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KANSAS FARMER.

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116 West Sixth Ave., Topeka, Kans.

This week Mr. Blake, who has passed his seventy-fifth year, brought in a potato—Early Ohio—which weighs two pounds. It was grown on the high land near Washburn College. Should our white-haired friend continue farming for another quarter of a century, who can guess the size of the potatoes he will produce?

One year ago Kansans were not alarmed at flood prospects. For the last several days the most interesting news has related to floods and wash-outs. The Kansas river has made a new record at Topeka, having damaged bridges and railway embankments and having at various places along its course overflowed fields and destroyed crops. This one stream is carrying out of Kansas water that fell on the soil of the State in sufficient quantity to bridge over several drouths if it could be retained until needed.

KANSAS FARMER'S NEW WALL ATLAS.

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

The size of our new Wall Atlas is 22 by 28 inches. The outside map shows the flags of the United States, as well as the flags of all nations. In addition thereto is given a list of tables, an exhibit of the products and their values of the United States and the world. One of the maps shows all States, Territories and possessions of the greater United States and facts as to their cap-

itals and the first settlements and in relation to their general government, areas, population, and legislature.

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

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

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

CALLED TO BETTER PAY.

It will interest the thousands of Kansas friends of Prof. F. A. Waugh to know that he has just been elected to the chair of horticulture in the Massachusetts Agricultural College, at a salary about equal to that of the president of the Kansas State Agricultural College. Professor Waugh will have two assistants, one at a salary of \$1,000 and the other at \$600. With capable assistants and the best-equipped horticultural department in the East, Professor Waugh's tireless energy and well-trained powers will make a new record for the Kansas boy abroad. A graduate of the Kansas Agricultural College, Mr. Waugh became agricultural editor of the Topeka Capital. He also did editorial work on the Denver Field and Farm. Later he was called to the chair of horticulture in the Oklahoma Agricultural College. Besides opening the work of his department in the then new college, he introduced the now almost universal practice of issuing press bulletins from the experiment station. The issuance of press bulletins at first met opposition from the fogies in the business, but under Waugh's editorship their value was quickly recognized by both press and people. Later the University of Vermont came foraging around for vigorous Western blood, and soon Professor Waugh was transferred to the Green Mountain State as professor of horticulture. Here he has distinguished himself for ability and industry. Besides carrying forward the work of his department, including a lot of valuable experimentation, he has written several extensive volumes on horticultural subjects. These were eagerly sought by the best publishers and are standards in both practical and college work. The Massachusetts College is to be congratulated on securing so valuable a man. Kansas is proud of this son of McPherson County.

THE CORN CROP.

Estimates of the corn crop of 1902 are now in fashion. The following table gives the record of the seven leading corn States for six years with the indicated yields for this year shown by the latest Government reports:

	1902, bus.	1901, bus.	1900, bus.	1899, bus.	1898, bus.	1897, bus.	1896, bus.
Ohio.....	104,000,000	80,000,000	107,000,000	99,049,000	102,828,000	92,166,000	123,692,000
Indiana....	146,000,000	88,000,000	153,000,000	141,853,000	129,154,000	109,825,000	133,468,000
Illinois....	311,000,000	198,000,000	284,000,000	247,150,000	199,960,000	232,928,000	284,573,000
Missouri...	242,000,000	66,000,000	181,000,000	162,915,000	154,731,000	171,924,000	176,769,000
Kansas.....	303,000,000	62,000,000	164,000,000	237,621,000	132,842,000	162,443,000	247,734,000
Iowa.....	310,000,000	230,000,000	306,000,000	242,250,000	255,000,000	220,089,000	321,719,000
Nebraska...	260,000,000	109,000,000	210,000,000	224,373,000	158,755,000	241,268,000	298,600,000
Totals.....	1,676,000,000	833,000,000	1,385,000,000	1,355,211,000	1,133,270,000	1,230,643,000	1,586,555,000
Total crop for entire country.	2,490,000,000	1,522,000,000	2,105,000,000	2,078,144,000	1,924,184,000	1,902,968,000	2,283,875,000

TAMING THE RUSSIAN THISTLE.

In its issue of January 27, 1898, the KANSAS FARMER contained the following: "At the session of the Students' Farmers' Club of the Kansas State Agricultural College held on the evening of January 14, Mr. J. W. Adams, a student of the college, reported that the Russian thistle had been harvested near Cheyenne Wells, Col., for a hay crop. A farmer had cut twenty acres of the thistles while the plants were still succulent and tender, and is feeding them to his stock this winter. Here seems to be an opportunity to make use of a pest."

So far as the KANSAS FARMER is advised this is the first published account of the use of the Russian thistle for forage. Since that time the use of thistle hay has been greatly increased and with profit to the users. In Secretary Coburn's latest Quarterly the experiences of twenty-eight farmers with this kind of forage are given. Some of these value this hay along with alfalfa as to quality. Analyses of the hay made by Professor Bailey of the State University show compositions that accord well with the reputation given this hay by the farmers who have used it. Especially rich in protein, thistle hay can easily justify its reputation as a feed for dairy cows.

Most of those who have used the hay discourage its propagation preferring to raise feeds which lack the thistle's pernicious habit of scattering seeds all over the country. It is a relief to know that the weed can be exterminated and is not likely to take the country as was feared when it first appeared. Possibly with a little further "taming" it may be entitled to a place among our highly-prized crops.

EXPORTS OF FOOD STUFFS REDUCED BY LAST YEAR'S DROUTH.

It is now practicable to determine the effect of the drouth of 1901 upon the export trade of 1902. The Treasury Bureau of Statistics has just completed its preliminary figures on the exports of breadstuffs and provisions and, as they show about 97 per cent of the total exports, a reasonably accurate measurement of the exportation of articles affected by the drouth of last year can now be made. The tables show the exports of quantities and value of corn and corn-meal, oats and oatmeal, wheat flour and other breadstuffs, also live cattle, fresh beef and other beef products as well as other provisions. The direct and most marked reduction is in corn which was most largely affected by the drouth of 1901. The exportation of corn at the principal ports, amounts to 26,000,000 bushels in the fiscal year ending June 30, 1902, against 176,000,000 at the same ports in the preceding year, the value for 1902 being \$16,000,000 against \$82,000,000 in the preceding year, a reduction of \$66,000,000. The complete figures will probably show the total exports at about 27,000,000 bushels against 181,000,000 in the preceding year. Exportations of corn-meal have also fallen

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from \$2,000,000 in 1901 to \$1,000,000 in 1902, making the total reduction in corn exports in round terms, as shown by the preliminary figures, \$67,000,000. Compared with the fiscal year 1900 the reduction is still greater; the corn exports of the fiscal year 1900 were the largest in the history of our export trade, having amounted to 213,123,412 bushels while for the year just ended the complete figures will amount to about 27,000,000 bushels.

The reduction in the quantity of corn available for live stock naturally increased the consumption of oats and, as a result, the exportation of oats fell off from 37,000,000 bushels in the fiscal year 1901 to 10,000,000 bushels in 1902, and the value from about \$12,000,000 in 1901 to \$4,000,000 in 1902. In oatmeal, exportations fell from 90,000,000 pounds in 1901 to 59,000,000 pounds in 1902, while the value fell from \$2,350,000 in 1901 to a little over \$1,500,000 in 1902. Thus the reduction in value of the exports of breadstuffs, clearly traceable to the drouth, was: Corn and corn-meal \$67,000,000; oats and oatmeal \$8,000,000; total \$75,000,000.

Two other marked reductions in the exportation of products of agriculture are beef, including live cattle, and cotton. The exportation of live cattle has fallen from 401,000 in 1901, to 319,000 in 1902; the exportation of fresh beef from 350,000,000 pounds in

1901 to 300,000,000 pounds in 1902, and the total value of cattle and beef products has fallen from \$80,000,000 in 1901 to \$69,000,000 in 1902, a loss of \$11,000,000. In cotton the reduction is wholly due to the reduced prices, the quantity exported for the year being 160,000,000 pounds greater than in the preceding year, while the value was \$24,000,000 less than the preceding year.

One other item of exports which will show a marked reduction during the last year is iron and steel. While the total figures of exports have not been received by the Bureau of Statistics, sufficient have been received to justify an estimate that the reduction in exports of iron and steel will amount, in round terms, to \$20,000,000 due in a large measure to increase in the home demand, and in part to the decreased demand abroad. The principal reduction in the export trade of the year will then stand: Corn and corn-meal and oats and oatmeal \$75,000,000, due chiefly to the drouth of 1901; beef and beef cattle \$11,000,000, due to increased home demand and shortage in material for feed of stock; cattle \$24,000,000, due to reduction in prices; manufactures of iron and steel \$20,000,000, due to increased home demand and decreased foreign demand.

Thus in the four items of exports—corn and oats, beef and beef cattle, raw cotton, and manufactures of iron and steel the reduction for the fiscal year will amount to about \$130,000,000, while the total reduction in all exports is about \$90,000,000, thus indicating that the general exports aside from these four classes, in which conditions were abnormal, will show a satisfactory growth when complete figures of the fiscal year are presented.

Crop Conditions on July 1.

Preliminary returns to the Statistician on the acreage of corn planted indicate an increase of about 3,520,000 acres, or 3.9 per cent on the area harvested last year. Of the twenty-five States and Territories with 1,000,000 acres or upward in corn harvested last year, Iowa, Nebraska, and Michigan report an increase of 1 per cent; Pennsylvania, Indiana, Virginia, and Louisiana of 2 per cent; Georgia, Arkansas, Wisconsin, and Missouri 3 per cent; Ohio, Illinois, Mississippi, and Indian Territory 4 per cent; Kansas, Kentucky, and Tennessee 5 per cent; North Carolina and South Carolina 6 per cent, Texas 7 per cent, Alabama 8 per cent, Minnesota 9 per cent, and South Dakota and Oklahoma 11 per cent. The average condition of the growing crop on July 1 was 87.5, as compared with 81.3 on July 1, 1901, 89.5 at the corresponding date in 1900, and a ten-year average of 89.2. The condition in Illinois was 91, in Iowa, Nebraska, and Indiana 90; in Kansas and Oklahoma 99; in Missouri 102; in Ohio, 87; and in Texas 41.

The average condition of winter wheat improved during June nine-tenths of 1 point, standing on July 1 at 77, or 11.3 points below the condition on July 1, 1901, 3.8 points below that at the corresponding date in 1900, and 2.4 points below the ten-year average. It fell off during June 4 points in Kansas, 2 points in California and Oklahoma, and 1 point in Illinois, and improved during the same period 2 points in Pennsylvania and Ohio, 7 in Indiana and Nebraska, 10 in Michigan, and 3 in Missouri. Special field agents report a decline of 4 points in Indiana and Illinois since July 1.

The average condition of spring wheat declined 3 points during June, standing at 92.4 on July 1, as compared with 95.6 on July 1, 1901, 55.2 at the corresponding date in 1900, and a ten-year average of 85.8. The decline during June amounted to 5 points in Minnesota, 6 in South Dakota, 3 in Iowa, and 4 in Washington. On the other hand, there was an improvement of 9 points in Nebraska, with no appreciable change in North Dakota.

