeing it that any one might live there.

It is not intended to ask Kansas Farmer readers to make sitting-rooms out of their hen houses, but mention is made of the above to show what can be done by constant attention and care. We firmly believe that if poultry-keepers were more careful about all the surroundings of their flocks, their profits would be increased.

But it is especially in reference to cleanliness in feeding to which attention is called at present, as it is a point seldom considered. Most people throw the food on the ground without any thought as to whether it is clean or not. Many use feeding troughs, etc., but forget that the fowls often drag the food to the ground. Any place where fowls are constantly fed must get soaked with their excrement, and if they have access to the same place all day they will often return to look for a stray bit and scratch it over often in order to get a morsel. This must result in their droppings being trampled into the surface so that the food coming in contact with it must be rendered impure and if not fatally or unhealthily injurious, must at least be innutritious, and so must ultimately produce unprofitable results. It is an undisputed fact that many cases of disease have arisen from this cause, ending in some in death, and the owners wonder why their fowls die, and write to some poultry editor, describing everything but the main thing.

On looking over the different writings on this subject at our command, we find the following, from a foreign paper, which seems to explain what we were trying to do, in a better way, and it gives us satisfaction to learn that they have the same ideas on this point as we have. Note their last paragraph. It conveys everything:

"It is an old proverb, still true, that 'Necessity is the mother of invention,' and thus the writer conceived the idea of having a separate place—or compartment, we will call it—kept exclusively for feeding purposes, which, as the fowls were only allowed into it at feeding time, could be kept scrupulously clean. This place need not be large, and may be a corner of the shed, or any other convenient spot. In the center there should be a square railed off with wooden laths,

or, better still, iron bars, inside which the troughs with the food are placed, and through the bars the fowls eat. The size of this should correspond with the size of the compartments, allowing sufficient room for all the fowls to congregate round the four sides of the railed spot. This prevents one from beating the other, and each gets a chance of eating. The compartment should have a cement floor, which will easily be cleaned and washed; or, if a wooden one, it should be covered with a little clean ashes or sand each time the fowls are fed, and this can be easily swept away. When they have had enough they should all be turned out, and the place thoroughly cleaned for the next feed. Any food left should be taken away, and if cooked or soft food it should be kept from turning sour by being left in a cool place, and it can then be mixed with the next day's feed. But if notice is taken of what is eaten more need not be prepared, as food left over is never relished so much as that freshly made each time."

We do not remember of having seen this idea suggested by any poultry writer before, but, we believe, if it were more widely known and adopted, the health and appearance of the fowls would be greatly improved. Especially would those who exhibit at our shows find it of great benefit, as nothing tells upon the bright,

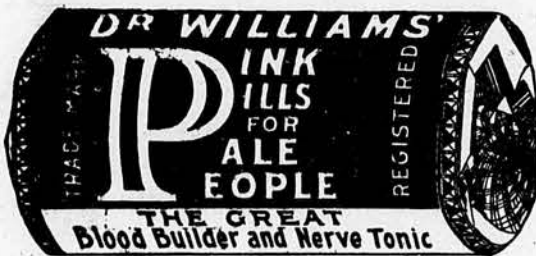
How to Get Strong

A system which has become run down by the trying weather of the past summer is not in a condition to meet the severe winter of this climate and will easily fall a prey to disease unless a proper tonic is used.

Dr. Williams' Pink Pills for Pale People are the best medicine in the world for building up and strengthening an enervated system.

Do not confuse these pills with ordinary purgative pills. They do NOT act on the bowels, thereby further weakening the body. They build up the blood and strengthen the nerves.

Major A. C. Bishop, of 715 Third ave., Detroit, Mich., is a well known civil engineer. He says: "When I had my last spell of sickness and came out of the hospital I was a sorry sight. I could not regain my strength, and could not walk over a block for several weeks. I noticed some articles in the newspapers regarding Dr. Williams' Pink Pills for Pale People, which convinced me that they were worth trying and I bought two boxes. I did not take them for my complexion but for strength. After using them I felt better, and know they did me worlds of good. I am pleased to recommend them to invalids who need a tonic or to build up a shattered constitution."—*Detroit Free Press.*



The great success of Dr. Williams' Pink Pills for Pale People has led to many attempts at imitation and substitution. The genuine are always sold in packages like this, the wrapper being printed in red ink on white paper. At all druggists or direct from the Dr. Williams Medicine Co., Schenectady, N.Y., 50 cents per box.

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.**
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If you want to know how others do this, send for our Catalogue and Poultry Guide. It tells all about the poultry business and about the **CYPHERS INCUBATOR** which embodies all the good points of other machines and the faults of none. Sent freight paid to every buyer. Catalogue 10c. Circulars free. The Cyphers Incubator Co., Box 84, Wayland, N.Y.