The condition of spring and winter wheat combined on July 1 was 82.9, as compared with 91.1 on July 1, 1901, 60.8 on July 1, 1900, and 76.2 at the corresponding date in 1899.

The amount of wheat remaining in the hands of farmers on July 1 is estimated at about 52,440,000 bushels, or 7 per cent of the crop of last year.

The average condition of the oat crop on July 1 was 92.1, as compared with 90.6 last month, 83.7 on July 1, 1901, 85.5 at the corresponding date in 1900, and a ten-year average of 87.3. With no measurable change of condition in Minnesota and Wisconsin during June, there is reported an improvement of 7 points in New York, 12 in Pennsylvania, 6 in Ohio, 8 in Michigan, 5 in Indiana, and 10 in Nebraska, and a decline of 1 point in Iowa and 5 points in Illinois. Special field agents report a decline

since July 1 of 3 points in Ohio, 5 in Indiana, and 2 in Illinois.

The acreage of potatoes is 3.5 per cent, or about 100,000 acres, greater than that of last year. Of the 48 States and Territories reporting, 40 show increased and 8 decreased acreages. The average condition of potatoes on July 1 was 92.9, as compared with 87.4 on July 1, 1901, 91.3 at the corresponding date in 1900, and a ten-year average of 92.3. Wisconsin shows a condition 1 point above the ten-year average, Ohio 5, Iowa 3, and Illinois 9, while New York, Minnesota, Michigan, and Pennsylvania show conditions 1, 3, 5, and 10 points, respectively, below such average.

Reports on sweet potatoes are rather unfavorable, but few States showing conditions above their ten-year averages, and the majority of the more important producing States show conditions considerably below such average.

Reports of hay crop are very favorable, an improvement in condition being noted during June in nearly every important hay-producing State. The rains of the past two months have been very beneficial to pastures, and their present condition is excellent, nearly every important State reporting a condition considerably above the ten-year average.

While there has been a general decline in the condition of apples and peaches as compared with last month, reports of those fruits from almost every important State indicate that more than an average crop of each of them will be harvested. The condition of grapes is very good, and it is quite probable that the crop will be as large as that of any ordinarily good year.

Farmers' Institute at Britton's Grove.

Following is the program for the Farmers' Institute at Britton's Grove, three miles south of Florence, under the auspices of Spring Valley Farmers' Club and State Grange:

- MONDAY, JULY 28, 1902.
- Morning Session—10 O'clock.
- Song.....Reverend McCartney
- Prayer.....David Britton
- Welcome.....Mrs. Henrietta Calvin
- Address.....Kansas State Agricultural College.
- "Just a Minute" Talk.....Prof. L. M. Knowles
- County Superintendent.
- Song.....S. V. Quartet
- Address.....Prof. D. H. Otis
- Kansas State Agricultural College.
- DINNER.
- Afternoon Session—1.30 O'clock.
- Song.....Chorus
- Address.....E. W. Westgate
- Master State Grange.
- Declamation.....Bessie Rowe
- Song.....Comic Company
- Address....."The Grange"; Its Objects and
- Accomplishments.....Aaron Jones
- Master National Grange.
- Band Music.

Agricultural Matters.

High Rates.

EDITOR KANSAS FARMER:—On your first page in the article headed "Let this kind of trouble come," I read that the rate on wheat from Kansas City to New Orleans a distance of 900 miles, is 12 cents per hundred; from Kansas City to Chicago a distance of 500 miles the rate is 7 cents per hundred. The rate from Abilene to Kansas City, a distance of 163 miles, is 14 cents; from Solomon City, 172 miles, it is 14½ cents. If this is not robbery I'd like to have it ex-

A Shipment from Ward's



There must be considerable satisfaction to every man when he realizes that he has done something wise and creditable, especially when it directly concerns the welfare of himself and family. Here is a man who is hauling a shipment home, content with the knowledge that all his supplies for several months have been purchased at wholesale prices, or in other words at a saving of about 30 per cent over his home prices.

He has no cause to worry as to what he will find inside the boxes. He has received shipments from us before and knows that everything will be found first-class and exactly as represented. Even if something is wrong, he knows that no firm in the country is more anxious to make it right than we are. We have customers everywhere—in every nook and corner of the United States. Beyond a doubt some of your neighbors deal with us. If you are not a heavy buyer, why not join with a neighbor and get your supplies by freight? It only takes 100 pounds to make a profitable freight shipment.

You may need a catalogue to start with. Our 1,000 page catalogue containing over 70,000 quotations and 17,000 illustrations will be sent on receipt of 15 cents to partly pay the postage. This catalogue is already in the homes of over 2,000,000 careful buyers and should be in your home also. Send for it today.

Montgomery Ward & Co.
CHICAGO
The house that tells the truth. 11

plained to me, but I suppose it can't be explained. We have to grin and bear it. I shall vote the Socialist ticket however, which is all I can do.
P. H. MEYERS.
Abilene, Dickinson County.

Feeding Flaxseed.

EDITOR KANSAS FARMER:—I have a lot of flaxseed which I would like to feed cattle on full feed. Could you or some reader of the FARMER tell me how and how much to feed a day per head. Should I grind it or feed it whole.
JOHN M. SWART.
Oneida, Nemaha County.

Pocket-gopher.

EDITOR KANSAS FARMER:—Will you please give me through your valuable paper the best way of ridding my farm of the pocket-gopher? They are a great drawback here to alfalfa-planting. I have tried trapping with steel traps with only fair success. I have also tried poisoning them with strychnine put in potato but with only fair success. I find they carry the poison out of the holes and do not eat it.
S. A. BOWMAN.
Council Grove, Morris County.

Sowing Alfalfa Seed.

EDITOR KANSAS FARMER:—I have seen a great deal in the KANSAS FARMER about sowing alfalfa. I have some thirty acres full of seed and I would like to know through the columns of your paper when to cut it and the care of it up to threshing.
I pastured thirty head of cattle on it this spring using Bush's "Gas releasing bits." It has not been cut this year.
O. E. MATSON.
Furley, Sedgwick County.

Let the alfalfa stand until the older pods are about ready to lose their seed; then cut and handle as for hay. A side delivery rake is excellent to rake alfalfa on account of saving more of the leaves for hay and shattering the seed less than the ordinary rake. As soon as the alfalfa is dry enough, stack and cover the top of the stack with stough-grass or millet, or something equally good to shed rain. Where there is much alfalfa to thresh, machines specially fitted for this purpose may be obtained. The usual charge for these is \$1 a bushel for threshing. The ordinary grain-thresher may be used if provided with coarse-set riddles. For threshing with this kind of machine the usual charge is 50 cents a bushel. Unlike clover, the alfalfa seeds are arranged several in a pod, and are knocked out by the action of the ordinary threshing-machine so that a clover-huller is not necessary.

Early Plowing for Wheat.

FROM FARMERS' BULLETIN NO. 122, UNITED STATES DEPARTMENT OF AGRICULTURE.

The opinion generally prevails that early preparation of land for wheat is an advantage. A number of stations have studied this problem, and have reported results showing the advantages of breaking the ground for wheat upon the removal of a preceding crop of oats.

As the result of seven years' trial at the North Dakota station, fall preparation for spring wheat gave an average increase in yield of one bushel per acre over spring preparation.

At the Kansas station, the average was even greater with early plowing for winter wheat. Starting the plow immediately after harvesting the previous crop resulted in a considerably increased yield over September plowing. Of two large plats lying side by side, one was plowed August 7 and the other September 7. The ground was very hard on both plats and broke up in large lumps. At the first plowing the land was comparatively free of weeds, while in the later breaking there was an even crop of weeds almost one foot in height. The early-plowed plat was disked twice to keep the weeds in check. The late-plowed plat was disked five times immediately after plowing, to prepare it for planting. Both plats were seeded September 12, at the rate of one and one-fourth bushels per acre. At the time of seeding, the early-plowed plat was moist three inches below the surface, while the late-plowed plat was very dry. Though the latter was moist when turned up, it dried out rapidly when exposed to the sun. A large portion of the seed on the early-plowed strip germinated promptly, but on the late-plowed remained dormant until the October rains. The difference in the two plats was noticeable throughout the growing period. The early-plowed plat ripened first, and yielded at the rate of 14.57 bushels of grain and 0.7 ton of straw; the late-plowed, at the rate of 11.99 bushels of grain and 0.49 ton of straw per acre.

In another trial at the same station, two plats were plowed July 20, just after removing a crop of oats, and two others were plowed September 3. Several heavy rains occurred between these two dates, causing a packing of the first-plowed plats. They were also rather weedy at the time of seeding, and were disked to bring them into good condition. All were seeded September 18. The wheat on the early-plowed plat came up first and was more uniform than on the late-plowed, and maintained the advantage throughout the fall. The early-plowed plats yielded at the rate of 23.66 bushels, the late-plowed at the rate of 19.74 bushels, per acre.

At the Michigan station, in experiments recently reported, one plat was plowed for winter wheat immediately after removing the oat crop. The soil was rolled and harrowed at once, harrowing being repeated every seven or ten days until the wheat was sown. On another plat the ground, after the removal of the oats, was allowed to remain undisturbed until the day before sowing the wheat, when it was plowed, rolled, and harrowed three times. The early plowing, followed by rolling and repeated harrowing, approached the condition of summer-fallow. In case of the late plowing, done September 16, the ground became very hard and lumpy and the plowing was difficult. It was impossible to prepare the seed-bed as well as in the preceding case. The yield of the early-plowed plat was at the rate of 23.65 bushels, the late-plowed, 19 bushels, of grain per acre.

Very similar experiments, with like results, are reported from the Oklahoma station. Wheat seeded on oat land, plowed July 19, August 15, and September 11, yielded at rates of 31.3, 23.5, and 15.3 bushels per acre, respectively. Early plowing tended greatly

to the suppression of weeds and the conservation of soil moisture in these experiments. Three days before seeding the early-plowed soil contained 16.8 per cent of moisture, the medium-plowed 13.9, and the late-plowed 7.7 per cent—some 4 per cent less than the amount required to germinate wheat readily.

At the Minnesota station, it was found that early plowing opened the surface of the ground, so that the rainfall could be more readily absorbed, while the furrow slice formed an effective dirt mulch; retarding the movement of moisture to the surface. This is a matter of much importance in a droughty season. It was also found that on unplowed land the growth of weeds following a crop of grain dissipated a large amount of the moisture that early plowing conserved.

The results secured in all these experiments are quite uniform in showing the good effects of early plowing for fall wheat. Briefly stated, early plowing, followed at intervals by harrowing, prevents the growth of weeds, conserves the moisture of the soil, keeps the soil in good tilth, and results in the formation of a seed-bed best suited for the prompt germination and growth of the seed. The cost of preparing the ground is lessened, the yield of grain is increased, and the practice is financially profitable.

Forage from Russian Thistles.

FROM SECRETARY COBURN'S JUNE QUARTERLY.

Eight years ago the equanimity of Kansas farmers, especially those in the more northwestern counties, was disturbed by the appearance on their cultivated lands of a new and strange weed, which proved to be the dreaded Russian thistle or Russian tumbleweed. Its source of introduction has been ascribed to Colorado and Nebraska—being brought in alfalfa seed from the former and "tumbled" in by winds from the latter. Immediately following its appearance in Kansas strenuous efforts were made and stringent measures adopted to prevent its spread and if possible to eradicate it. Much information was disseminated, telling of the weed's pernicious habits, and giving the observations and experiences of others who had dealt with it, as well as the best means of preventing its spread.

Russian thistle seeds probably were brought to the United States in flaxseed from Russia, and the presence of the plants in any alarming numbers was first noted in South Dakota, where they rapidly spread more or less to North Dakota, Minnesota, Wisconsin, Iowa, Nebraska, Colorado, and other sections, and, regardless of location, soils, conditions, or climates, they seemed to thrive and multiply. But all along the line a fierce fight has been waged against them, although often with little avail, and nothing but the vigilant cooperation by the inhabitants of infested districts is likely ever to bring about their extermination.

In Kansas the thistles have as yet been pretty well confined to the north-west corner of the State, the section earliest seeded, and it is gratifying to note that they have not been permitted largely to extend their area in a threatening way. In the territory where they are, however, nothing but condemnation of them has been heard until recently. Within the past few years, however, there have come indirectly to the Kansas agricultural department occasional reports of their being utilized, both green and cured, as feed for live stock, and with a view of ascertaining the facts as to such practices the department has interviewed numerous parties who have harvested thistles and fed them to live stock on a considerable scale, and what they say is set forth in detail in the following pages of this quarterly, along with other kindred information.

Russian thistles, as generally understood, are regarded as the farmers' implacable enemy, a hateful menace to all useful vegetation, and a curse to agricultural districts; difficult to prevent the spread of or to exterminate. While it is well known that, when young and growing, they are often greedily eaten by live stock, especially sheep and cattle, their utilization as indicated is new. In this connection, it is proper to say that the State Board of Agriculture, in devoting a publication to the discussion of this subject, does not in any sense intend to appear as encouraging or even countenancing the growth of thistles for any purpose whatsoever, as the farms of Kansas should not be disgraced nor depreciated by their presence.

Of those interviewed, most agree that the so-called "thistle hay" quite favorably corresponds in feeding value

with that from native grasses, and some even assert that it is equal to alfalfa, which it is said to resemble in some respects, when properly cured and handled. At all events, from a general survey of the reports, thistle hay is considered by those who have used it nutritious and fattening, and cattle and sheep, with no other feed, can be sustained throughout the winter in as fair condition as when other ordinary forage is used. It is also indicated that horses and mules do not seem to care so much for nor do so well on thistle hay as do other stock, and hogs will not eat it at all, although they relish the thistles when cut and fed green. When used with sorghum, millet, alfalfa, etc., the general experience has been that cattle made no apparent distinction between them, and if any preference were shown, it would likely be in favor of the thistles. The hay is generally all thistles, owing to their habits of growth, as on land sufficiently numerous to justify harvesting, they have usually choked out other vegetation, even other weeds, and in the majority of cases no cultivated crops were grown; as, if attempted, they more often than otherwise came to naught. Small grains, such as wheat, rye, and oats, are easy victims of the thistles. Crops that can be frequently cultivated, like corn, can be successfully grown, in other conditions being favorable, in spite of the thistles, as the frequent cultivation necessary for the best development of the corn greatly retards and dwarfs the growth of those not killed by it; but lands badly infested with Russian thistles are at best much depreciated for general farming.

The thistles are cut for hay with mowers, ordinarily when eight to twelve inches high and blooming, before the stems become hardened and woody. The methods of handling after cutting, are various. Some rake and stack immediately; others let them cure as they lie, afterwards stacking; while still others let them wilt, then cure in shock, and haul from the field as used, or stacking at convenience; whatever way they are handled seems to give satisfaction, provided the hay is not rain-washed after cutting, which discolors and may make it distasteful to stock. To prevent this possibility in a measure, it is suggested that thistle stacks should be topped with something that will turn rain, as at first the thistles lie very loosely and will not shed water, although later settling quite compactly. Some report that thistles can be cut two or three times during a season, when conditions are favorable.

Wherever live stock has access to thistles it is observed that the young plants are greedily eaten, and they are found excellent for increasing the flow of milk. Their early growth gives succulent grazing in the spring some time before other vegetation is advanced sufficiently to be available, and is likely to be abundant on infested tracts, regardless of weather or soil conditions.

It is generally reported that all live stock relish the pasturage afforded by thistles for the three or four growing months each year and sheep and cattle particularly like it, abandoning other herbage in its favor, and even break through fences in their eagerness to graze upon it, rather than be confined to the prairie- or buffalo-grass. Thistles, of course, are most valuable for pasturage when young and tender, but live stock will eat, apparently with relish, the matured plants in the fields, when damp and soft, sometimes even preferring them to the green grass. When intended for hay, thistles preferably should not be grazed upon. Whether grazed or cut for hay, they will in course of the season produce enormously of seed, and their survival is in no wise endangered by either.

It is also reported that the very young plants are excellent for human food as "greens."

Russian thistles are annuals, growing from the seed each year, and if no seed is produced eventually there will be no thistles. When young, individual plants are easily killed by cutting off at the surface of the ground, and whole fields of them destroyed by carefully plowing under, completely covering, and, of course, no seeds are produced. Nearly all agree, however, that wherever present in large quantities or scattered over wide areas, their eradication is difficult, and without the untiring cooperation of those in infested districts it will fall of accomplishment. There have been numerous opinions advanced by those reporting as to the best methods of ridding infested areas, and one, frequently mentioned as being most effective, is to utterly abandon the cultivation of such fields for three or four years, when the thistles will ordinarily cease to reproduce themselves thereon, on account of the

soil becoming soddy and hard—these conditions being unfavorable to their growth. This, however, if thistles are allowed to mature and tumble about unhindered, will not prevent their distributing seeds over other areas. In this connection, it is worthy of note that one correspondent says, if thistles are harvested while yet green with a lever harrow (pulled up), as done by him, no seed will be produced on the land so treated, which is suggestive, considering their habits of growth. These plants grow only on cultivated or abraded land, and not where the sod is unbroken.

The average number of years thistle hay has been used by those reporting is slightly over three; some feeding it as many as six years. The largest area given as having been harvested is 100 acres, others ranging from that down to a few acres. Reported yields per acre are widely divergent, the general average probably being about one and one-half tons, although in some instances nearly four tons have been secured. The largest aggregate quantity reported harvested by any individual is 250 tons.

To summarize, Russian thistles are undesirable and a menace to legitimate agriculture, but if no better feed for live stock is available their use as such is pronounced justifiable wherever present in sufficient quantities. Their production, however, is not encouraged for any purpose, and they should be exterminated, the ground formerly infested devoted to reliable forage crops which contain all the elements that recommend the thistles, and more, without their objectionable features.

The Hessian Fly.

In presenting the following discussion by Mr. C. L. Marlatt first assistant entomologist of the Department of Agriculture, the KANSAS FARMER hopes to do timely service to the wheat-growers:

Economic Importance and General Characteristics.—The Hessian fly is one of the principal enemies of the wheat crop, the minimum annual damage due to it being estimated at about 10 per cent of the product in the chief wheat-growing sections of this country, which indicates an annual loss of forty million bushels and over. An injury of from 50 per cent to a total failure of the crop is not infrequent in certain localities, and the resulting loss is proportionately greater. The parent insect is a very fragile, dark-colored gnat or midge, about one-eighth inch long, and resembling somewhat closely a small mosquito. As commonly observed, however, more or less hidden in the base of young wheat plants or other small grains, the insect appears either in the form of a footless maggot, or larva, or in what is known as the flaxseed state, which corresponds to the chrysalis of other insects. The injury to the plant is done altogether by the larva, which feeds on the tissues and juices and weakens and eventually destroys the plant.

Distribution.—In common with many other of our more injurious farm pests, the Hessian fly is an importation from Europe; and the evidence points very strongly to the fact of its introduction in straw brought over with the Hessian troops during the War of the Revolution. It first appeared in injurious numbers in 1779, in the vicinity of the landing-place of these troops three years before on Long Island, and has gradually spread westward, following the movement of settlement and wheat culture, reaching the Pacific slope about 1884, and now practically extends throughout the wheat belt of the United States and Canada. It has long been known on the continent of Europe, covering the wheat belt from Russia westward. It appeared in England in injurious numbers in 1836, and was first thought to have been recently introduced, but has since been proved to have been present long before in barley fields. In 1888 it was reported from New Zealand, and has since become an important grain pest there, thus nearly completing the circuit of the globe.

Natural History and Habits.—The Hessian fly is distinctively a wheat insect, but will breed also in barley and rye. What has been taken for this insect has, in recent years, been found occasionally in timothy and several wild grasses, but the insects in these cases are now known to be distinct from the Hessian fly, and the occurrence of the latter in plants other than those first named is extremely doubtful.

Over the bulk of the wheat area of the United States there are two principal broods of the Hessian fly annually, viz., a spring and a fall brood. There



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are, however, supplemental broods, both in spring and in fall, particularly in the southern wheat areas, but in the extreme northern area of the spring-wheat belt there may be only a single annual brood, the progeny of the spring brood passing the late summer and the winter in the flaxseed state instead of developing a brood in autumn. It is possible, however, that in this region an autumn brood may develop in volunteer spring wheat. Each generation is represented by four distinct states, viz: (1) egg; (2) maggot, or larva; (3) pupa, or flaxseed; and (4) mature winged insect.

The eggs are very minute and slender, pale red in color, and are usually deposited in regular rows of three to five or more on the upper surface of the leaf. In case of the spring brood, they are sometimes thrust beneath the sheath of the leaf, on the lower joints. The number of eggs produced by a single female varies from 100 to 150.

The whitish maggots hatch in from three to five days and crawl down the leaf to the base of the sheath, embedding themselves between the sheath and stem, and develop on the substance of the wheat, causing more or less distortion and bulbous enlargement at the point of attack.

In a few weeks the larva contracts into a flaxseed-like object, which is the puparium. In the case of the spring brood, the insect remains in the flaxseed state during midsummer, yielding the perfect insect for the most part in September; in the case of the fall brood, the winter is passed in the base of the wheat in the flaxseed condition.

The fall brood works in the young wheat very near or at the surface of the ground. The spring brood usually develops in the lower joints of the wheat, commonly so near the ground as to be left in the stubble on harvesting. With spring wheat the attack is sometimes just at the surface of the ground, as in the case of the fall brood. The adults from the wintered-over flaxseed puparia emerge during April and May, most numerous before the middle of the latter month. The adults of the important fall brood emerge chiefly during September.

There is a supplemental spring brood following the main one and a supplemental fall brood preceding the main one. These supplemental broods are, as a rule, comparatively unimportant, most of the individuals of the spring and fall broods going through the course of development first indicated. Under any favorable weather conditions, as indicated further on, the supplemental fall brood may become a

(Continued on page 740.)