JUST AS NATURAL as the old hen and a good deal more reliable. Doesn't break its eggs or make its chicks lousy. Doesn't stay off the nest and allow the eggs to chill but hatches every egg that can be hatched.
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is absolutely perfect as to incubator essentials—proper application and distribution of heat and moisture, regulation and ventilation. For 50 to 350 eggs. **WE PAY FREIGHT ANYWHERE** in the U.S. Handsome catalog free. Petaluma Incubator Co., Box 80, Petaluma, Cal.

HATCH CHICKENS BY STEAM—with the simple, perfect, self-regulating **EXCELSIOR INCUBATOR**. Thousands in successful operation. Lowest priced 1st-class hatcher made. **GEO. H. STAHL,** 114 to 122 S. 6th St., Quincy, Ill.

JUST A HAMMER
That's the only tool necessary to build the **CHANDLER FENCE**. You save all the money necessary to buy an expensive machine and have a much better fence in the end. It's in the lock. Fits any kind of wire, holds absolutely without twisting, straining or breaking the wire. Makes the strongest, nicest and cheapest farm fence known. **WE WANT AGENTS** in every locality. Exclusive territory to the right men. Write at once for terms and territory. Tomorrow may be too late to get territory you want. Sample and catalog free. **CHANDLER FENCE CO.,** 11 S. Howard St., Baltimore, Md. When writing advertisers please mention Kansas Farmer.

WE CAN SUIT YOU IN PRICE AND WE GUARANTEE TO PLEASE YOU IN QUALITY. What more could we do? Our catalogue tells all, and is devoted largely to practical matters pertaining to poultry raising. Has 148 pages; mailed for any address for 6c. No wild and woolly statements, try outfits, nor prize package lots to offer. Fair treatment, prompt service and full value are what we try to give our customers.
HIGH-GRADE INCUBATORS
DES MOINES INCUBATOR CO., Box 83, Des Moines, Iowa.

sprightly look, so necessary for successful competition at shows, as good feeding.

The habit of throwing soft food broadcast over the ground, with the idea that it is necessary for fowls to pick up gravel and grass with it, is a pernicious one, at best. When they are eating the food supplied to them they will eat nothing else; and if they have access to grit and green food, which they should have, they will partake of it at other times when they want it; but let their regular meals be supplied to them in as clean a way as possible, and the method we have suggested will be found among the best, if not the best, unless special arrangements are made for feeding in the houses as shown in the plans of house, September 22, last.

Of course, in feeding grain it is different, as that will not be so likely to become soiled by coming in contact with the ground, and should be scattered as much as possible to avoid crowding, and to induce exercise; and to compel the latter, always scatter the grain in several inches of litter, such as cut straw, etc., or rake it into loose, mellow soil. Even if covered two or three inches deep the fowls will find every grain, and be the better for the exercise.

Poultry-Raising as a Business.

In all occupations it is the strict observance of business principles that result in success. Raising poultry is no exception to this rule, and those who have and are making the business a decided success are but receiving the reward that follows the faithful application of strictly business methods. This so-called "luck," good or bad, is merely the effect of proper or improper methods. It is a matter of wonder that men of intelligence, who know perfectly well that certain things are necessary to observe, will half observe or carry them out, and then, when the natural results of cause and effect follow, lay the poor success on "luck." "Luck" is thus made an excuse for all manner of carelessness, shiftlessness, incompetency, laziness and sheer ignorance.

Success in poultry culture is no haphazard affair but is secured only by regular methods, and the closer the application and more careful and earnest, the greater becomes the success. There are some men who can handle a large flock with success. There are others that succeed well with but few, but make a sad failure when they try large flocks. A well-known fancier has said there are few "thousand-hen men."

One reason why many fail to meet with success when they increase their flocks is that they fail to increase their accommodations in proportion to the increase in their flock; they fail to recognize the fact that large flocks are difficult to feed so that each individual may secure its allotted share; the various ailments have to be guarded against where large flocks are kept that are comparatively unknown among moderate-sized flocks. The man who has attained success with a fair-sized flock should be very cautious how he increases it, expecting thereby to increase his profits. He should make a careful note of the facts that have resulted in securing profits.

A good way to increase the flock is to do it on the colony plan. After you know how to care for, say, fifty hens, then start another yard of fifty hens. Then you will about double the number of hens with not quite twice the amount of labor, and you should have twice the amount of profit. This should be followed up until you can increase by another colony of fifty hens. By method you will be able to care for 500 hens and do it as successfully as you did with the first fifty.