Horticulture.

Horticultural Products for Army and Navy.

COL. WILDER S. METCALF, LAWRENCE, BEFORE THE KANSAS STATE HORTICULTURAL SOCIETY.

If an examination be made of the ration furnished the army and navy of the United States, it will be found that a very considerable as well as an absolutely essential portion thereof consists of what may be termed horticultural products. Meat, of course, is a necessity; and it is being demonstrated that a plentiful supply of fresh meat is a wholesome and necessary part of a soldier's diet, even in a tropical country. But equally important, and especially palatable and wholesome, are the fresh potatoes and, of course, the beans. Beans have been so long recognized as a vital part of the ration that some beans are known the world over as "Navy" beans. Likewise many of you will doubtless recall some jingling lines, which it will not be necessary to quote on this occasion, in praise of the army beans. It may be well to announce at this point that our knowledge of this subject is more personal than practical—more the result of experience than of extended research.

The United States army and navy of to-day have no such experience of hunger and hardship as was had in 1861 to 1865. Food of all sorts is wholesome and plentiful as well as regularly supplied. The American army and navy in the Philippines, 10,000 miles from home and its base of supplies, is unquestionably the best-fed army and navy ever known in the history of the world. Matchless Australian beef and mutton are usually delivered to the remotest lines several times each week. Fine fresh potatoes and the never-to-be-neglected beans, all grown at home, are shipped across the vast expanse of water and issued to the army and navy in the orient with comparatively little loss. Onions, also, a wholesome, fragrant and unjustly tabooed delicacy, are issued frequently. No more appetizing or satisfactory meal was ever eaten by the present speaker than raw slices of those same onions, with hard crackers and salt. Such a meal seemed to put new energy into weary bodies; new red strength into pale, thin blood; and fire into burned-out hearts; to say nothing of hot fragrance into each panting breath. Rotten potatoes and desiccated vegetables will not be mentioned in this address, as little or no experience was had with them. In their stead was had an abundance of canned fruit and vegetables, the purchase of which was always made possible by the savings of flour and vinegar and other articles of the ration, and always to be had from the stores of the commissary sales depot accompanying the troops within reaching distance.

HORTICULTURE IN THE PHILIPPINES.

But little can be said regarding horticulture in the Philippine islands. Horticulture means work, and work is something to which the native of a tropical country is traditionally and constitutionally opposed. Abundant fruit and some vegetables appear to grow spontaneously, and are to be had for the slight exertion of gathering. There was a yam or a sweet potato sometimes rudely cultivated, a small amount of very poor corn, and a root like a radish or turnip, sometimes found in the miserable gardens, and eaten by the army with scant relish. About the only fruit systematically raised seemed to be the banana, found in little groves near the better class of houses. This fruit is found in many varieties, and runs from small to enormous in size; and from poor and indifferent to excellent in flavor. There was an abundance of other tropical fruit, usually growing wild, without care or cultivation of any sort; the delicious mango, the king of tropical fruits, growing on large majestic trees; the peculiar, sweet chico, looking something like a russet apple or a rounded seckel pear and tasting like neither; the tomato-like pomelo, much liked by many. There are also an abundance of coconuts and pineapples. The guava is also found, well known as making most delicious jelly. There are numerous berries and nuts, some edible and some eminently not so. The soldiers of the Twentieth Kansas will never forget one extremely attractive berry found on some trees near a house in San Fernando de la Pampanga. This fruit was beautiful to look upon and pleasant to the taste, and was therefore partaken of most generously by the men of one company which happened to be camping near the trees, with the somewhat alarming result that the entire company was within thirty

minutes distressingly sick and disgracefully unfit for duty. Happily the effects rapidly passed away and left the men seemingly none the worse for the wear and tear, and very much wiser in regard to the proper uselessness of the fruit of at least one tropical tree. There are also lemons and limes, and sour, scrawny, ill-bred, uncultivated oranges.

We must not forget the many beautiful flowering trees: the peculiar flaming blossom of the fire-tree, presenting with its mass of blossoms a truly startling appearance from a distance; the wonderfully fragrant ylang-ylang, the source of one exquisite perfume and the base of many others. These beautiful, delicate, white blossoms, gathered by the natives and strung in long garlands, are eagerly purchased on the streets by the foreigner and wealthy native. And so, with the abundant home ration, supplemented by the varied fruits of the tropics, the army and navy lived well. The fact of the matter is, after all, that man's enjoyment of something to eat depends more on his appetite than on the variety or abundance of the food available, and man's appetite depends largely upon his habits and mode of living; and this brings us to another thought.

YOUTHFUL EXPERIENCES WITH HORTICULTURE.

Our paternal ancestor was a horticulturist of considerable local reputation. In his home place there were ten acres of excellent land, in the outskirts of a growing young city in northern Ohio. The family consisted of eleven sturdy boys and a few girls. These boys were given a thorough and well-considered twenty-one-year course in horticulture, the advantages of which were not at the time fully enjoyed or appreciated, the course being, in a measure, compulsory, and interfering frequently with other pursuits more congenial. However, we still remember the absorbing interest with which we watched the careful preparation of the soil of the garden, and how we enjoyed sorting over the various packages of seeds and the careful planting thereof. We knew which seed should go in trenches and which in hills, and which should be covered deeply and which lightly. We watched daily for the first appearance of the tender leaves and rejoiced in the marvelous growth and development of each little plant. We cut the seed potatoes, being careful to get eyes in each quarter. We dug in the earth and found and wondered at the shriveled seed potato giving its substance to nourish the growing stem. We watched with intense interest the forming pods of the beans and peas; we cleared and prepared the early vegetable ground and planted the attractive little turnip seed. We knew how to cut and trim brush and make supports for the peas and tomatoes. We were taught to drop the kernels of sweet corn five in a hill, and as we dropped the corn we sang the now scarcely remembered ditty, running something like this: "One for the chickens, one for the crow, one for the grubworm, and two to grow."

We remember well the pulling and hoeing of the fast-growing weeds, and our struggle to keep them down, and our pride in the clean earth, free to give all its nourishment to the growing vegetables. In the intervals between school hours, and in the long, pleasant days of the summer vacation, we often worked with bitter hearts, feeling that we ought to have, more often, the usually recognized right of boys to go fishing or swimming. We remember, also, the wondering interest with which we watched in the orchard the process of grafting; the preparation of the graft and of the notch in the limb to be treated, the skilful setting of the graft in place, and the sticky bandage with which the wound was dressed. We recall the curious slit prepared for budding; the bud with its bit of parent wood; its careful insertion in the slit, and that same sticky bandage. How we watched the growth of the bud or graft until the scar disappeared and it was almost impossible to tell where the wonderful cross-breeding took place! We remember the first green fruit, and the usual experience of boys with green apples, pears, and peaches. We never forget the first ripe apples, the Early Harvest and the Red Astrachan. We knew the names and qualities of the various apples, and peaches, and pears, and grapes. We climbed the apple trees and picked with tender care the fall and winter apples. We prided ourselves many a winter evening on our ability to tell the varieties of apples by the sense of taste alone; we recall the great map on which our father had indicated the location and name of each of the several hundred fruit-trees on the place. We had our favorite Bart-

lett and Seckel pear trees, Golden Sweet, Sweet Bough, Russet, Rhode Island Greening, Porter, Belmont, or that particular favorite, that prince of fall apples, the Rambo.

WORK AS A PROMOTER OF MANHOOD.

In short the boys knew something about horticulture because the respected ancestor before mentioned had a theory that there was a close and intimate relation between the raising of good fruit and vegetables and the raising of a good family of boys. The enforced application to duty, the having a definite something to do, developed the habit of industry and the love of work; the boys grew and thrived with the trees and the garden, and now we bless that wise paternal ancestor daily for his knowledge of horticulture and his interest in it, and for his masterful grasp of the wise and beneficent connection between the growth and training of vegetables and trees and the growth and training of boys. The love of work and the habit of industry are of inestimable value. Idleness and lack of responsibility are a terrible mistake in the life of any boy. Let me urge the fathers here present to bring up their boys to work; to have something definite to do each day. You may well praise God for the time when, with them, work becomes a habit; when idleness becomes impossible; while in their thoughtless youth they may complain and think hard things of you, take the word of a grown-up boy that the time will come when your boys will understand, and will bless and honor you all their lives for forcing upon them the priceless habit of application and industry. Did you ever think that the youth of Kansas are perhaps fortunate in their environment?

The withering hot winds, the long seasons of record-breaking droughts, the sudden changes from balmy Italian air to a bitter, six-below-zero blizzard, the occasional magnificent rains, all have helped to make our wonderfully productive soil. The constant struggle with the fitfully changing elements, the some-time affluence and the oft-time lamentable poverty, all tend to develop men. Exposure to the cold of our short, severe winters and the hot sun of our long summers develops strong constitutions. Stern necessity develops habits of industry and application. The whole history of our magnificent State, the conflicts with the Southern proslavery squatter in the fifties, the glorious record in the civil war and the never-ceasing struggle with the soil and the elements have helped to develop strong, aggressive, intelligent, far-seeing, all-conquering men. Keep up your good work, then, horticulturists of the State of Kansas, and remember always the plain connection between your boys and your business.

Hardy Oranges.

H. E. VAN DEMAN, WASHINGTON, D. C.

"Japanese orange trees are now being grown as far north as Virginia and Maryland. Sweet oranges have been grafted on these hardy stocks, and are growing reasonably well. There is no telling how far north oranges may yet be successfully grown, and also no telling when Boreas may blast an entire orchard that has intruded too far into his domain."

The above statements and others of a similar character have been going the rounds of the papers, which are misleading, if not entirely without foundation, in fact. There is a species of orange, citrus trifoliata, which is hardy

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as far north as Washington and St. Louis, and in some places north of there, but it bears small fruit of worthless and repulsive flavor. It makes a beautiful and very thorny bush, with glossy foliage and green twigs, which drops its leaves in the fall. It is well adapted for hedges and looks well on the lawn as a single tree-like bush. The white flowers are abundant and fragrant, like those of other orange trees.

While it is true that hybrids between this hardy species and the sweet or edible oranges have been made, and experiments are being made to determine the value of the fruit as regards size, flavor and adaptability to regions north of those where the good oranges flourish, it is not true that any varieties or points of value to the public have been developed. There is not a good orange tree, that is, one that is bearing or will bear good fruit, so "far north as Virginia," nor for several States south of there. Even in extreme northern Florida there is the utmost difficulty in getting orange trees to succeed, and, for the most part they fail except in the central and southern portions of that State, as I can testify from personal inspection within the last year.