There are men who raise poultry by the thousands, and with a percentage of loss not much greater than those who raise but a few. Their success is due to their personal attention and the strict observance of proper feeding, good houses, sanitary conditions; in fact, the carrying out of all little things in careful detail that experience has taught them is necessary. There are men who become infatuated with the poultry business and imagine that because they have the proper pocketbook backing to start in on a large scale they will be successful. Experience is a wise but often a costly teacher, but in poultry keeping experience properly followed will lead the follower on to success, and it is the only way by which you can reach that goal.

Remember this, that it is the little things that makes the success good or bad on the poultry farm.—Indiana Farmer.

POULTRY SUPPLIES.

The Peerless brand of Crushed Oyster Shells, Bone Mills, Tarred Roofing, poultry foods and remedies, Poultry Netting, etc., etc. Write for price list to T. Lee Adams, 417 Walnut street, Kansas City, Mo.

\$100 Reward

for any case of colic, curb, splints, contracted cord, and callous of all kinds that



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will not cure. For sale everywhere. Send for pamphlets.

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SAVE FEED

by supplying your cattle and hogs with warm water. Feed is just so much fuel to the animal economy. It takes lots of extra feed to take the chill off of the cold water animals drink.

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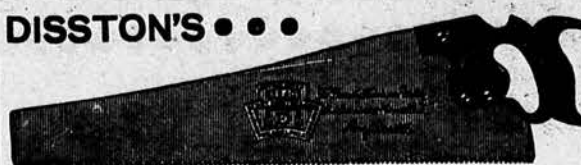


excels in the following points: Heavy galvanized steel sides, cast iron top and bottom—base cast to sides, double riveted and asbestos packed, perfect draft and ashes can be removed without disturbing the fire and without removing the fire pot. Burns soft coal, wood or coals, and takes but a small amount of fuel. We make also the famous

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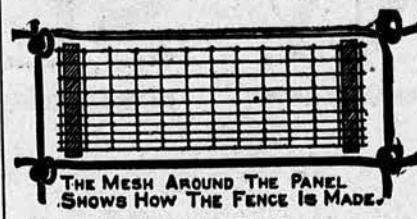
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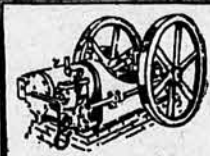
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TO BE HELD AT KANSAS CITY STOCK YARDS, KANSAS CITY, MO.,
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100 HEAD OF BULLS AND HEIFERS

of the Highest Quality and Most Fashionable Breeding.

The sale will include all of my Omaha Show Herd excepting my imported breeding bull, Keep On.

In 1899 I expect to show only a calf herd, as I will have about sixty calves sired by Wild Tom and the bulls that I imported last year, out of which I shall make a selection to show as a young herd.

There will be sold a son of Beau Real, 3 years old (a half brother of Wild Tom), and at least four young Beau Real cows, including Beau Real's Maid, the well-known show cow. Beau Real died on my farm, and I am the only breeder that can offer any of his younger get. Included in the sale will be Diana, the yearling heifer, winner of first at five State fairs in 1897, and first in class and first over all beef breeds at Omaha this year; Climax 4th, winner of many prizes as a bull calf and yearling; Miss Grove 2d, second in class and second over all beef breeds at Omaha, the only time shown. I will also sell Climax 60942, himself a show winner and the sire of many good ones, including Climax 4th and Miss Grove 2d. I am offering the very best of the young males and females that I own, believing that as I have the same sires and dams, I can produce just as good ones another year.

A fact that has not been fully emphasized is that there is a multitude of cattle of cheap quality and but few really good ones. Those farmers and range men who have in the past bought pure-bred animals to keep in their herds are the ones who are reaping the benefit of the present good prices for good cattle. As an illustration, Mr. R. Walsh, who for many years kept up his supply of pure-bred bulls, sold at public sale in Kansas City in October 400 spring heifer range calves at \$37 per head.

At my spring sale I received the highest average of recent years for one, five, ten, twenty, thirty, forty, fifty, sixty, seventy, eighty, ninety and one hundred head. I do not say this as giving any idea as to what the present cattle will average, but only to emphasize the two facts that my cattle are of the very highest quality, and more especially that this present offering will consist of animals equally as good in quality and breeding.

I do not expect any fancy prices, but do feel that breeders will pay fair value for superior quality. I have put into the sale animals to fill the desires of all. There are aged bulls, young bulls and bull calves, cows that have calves at foot, heifers bred and unbred, and heifer calves.

I will be very glad indeed to see present all those who have been corresponding with me this fall, and expect all those who attended my sale last spring to come again and bring their friends.

If you have not received a catalogue, send for one to

C. S. CROSS, Emporia, Kas.