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

August 1, 1902—American Berkshire Association, at Kansas City, Mo.
 August 8, 1902—Combination sale of Berkshires, at Kansas City, Mo. Chas. F. Mills, Mgr.
 August 13, 1902—American Berkshire Association, at Kansas City, Mo.
 August 22, 1902—Harry Sneed and McFarland Bros., of Smithton, Mo., Duroc-Jersey hogs at State Fair, Sedalia, Mo.
 September 2, 1902—L. M. Monsees & Sons, registered saddle horses, mules, and registered Poland-Chinas, at Smithton, Mo.
 September 10-12, 1902—Mid-Missouri Combination Sale of Angus, Galloways, Shorthorns, and Herefords, in connection with the North Missouri Fair, Chillicothe, Mo.
 October 1, 1902—Wm. Plummer, Poland-Chinas, Barclay, Kans.
 October 7-8, 1902—J. S. McIntosh, Kansas City, Mo., Shorthorns.
 October 18, 1902—J. W. Dawdy, Abingdon, Ill., and D. L. Dawdy, Arrington, Kans., at Galesburg, Ill., Shorthorns.
 October 20, 1902—E. E. Axline, Poland-Chinas, Oak Grove, Mo.
 October 21 and 22, 1902—Herefords at Kansas City, Mo., under auspices of American Hereford Cattle Breeders' Association. (Week of American Royal.)
 October 22-23, 1902—Combination sale of Berkshires, at Kansas City, Mo. (Week of American Royal.)
 October 23, 1902—J. B. Davis, Duroc-Jerseys, Fairview, Kans.
 October 20-25, 1902—American Royal Swine sale Berkshires, and Poland-Chinas, Kansas City Stock Yards.
 October 31, 1902—J. C. Hall, Hallsville, Boone Co., Mo., at Centralia, Mo., Shorthorns.
 November 1, 1902—H. M. Kirkpatrick, Farm sale of Poland-Chinas, Wolcott, Kans.
 November 6, 1902—Thos. Andrews & Son, Cambridge, Neb., Shorthorns.
 November 13, 1902—Geo. W. Berry, North Topeka, Manager. Combination sale of Berkshires. Manhattan, Kans.
 November 18-19, 1902—Marshall County Hereford Breeders' Association Sale, Blue Rapids, Kans.
 November 28-29, 1902—W. P. Harned, Vermont, Mo., and F. M. Marshall, Blackwater, Mo., at Kansas City, Mo., Gody Short-horns.
 December 4 and 5, 1902—Herefords at Chicago, Ill., under auspices of American Hereford Cattle Breeders' Association. (During week of International Cattle Show.)
 December 8-9, 1902—J. E. Logan and Benton Gabbert & Sons, Kansas City, Mo., Herefords.
 December 16, 1902—Gifford Bros., Manhattan, Kans., Shorthorns.
 January 12-17, 1903—C. W. Armour and Jas. A. Funkhouser, Herefords at Kansas City, Mo.
 January 28-29, 1903—C. A. Jamison, Peoria, Ill., Shorthorns, at Chicago.
 February 17, 1903—Geo. F. Kellerman, Shorthorns, Kansas City, Mo.

How Feed Flaxseed?

EDITOR KANSAS FARMER:—I have a lot of flaxseed which I would like to feed to cattle on full feed. Could you or some reader of the FARMER tell me how and how much to feed a day to the head? Shall I grind it or feed it whole?
 JOHN M. SWART.
 Oneida, Nemaha County.

This is one of the practical questions on which the KANSAS FARMER desires the experience of its readers.

Angoras as Browsers.

EDITOR KANSAS FARMER:—Replying to the letter you enclosed me from E. W. Stiles, of Springhill, Kans., I will say that the Angora goats are browsers and not grazers. They are no harder to restrain than sheep, will protect themselves better from wolves and dogs than sheep. They will eat other things, such as weeds and brush and briars before they will touch the black walnut and hickory. The Angora goats are more prolific than sheep and are a much harder animal. They will under no consideration have the scab and can not be inoculated with the tuberculosis.
 W. M. MCINTIRE.
 Kansas City, Mo.

Trouble Ahead for the Hog.

The weather is breeding all kinds of trouble for his unsuspecting swineship. Every shower is nearing the one that will make corn and make it cheap. Then his swineship will be in danger. He is likely to be condemned to an exclusive diet of corn and water. He well knows the evils of such a diet. Destruction in the form of indigestion, worms, constipation, fits, fevers, lung troubles, cholera and what-not stares him in the face. But what can he do? Break out of the pen? Yes, and be led back by the ear. Squeal for alfalfa? Yes, and get an ear of 15-cent corn. Verily, there is trouble ahead for the Kansas porker.—Western Breeders' Journal.

Stud Fees Again.

EDITOR KANSAS FARMER:—I see in your paper of July 3d an article about "Stud Fees." Now this is just what I have always practiced. I have stood horses for the last twenty-five years and have never had less than two in service and sometimes as high as twenty in my barn all season. I have never travelled with my horses and never beg a man to come to my barn to breed. I always keep good horses—the best there is—and charge a good fee for service. I treat all men alike unless a poor and worthy neighbor who can not pay should come and to him I give the service free. I sell 50 or 60 stallions a year for service and I discourage all insuring a colt to stand and suck. Let

the man who owns the mare take that risk or not breed. We get good fees to insure the foal. Your article is correct and your paper is all right.
 M. L. AYRES.
 Shenandoah, Iowa.

The Hog in 1902-1903.

Should the present favorable weather continue another month we ask in all seriousness, says the Western Breeders' Journal from whence are the hogs forthcoming to market 20-cent corn at 60 cents in the shape of pork? The demand for swine of any and all ages will simply be unlimited, and those who are fortunate enough to have some surplus pigs will not be slow in placing a proper estimate upon their worth. Every effort should be put forth to give the pigs suitable care. Abundant shade should be always accessible. Good large trees of varieties that produce heavy foliage give the best shade and if not standing too closely allow the air to circulate freely, keeping the pigs fairly comfortable, even in hot weather.

Care will also be required in feeding. Those who have plenty of alfalfa pasture need not use a small amount of grain. A little corn, if it can be gotten, makes a good feed used in connection with the alfalfa pasture. Ground wheat or shorts sloop made very thick is good with alfalfa. Oats are almost ready to feed and make a good feed for young animals and breeding stock and in fact are good for hogs of any age at this time of year. There will be considerable low-grade wheat this year that can be used to excellent advantage in feeding pigs. We have seen so many pigs and shoats seriously injured by being fed too much new corn that we want to emphasize the warning as strongly as possible. There is something about green soft corn that soon gets a pig's system out of condition from which it is very hard for him to recover. Feeding new corn is likewise a very wasteful practice. We are well satisfied that one ear of dry, well-matured corn will produce as much pork as two roasting-ears of equal size. One can demonstrate this to his entire satisfaction by laying away a few roasting-ears until they are thoroughly dry, then shelling off the corn and weighing it in comparison with properly ripened ears. It will pay well to give the swine such care as will put them in the best possible shape to utilize the corn crop this fall, in case the present very favorable crop prospects continue, as hogs, while they may not soar around the 8-cent margin, will undoubtedly rule high for the next year at least.

The New Wool Season.

The 1902 clip of wool has thus far been taken about as fast as it has come off the sheep's back, and at prices which, as compared with a year ago, show an average advance of about 2 cents per pound. In many sections, notably in Texas, the wools have been taken with great eagerness, the buyers, figuratively speaking, climbing over each other in their desire to secure the fleecy staple, and in many instances, prices as compared with those paid a year ago, show an advance of more than 2 cents per pound. Never before, probably, at this stage of the season, has a larger portion of the clip been contracted for. In San Angelo, Texas, wools have sold at prices ranging from 13 1/4 to 16 cents per pound, eight months' stock bringing in a number of instances 14@14 1/2 cents, and twelve months', 15@16 cents. The Lampasas wools have moved at extremely high prices, some sales being effected at 16@16 1/4 cents, which means a clean cost of 55 cents, landed in the Boston market. There has been such a scramble for wool, in fact, in some parts of Texas, that buyers have been taking large quantities on the sheep's back, where the sheep are not going to be shorn for some time to come. The Kerrville wools sold at 15 cents for eight months' growth and 16 1/2 cents for twelve months' growth. In Oregon, comparatively high prices have thus far been paid, equivalent to a clean cost of 45@50 cents, landed in Boston, although the season in Oregon at this writing is not fully under way. In western Idaho 13 cents has been paid, and in Wyoming, 13@13 1/2 cents.

The avidity with which the new wools have been taken and the comparatively high prices paid by eastern buyers, indicate great confidence in the minds of the latter in the future of the wool market. Whether their hopes will be realized, of course, time alone can determine. Much will depend on the character of the opening of the light-weight season with manufacturers. If light weights sell at an advance, consumers, it is believed, will

be ready to pay higher prices than a year ago. If the goods do not sell at an advance, they will naturally resist paying higher prices. It must be remembered, however, that the foreign markets are strong with an upward tendency, and that the present and prospective supplies of wool are at the most only moderate. There is talk of a shortage in the Australian clip of about 150,000 bales; so that it is altogether improbable that wools can be bought outside at prices which will enable the purchaser to land them in this country so that they can compete with domestic stock. A continued large consumption of wool is indicated in this country which must be met largely by drawing upon domestic wool. Of course if wool is advanced to too high a point, it will result in a return to the use of substitutes. But the limit to which prices can be advanced before such a movement sets in, would seem to be at least a few cents per pound above the level of prices at present ruling at the seaboard markets where there has been practically no advance in the selling prices of wool for several months past.—American Shepherds' Bulletin.

The Veterinarian.

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

Fistulous Teat.—I have a fresh cow that has an extra hole in a teat which leaks constantly. If I should leave a milk tube in that teat to relieve the pressure and scarify the edges of the hole, then stick pins one-fourth inch apart through the sides and draw them together with soft twine around each pin would it probably heal in ten days?
 CHAS. A. BABBIT.

Hiawatha, Brown Co.
 Answer.—Yes, it will heal in ten days if at all. It would be better to use good silk sutures to close it.

Obstructed Teat.—1. A good Jersey cow just fresh, has one teat closed up since she turned dry about two months ago. Milk will not come, even with the hardest pressure of the hand and I have to draw it with a quill. How can I get it to milking again?
 2. Same cow when last fresh, sucked herself when udder got pretty tight. Can you tell me some mixture to be applied to teats that will cure her of the habit? I do not want a preventive as I do not like the harness.
 J. B. ANDERSON.

Salina, Saline Co.
 Answer.—1. Pass a milk tube each time you milk and it will probably stay open then.

2. Try powdered Barbadoes aloes, two ounces; castor oil, eight ounces; mix and apply twice a day.
Fistula.—I have a gray mare, 10 years old, with fistula. It was bruised or started probably from collar bruise about July 15, last and broke on one side in November and on the other in January. I used Common Sense Liniment until in February, then used solution of carbolic acid. I syringed out once or twice a day. I got the swelling all out, but as soon as I quit, it commenced to swell again and it ran some. Then I got another remedy, a liniment that seemed to work all right, and I treated her for six weeks. It ran and seemed to act all right, then the swelling all went out and it quit running and I thought it was all right. I turned her out in the pasture the last of May and in ten days it commenced to run again, just a little. Ten days ago I took a piece of leather and probed and found that the pipe runs from two inches below top of withers and just behind where collar would work straight through to the skin on the other side. It appears to be just above the bone in the neck and under the main cord on the top of the neck. I can pump water into one side with a syringe and it goes right through and out at the other side. I have not done anything for it for two or perhaps three weeks now, and it is swelled a little and running some on one side. I do not work her and have not since first begun. Please state if it makes any difference whether she is worked or not, and what would be best to do.
 I. A. HIGBEE.

Star, Greenwood Co.
 Answer.—Make a good free opening on each side and use a metal syringe or hard rubber with a good nozzle and wash it out well with carbolic acid and water, one to twenty, every day, and twice a week inject the following, after

KENDALL'S SPAVIN CURE



Used 20 Yrs.
 Great Results
 Cleveland, Ohio,
 May 17, 1900.
 Dr. B. J. Kendall
 Co., My Dear Sirs:
 I have for the past twenty years used your KENDALL'S SPAVIN CURE on many horses, receiving great results.
 Yours truly,
 J. T. Dewey.

The old reliable remedy for Spavins, Ringbones, Splints, Curbs and all forms of Lameness. It cures without a blenheim because it does not blister. Price \$1, Six for \$5. As a liniment for family use it has no equal. Ask your druggist for KENDALL'S SPAVIN CURE, also "A Treatise on the Horse," the book free, or address DR. B. J. KENDALL CO., ENOSBURG FALLS, VT.

Horse Owners! Use



GOMBAULT'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 Blemishes from Horses and Cattle. SUPERSEDES ALL CAUSTIC OR FIRING. Impossible to produce scar or blenheim. 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.

CAR-SUL CATTLE DIP

CURES Mange and Itch; KILLS Lice, Ticks and Sew-Worms; HEALS Cuts, Wounds, Galls and all Sores.
 GUARANTEED to do the work without injury to eyes or other parts of animal. At dealers or by express, prepaid, \$1.50 per gallon. 25 cent cans—dealers only. Special price in quantities. Write to-day for book and free trial Car-Sul. Address
MOORE CHEMICAL CO.,
 1501 Genesee St., Kansas City, Mo.

WORK THE HORSE IF NECESSARY

BALMOLINE

NATURE'S WONDERFUL HEALING SALVE.
 CURES SORE SHOULDERS, COLLAR GALLS, SCRATCHES, CRACKED HEELS, SITTFASTS, CHAFES, ROPE BURNS, WIRE CUTS, SORE TEATS, OLD STANDING SORES AND ALL FLESH WOUNDS OF
MAN OR BEAST

PREVENTS FLIES, MAGGOTS, SCREW WORMS AND PROUD FLESH. ALL DEALERS
 SEND 4c FOR TRIAL SIZE TO
 S. H. DeHUY, P. O. C. STATION A, DENVER, COLORADO.
 ENDORSED BY HORSEMEN EVERYWHERE

Abilene, Kans., May 14, 1900.
 Dr. B. H. DeHuy, Denver, Colo.

Dear Sir:—I take great pleasure in extending to you my congratulations in giving to the public so valuable a remedy as Balmoline for the relief of our best friend, the horse. I have used in the past ten years many remedies for wire cuts and flesh wounds of all kinds, but never had any work with such entire satisfaction as Balmoline.
 Respectfully yours,
 F. G. PULLIVER.

WHEEL CHAIRS.

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

RECLINING CHAIRS... FOR LIBRARY OR SICK-ROOM.
 Every known position for comfort. Write us for Free Illus. Catalog. Mention this paper.
STEVENS CHAIR CO.,
 405 6 St., Pittsburg, Pa

WINTER WATER.

When the stock goes into winter quarters you will want to be sure of a reliable and constant supply of water. A bored well is the safest and surest. Our Well Machinery does it best and cheapest. Drills 25 to 1500 ft deep. We make all appliances. Have stood the test of 13 years. We also have Gasoline Engines for all purposes. Send for free catalog.
W. M. Thompson Co., Sioux City, Iowa.
 Successors to Sioux City Engine & Iron Works

CORN HARVESTERS. It cuts and throws it in pile. One man and one horse cuts equal to a corn binder. Price \$12. Circulars free.
NEW PROCESS MFG. Co., Lincoln, Kans.

cleaning well and oiling outside with oil of tar and fish oil, half and half: solution of caustic potash eight ounces, chloride antimony three ounces, olive oil five ounces; mix and have an assistant hold a sponge in one side and hold sponge tight around the syringe so as to force the entire cavity full of the medicine and hold it there for one minute and then clean off what runs outside. Four times will be enough to use the medicine. It would be better if you can have a qualified veterinarian operate on her. Keep her up and feed from a high manger in a darkened stable until after she is healed up for some time and not work her.

Bloody Milk.—We have a fine young Jersey cow, past 4 years old, with her second calf. The calf is 2 months old. The cow is in good condition, apparently perfectly healthy, and in good flesh. Has good pasture, partly clover, and is fed bran night and morning, with some hay. For several days past she has been giving bloody milk out of one teat. Can you tell me the cause of this, and the remedy?

CLAUDE JONES.
Baxter Springs, Cherokee Co.
Answer.—It is probably caused from an injury. Take fluid extract of belladonna one ounce; camphor spirits one and a half ounces; and sweet oil five and one-half ounces. Mix and apply twice a day. Keep in a darkened stall during the day and feed light. Give one ounce a day of nitrate of potash in drinking water or feed.

Entries for Hereford Shows.

Secretary Thomas, of the American Hereford Breeders' Association requests us to announce that he is now ready to receive entries for the national show of Herefords to be held in connection with the Minnesota State Fair the first week in September. The prospects are for an exceptionally good show and that there will be more exhibitors represented in the show ring than ever before. August 15 is the closing date for receiving entries for the Minnesota show, and prospective exhibitors will do well to write Secretary Thomas, at the Union Stock Yards, Chicago, for entry blanks at the very earliest moment.

An Excellent Record.

"We have just received the following cable message from Mr. James McLaughlin," writes McLaughlin Bros., Columbus, O. and Kansas City, Mo: "Mortagne, Sur Suine, July 5th, 1902. "McLaughlin, Columbus, Ohio. "Thirty prizes. Every first except one."

"This message in connection with the two previous ones shows that our horses in France have carried off nearly all the prizes at the leading stallion shows held in that country.

"Mr. McLaughlin will leave France on Thursday, July 10, with the largest importation that we have ever brought to this country.

"The prizes that we have won are evidence that they are the best horses that will leave France this year. We hope that nothing will happen to them so that they will arrive safely in Columbus on July 22."

Galloways Getting There.

Since the Hereford Association's office has been moved to Chicago, the Drovers' Telegram has been "whooping it up" for the Galloways whose association headquarters are retained at Kansas City. We quote the following:

"For the first time in their history Galloway cattle will this year be entered in all the Western State fairs. Secretary R. W. Park of the national association to-day received a letter from Chas. A. Galloway, the secretary of the Colorado State Fair Association, in which the latter announced that the directors of the fair had made an appropriation of \$500 for Galloway premiums. This prize list by the Colorado fair makes the Galloways a factor in all Western State events this fall. The Colorado fair will be held at Pueblo, September 15 to 19.

Secretary Galloway said in part in his letter: "We would also appreciate your using your influence to the end of securing as entries breeders from your part of the country. Last year we had exhibits of Shorthorns from as far east as Missouri, and this season we expect to have Galloways from Kansas, Missouri, Nebraska, and Iowa.

"Colorado at present is one of the most prosperous States in the West. This is an opportunity for the Galloway breeders to introduce their cattle that ought not be overlooked."

This action of the Colorado Fair Association is one of deep significance. The removal of headquarters of the Herefords to Chicago, which is regarded as a distinctively Eastern city by breeders west of the

"C" With a Tail.

The "C" with a tail is the trademark of Cascarets Candy Cathartic. Look for it on the light blue enameled metal box! Each tablet stamped C. C. C. Never sold in bulk. All druggists, 10c.

A MECHANIC'S PERIL

HE SAVED HIMSELF WHEN OTHERS WERE POWERLESS TO HELP.

E. J. Winn Had a Narrow Escape While Working at the Sedgwick Machine Works—The Account as He Gave It to a Reporter.

E. J. Winn, a machinist in the employ of the Sedgwick machine works, at Poughkeepsie, N. Y., had a narrow escape, but saved himself by his own efforts. He told the story to a reporter as follows:

"I had been working here for eleven years," he said, "without even a week's time to spend in rest. It was all right till a year ago when I began to lose flesh and to experience a severe pain in the right side. My appetite was fair but I could eat only the plainest of food and not heartily of that. My weight was reduced to 118 pounds.

"Besides the pain which was very sharp at times, I could not stoop over without being dizzy when I stood erect again, and my blood was thin and watery. I employed physicians who said I was suffering from indigestion. I did not obtain any material relief and as a friend suggested that I should try Dr. Williams' Pink Pills for Pale People, I did so.

"The result is very evident. I noticed a little improvement by the time the first box had been taken. I persisted, and continued till four boxes had been taken. This was about a year ago. I have had no return of the trouble; I am back at my normal weight of 132 pounds and am feeling well and strong. If anything I can say about the remedy will do any good to others who are afflicted as I was, I am glad to say it, for there is no doubt that Dr. Williams' Pink Pills for Pale People cured me."

Mr. Winn lives at No. 325 Church Street, Poughkeepsie, N. Y., and is willing to substantiate his above statement. The pills which cured him are not a patent medicine, but a prescription used for many years by an eminent practitioner who produced the most wonderful results with them, curing all kinds of weakness arising from a watery condition of the blood or shattered nerves, two fruitful causes of almost every ill to which flesh is heir. Dr. Williams' Pink Pills for Pale People are sold by all druggists, or direct from Dr. Williams Medicine Co., Schenectady, N. Y., 50 cents per box; six boxes for \$2.50. Send for free booklet of medical advice.

Missouri, has had the effect of throwing the Galloways into prominence as the "Western breed." Heretofore the Herefords claimed that honor. Now the Galloways are looming towards the front. They maintain headquarters in the West, are the only show breed that does so now, and show every effort to cater to the plainmen. This policy is having its effect in a manner beneficial to the breed. Galloways are now located in New Mexico, Arizona, Colorado, Utah, Montana, Wyoming, and other Western States.

Scarcity of Good Bulls.

During the past two weeks the Kansas Farmer has received a number of reports showing an exceptionally brisk trade in the sale of pure-bred bulls, all of which emphasizes the significant fact that there are not enough pure-bred bulls of serviceable age to supply the legitimate demand.

During the spring the demand for pure-bred bulls was generally reported dull, although there was splendid inquiry; but the unusual dry weather up to the middle of May made the general farmers and buyers apprehensive as to the immediate future. But now with improved prospects, since the heavy general rains, and the assurance of a huge corn crop together with the big crops of oats and hay now on hand, there is a likelihood that this fall will witness the fact that there is a dearth of pure-bred bulls of serviceable age to supply the demand.

Breeders having a supply of good bulls should not fail of immediate announcement of the fact. And the wise buyer who needs serviceable animals for use this fall or next spring should hustle wisely and well before it is too late. "A word to the wise is sufficient."

Handle Cattle Only.

Elsewhere will be found the card of the L. A. Allen Cattle Commission Company, Kansas City Stock Yards. This firm does strictly a cattle commission business, sells all kinds of cattle on commission, and fills orders for stockers and feeders. They are a reliable firm for farmers and cattlemen to do business with. Mr. Allen is well and favorably known as one of the best and most energetic cattlemen on the market, having been in the business for over twenty-five years, and having handled as many cattle of all grades as any other man. Mr. James R. Hawpe is associated with Mr. Allen as cattle salesman. He is a good judge of all kinds of cattle, having been in the business all his life, and knowing the market value of all grades. It seems the L. A. Allen Cattle Commission Company should receive a liberal share of patronage from those who buy and sell cattle in the Kansas City market.

Gossip About Stock.

An opportunity to secure Scotch Collie pups of excellent breeding is offered this week by H. D. Nutting, proprietor of the Walnut Grove Farm, Emporia, Kans. Notice his advertisement on page 745.

Manwaring Bros., breeders of Large English Berkshire swine, of Lawrence, Kans., have claimed the date of November 7, for a public sale of Berkshires and state that stock are doing well, especially spring pigs. They also have a few gilts bred for September and October farrow for present sale.

Is there any money in raising pigs? Nine months ago James Neel, a farmer living near Hiawatha, Kans., bought six sows for \$42.60. Recently he sold the six sows and forty-two of their pigs for \$325. Mr. Neel has twenty-one of the pigs left. They were fed on skim-milk and only 100 bushels of grain.

The Kansas Farmer has received Volume 51 of the American Shorthorn Herd-book. This volume contains the pedigrees of bulls from No. 174001 to No. 179365 inclusive, and also the pedigrees of 7,126 cows. The price for this volume is \$3, or it will be sent post-paid for \$3.30 by John W. Grove, Secretary, Springfield, Ill.

N. B. Sawyer, breeder of Duroc-Jersey swine, of Cherryvale, Kans., who has 100 pigs of the breed for sale, writes that farm crops were never better. Of wheat fully two-thirds of a crop has been harvested; oats are good; corn is now laid by and stands higher than a horse and promises to be excellent. But the country is short on hogs. There is a strong demand for breeding hogs.

In view of the active interest in dairy cattle, and especially the beef breeds which are prominent because of their milk qualities, we call attention to the new advertisement of Chas. Foster & Son, Foster, Butler County, Kansas, breeders of Red Polled cattle, also Light Brahma chickens. They have for ready sale a few young Red Polled calves and a lot of prize-winning Light Brahma chickens.

The bull market which has been very dull all summer, is picking up again, judging by the sales made by M. R. Platt & Son, of Kansas City, last week. They have sold seventeen Galloway bulls since Monday, all of which went to Kansas. John Miller, the big ranchman, of Hill City, took ten head of prime yearlings. The Lonsdale Stock Farm Company, of Barnard, through its manager, Joe Wear, purchased two head, and John Marshall, of Whiting, purchased five head. The Miller and Marshall consignments will be shipped to their new homes next Monday.

A recent press dispatch from Emporia, Kans., states that coyotes are becoming a pest in the country districts north of there. William Benedict, residing on his farm about eighteen miles from Emporia, reports serious ravages by coyotes among sheep in that vicinity. He said sometimes six or a dozen sheep would be killed in one flock in a single night. Ex-County Superintendent Spiker is a prominent sheep-raiser in that section, and his loss is reported to be considerable. A hunt for the animals has been instituted, and several scalps, for which there is a county bounty, have been turned over to the clerk of the court.

Guy P. Cobb, revenue inspector, of Guthrie, Okla., has completed the compilation of a list of the cattle in the Indian Territory. He estimates there are 1,000,000 head, distributed as follows: Chickasaw nation, 500,000; Choctaw nation, 250,000; Creek nation, 150,000; Cherokee and Seminole nations, 100,000. It is estimated that cattle will increase in value \$5 a head in one grass season. There has been an advance in the price of cattle since the first of the year, which will add another \$5 a head, making the total increase in valuation on cattle in the territory \$10,000,000 for the year. The grass has been good and it is the one year in three that cattlemen are assured of profits.

F. P. Healy, of Bedford, Iowa, has made arrangements to hold one of his fall combination sales of Shorthorn cattle at South St. Joseph this coming autumn. This announcement will be received with much favor by the breeders and by the stockmen in general who are within the St. Joseph "sphere of influence." Mr. Healy is a leader among Shorthorn cattle men, combining ripe knowledge of the breed and trading conditions with executive ability, which singles him out as the man to handle the combination auctions for a large number of his fellow breeders. South St. Joseph is a good point from which to disperse a hundred or so head of these cattle at such a sale, and undoubtedly the success of this initial sale will attract other breeders and an important line of live stock dealing will be added to that already carried on at this market.

Abbottsford Stock Farm of Shorthorn cattle, owned by D. Ballantyne & Sons, Herington, Kans., is a well-equipped breeding establishment that will soon rank high as a model establishment of its kind in the West. The regular card of this firm appears in the Kansas Farmer for the first time this week on page 740. They have had a ready sale for their bulls from year to

Mulford's Tuberculin

DETECTS THE PRESENCE OF TUBERCULOSIS IN CATTLE AND PROTECTS YOUR ENTIRE HERD

Mulford's Tuberculin, Mallein, Anthrax or Charbon Vaccine, Black-leg Vaccine and Pneumonia Serum are accepted by all veterinarians as the standard of excellence. They are of uniform strength and reliability.

PRICES FOR TUBERCULIN
2 doses 35c 10 doses \$1.25 50 doses \$4.50
5 " 75c 25 " 2.50 100 " 8.50

Write for our FREE BOOK containing valuable information to every breeder and dairyman.

H. K. MULFORD CO., Chemists
13th & Pine Sts., Philadelphia
74 Wabash Avenue, Chicago

A BOY DOES A MAN'S WORK



SUPERIOR DISC DRILLS

REQUIRE NO EXTRA HELP IN TRASHY GROUND. Discs roll over or cut through trash and cover all the seed.

The Disc does better work in hard or soft ground than any Hoe or Shoe Drill. The Superior Disc and Superior Feed make seeding easy and good results certain.

You run no risk when you buy a Superior. It is the drill for drilling all crops—Wheat, Oats, Cow Peas, Corn, etc., as well as all Grasses.

Patents sustained in highest Courts. Your request on a postal card will bring Illustrated Catalogue No. 20.

SUPERIOR DRILL CO.
Springfield, Ohio, U. S. A.

With a SUPERIOR DISC DRILL

WELL DRILLING MACHINERY.

ESTABLISHED 1867

PORTABLE and drill any depth, by steam or horse power.

42 DIFFERENT STYLES.

We challenge competition. Send for Free Illustrated Catalogue No. 83.

KELLY & TANEYHILL CO., 83 Chestnut St., Waterloo, Iowa.

DISEASES OF MEN ONLY.

The greatest and most successful Institute for Diseases of Men. Consultation free at office or by letter. BOOK printed in English, German and Swedish. Explaining Health and Happiness sent sealed in plain envelope for four cents in stamps. All letters answered in plain envelope. Various cures in five days. Call or address

Chicago Medical Institute,

513 Francis St., ST. JOSEPH, MISSOURI.

ONLY ONE STATE FAIR IN KANSAS THIS YEAR

It will be held at Hutchinson September 15-19.

\$10,000.00 IN PREMIUMS.—\$2,000.00 given away in premiums in the Cattle Department free of all entrance money.

Half fare rate on all railroads to the State Fair at Hutchinson from all points in Kansas, and Kansas City and St. Joseph, Mo.

Read the following resolution which was passed at the meeting of the Improved Stock Breeders Association held in January, 1902, at Topeka, Kansas: "Resolved, That inasmuch as the Central Kansas Fair Association propose to hold an agricultural and live stock fair in Hutchinson this fall, on a scale equaling the usual State Fair, that we hereby tender to that Association any help or assistance, or any endeavor we can to aid and further it as a battle ground for the show material for the State of Kansas this year, preparatory to the Louisiana Purchase Exposition at St. Louis in 1903." For premium list, drop a card to

ED. M. MOORE, Secretary, Hutchinson, Kans.

year at fair prices and have concluded to sell their herd-bull, Beauty's heir 145125, after August 15. He has been an exceptionally satisfactory breeder in their herd as the uniform lot of calves show. The young herd-bull which will soon stand at the head of the herd was recently purchased in Massachusetts and is called Marshall Abbottsburn 3d. He traces direct, on the sire's side, to Imp. Craven Knight, Imp. Princess Alice, Field Marshall, Pride of the Isle, and Roan Gauntlet. In order to make room for a number of registered females Mr. Ballantyne offers for ready sale thirty high-grade cows and helpers, good milkers, which will be sold at a reasonable price if taken soon.

The dairymen of the West will be in the market this fall for a large number of grade Shorthorn cows and helpers, and breeders having this class of stock should take advantage of the improved condition and expansion of the dairy industry so as to supply in part this general demand. An announcement in the advertising columns of the Kansas Farmer will undoubtedly result in a good sale. Readers of the Kansas Farmer who are needing good dairy cows should carefully scan our advertising columns where they will always find the best bargains in this line.

A report from Louisville, Ky., says that plans have been drawn and the capital subscribed for the erection of a million-dollar packing plant at that point. The interested parties are said to be Ira Brainerd and Walter Brainerd, of Pittsburg; Frank Brainerd, president of the New York Produce Exchange; F. E. Humphrey, of Chicago, and a member of the firm of J. P. Squires & Co., of Boston. Confirmation of the rumor has not yet been made. Most of the parties named are already in the packing business on a moderate scale. If the plant is built it will represent the interests of a number of small concerns merged together.

Louisiana Purchase Exposition Officially.

EDITOR KANSAS FARMER:—An international exposition will be held in St. Louis to celebrate the centennial anniversary of the first expansion of the nation, a step which made possible the commercial and political development which has given the United States her present commanding position in the world's affairs.

The congress of the United States has stamped its approval upon this great undertaking by appropriating \$5,000,000, and the city of St. Louis has appropriated the magnificent sum of \$10,000,000 to aid in its installation in a manner commensurate with its great mission.

In extent and variety of interests, as well as in the amount of money to be expended, it is designed on a larger scale than any preceding exposition in the world's history.

The Missouri legislature at its last session appropriated \$1,000,000 for its building and exhibit. The Illinois Commission is now in the field backed with an appropriation of \$250,000, which probably will be doubled at the next session. In Iowa a bill appropriating \$125,000 was passed by the legislature; this amount probably will be increased, New York has made a preliminary appropriation of \$100,000, and Mississippi, a State that never before made an appropriation for exposition purposes, has provided \$50,000 for her participation in this great enterprise.

The enterprising State of Kansas has always played a prominent part in the development of the great West and in every line leading to the advancement of humanity. Her sons and daughters are among the best of every State and Territory in the Union, and her social, commercial, and civil influence extends throughout the whole. We ask that you will give all possible aid in securing an increase of the appropriation made by the last legislature, to enable Kansas to be so well represented that it will not be second to any other State. We are especially anxious to have Kansas do her full duty in this matter on account of the moral effect it will have on other States. Laying aside all sentiment and State pride and considering it strictly in the light of a business proposition, a liberal appropriation by the legislature would be repaid many fold within the next few years.

CHAS. M. REEVES,
Secretary Committee on Legislation.

Is There a Shortage of Broom-Corn?

The annual consumption of broom-corn in the United States and Canada is from 30,000 to 35,000 tons, and occasionally 40,000 tons. The consumption last year was about 31,000. The crop of 1901 is estimated at 17,000 tons. It would, therefore, require some 13,000 or 14,000 tons of the surplus of previous years. We have it from a reliable source that there were 9,500 tons of the 1899 crop held by the United States Broom Company, consumed last year, leaving the remainder of the surplus to come from the 1900 crop. From present outlook the yield will be less than last year. Where is the surplus to come from this year?—Broom-corn Journal.

TO MOTHERS

Mrs. J. H. Haskins, of Chicago, Ill., President Chicago Arcade Club, Addresses Comforting Words to Women Regarding Childbirth.

"DEAR MRS. PINKHAM:—Mothers need not dread childbearing after they know the value of Lydia E. Pinkham's Vegetable Compound. While I loved children I dreaded the ordeal, for it left me weak and sick



MRS. J. H. HASKINS.

for months after, and at the time I thought death was a welcome relief; but before my last child was born a good neighbor advised Lydia E. Pinkham's Vegetable Compound, and I used that, together with your Pills and Sanative Wash for four months before the child's birth;—it brought me wonderful relief. I hardly had an ache or pain, and when the child was ten days old I left my bed strong in health. Every spring and fall I now take a bottle of Lydia E. Pinkham's Vegetable Compound and find it keeps me in continual excellent health."—Mrs. J. H. HASKINS, 3248 Indiana Ave., Chicago, Ill. — \$5000 forfeit if above testimonial is not genuine.

Care and careful counsel is what the expectant and would-be mother needs, and this counsel she can secure without cost by writing to Mrs. Pinkham at Lynn, Mass.

Higher Authority.

An Irishman, about whom the Detroit Free Press tells, had enlisted in the cavalry service, although he had never been on a horse in his life. He was taken out for drill with other raw recruits under command of a sergeant, and, as luck would have it, secured one of the worst buckers in the whole troop. "Now, my men," said the sergeant in addressing them, "no one is allowed to dismount without orders from a superior officer. Remember that."

Tim was no sooner in the saddle than he was hurled heels over head through the air, and came down so hard that the breath was almost knocked out of him.

"Murphy," shouted the sergeant, when he discovered the man spread out on the ground, "you dismounted!"

"I did."

"Did you have orders?"

"I did."

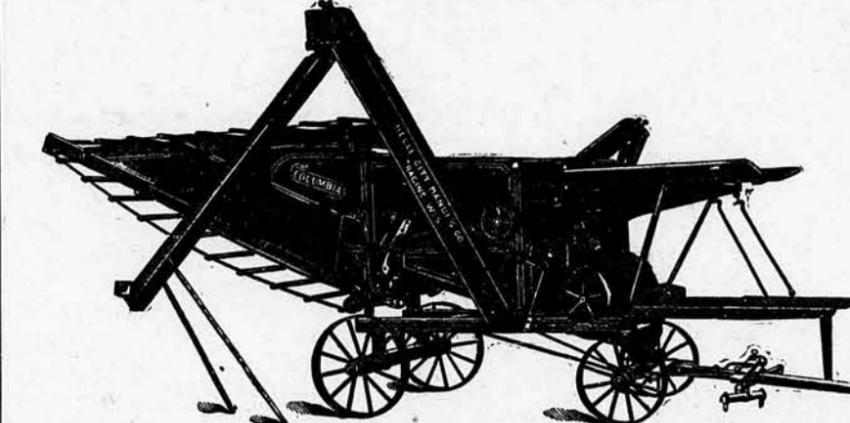
"From headquarters, I suppose?"

with a sneer.

"No, from hindquarters."

"Take him to the guardhouse!" ordered the sergeant.

A young tailor named Berry lately succeeded to his father's business and



sent in his account to a customer somewhat ahead of time, whereupon he wrote the following note: "You must be a goose-Berry to send me your bill-Berry before it is due Berry. Your father, the elder-Berry, would have had

Christian College Splendid new Dormitory, \$75,000; new Auditorium, \$32,000. Academic degrees. Schools of Music, Art, and Oratory. An elegant college home; exclusive patronage. For catalogue, address Secretary Christian College, Columbia, Mo.

The Topeka Business College
LEADING SCHOOL OF BUSINESS AND COMMERCE IN THE WEST
Large Schol. Reasonable Rates. Good Positions. Catalogue Free. Address L. H. Strickler, Topeka, Kans.

more sense. You may look very black-Berry and feel very blue-Berry but I don't care a straw-Berry for you and your bill-Berry."

Editor—Who sent in this item about that last hailstorm? Sub-Editor—Young Jenkins of Aravada. Why? Editor—Why, he says some of the hailstones were as large as canary birds' eggs—that chap's too honest to be a country correspondent—just drop him a line and offer him the position of cashier in this establishment.

Johnny Alfalfa was asked to parse the word cow and he did so in this wise: "Cow is a noun in the present tense—she switches her tail against the fence."

Washing Made Comfortable.
There are washers and washers, but the greatest success of them all in the opinion of the writer is the 1900 washer made by the 1900 Washer Company, Binghamton, N. Y., advertised on page 746 of the Kansas Farmer. Last year while at the Pan-American Exposition this washer was on active exhibition and attracted more attention than any machine of its kind ever shown. All that saw the washer in operation were unanimous in declaring it an unqualified success. Ever since seeing the machine we have been anxious to have it advertised in the Kansas Farmer as we believe it to be a great household necessity. Look up the advertisement and either send them an order or write them for particulars as it is sold absolutely on its merits and we hope that it will meet with a large sale among our readers.

Green Corn Cutter.
Have you noticed the attractive advertisement on page 740 of a new manufactory at Topeka, Kans., known as the Green Corn Cutter Company? They ask the pertinent question, why-buy-a-corn-cutter, when you can purchase a sled cutter for half price? This cutter has been thoroughly tested and does quite satisfactory work. It runs easy and cuts and gathers corn, cane, Kafir-corn, or anything which is planted in rows. The price, \$12, is certainly reasonable for such a well-made cutter as is being made by the Green Corn Cutter Company, of Topeka, Kans.

Publishers' Paragraphs.
Politicians are not the only ones that are getting their lightning rods up this year; but many farm owners who are erecting new buildings feel like insuring their property against loss by lightning by the erection of lightning-rods, and there is none better in the market than that manufactured by Townsend & Dooley, of Topeka, Kans., whose advertisement appears this week on page 740. They have already had a large sale in Iowa and adjoining States.

The Christian College of Columbia, Mo., an institution for women, is now in its fifty-second year. It has a splendid new dormitory which cost \$75,000 and a new auditorium which cost \$32,000. This is an excellent college home with an exclusive patronage. It contains schools of music, art, and oratory, and also furnishes the academic degree. Many of the young lady readers of the Kansas Farmer will find this college very worthy of consideration and any who contemplate attending college this fall should not fail to write for catalogue to Mrs. L. M. St. Clair, Secretary, Columbia, Mo.

Thrashing Machinery for the Farmer.—The small thrashing machine has had a large sale in the Northwest the last two years. Farmers have found it most practical to have their grain threshed by small machines, as they will do better work and save all the grain that is oftentimes wasted by the large machines in their hurry in getting from one job to another. By own-

The Colorado Flyer via Santa Fe.

A Convenient Train for Summer Tourists.

Composite Car, Palace Sleepers, Free Chair Cars, Observation Sleeper, Cafe Car between Colorado Springs and Denver.

DAILY, BEGINNING JUNE 1.

Leave Topeka 8.35 p. m. Arrive Colorado early next morning.

This train is in addition to the Colorado Express leaving Topeka 11.50 a. m., and arriving Colorado following morning, and carrying free Chair Cars, Pullman Sleepers and Observation Car. Reduced rates to Colorado and Utah daily from June 1 to September 15.

For particulars and copy "A Colorado Summer," apply to

T. L. KING, Agt., Topeka.

T. M. JAMES,
P. O. Building North Topeka.

A FENCE MACHINE
That combines Simplicity, Durability, Rapidity and Economy. The DUPLEX is made over 100 styles, 50 to 70 rod a day, of Horse-high, Bull-strong, Pig and Chicken-light Fence that combines Strength, Uniformity, Permanency, Reliability and Efficiency AT COST OF WIRE. Machine on Trial. Full information free. Wire of every description at Wholesale Prices. Write today. KITSELMAN BROTHERS, D 37 Muncie, Ind.

the Belle City Manufacturing Company, found on another page of this publication. This firm is located at Racine, Wis., but has branch offices through the Northwest. We recommend our readers to write to them for printed matter, and if interested in the cost of a machine, send for the address of their nearest Northwest branch.

Notice.
To All Whom It May Concern:—Notice is hereby given that on the 8th day of July, 1902, a charter was duly filed in the office of the Secretary of State of the State of Kansas, by the undersigned, incorporating the Kansas Union Life Insurance Company, for the purpose of transacting the business of life insurance. The names and residences of the Directors are as follows:
Chas. J. Devlin, Topeka, Kans.; Samuel T. Howe, Topeka, Kans.; Alpheus K. Rodgers, Topeka, Kans.; Joab Mulvane, Topeka, Kans.; P. I. Bonebrake, Topeka, Kans. The place of business is Topeka, Kans.
CHAS. J. DEVLIN,
SAMUEL T. HOWE,
ALPHEUS K. RODGERS,
JOAB MULVANE,
P. I. BONEBRAKE.
Topeka, Kansas, July 9, 1902.

The Young Folks.

Conducted by Ruth Cowgill.

THE GUEST.

Luck tapped upon a cottage door,
A gentle, quiet tap;
And Laziness, who lounged within,
The cat upon his lap,
Stretched out his slippers to the fire
And gave a sleepy yawn;
"Oh, bother let him knock again!"
He said, but Luck was gone.

Luck tapped again, more faintly still,
Upon another door,
Where Industry was hard at work
Mending his cottage floor.
The door was opened wide at once;
"Come in!" the worker cried
And Luck was taken by the hand
And fairly pulled inside.

He still is there—a wondrous guest
From out whose magic hand
Fortune flows last—but Laziness
Can never understand
How Industry found such a friend;
"Luck never came my way!"
He sighs, and quite forgets the knock
Upon his door that day.
—Youth's Companion.

Girls.

MRS. J. RIDLEY LEWIS.

The writer realizes that there are girls,—and girls, and they are as diverse as they are numerous. Yet there are certain tendencies which are common to girls as girls. There is nothing sweeter than a girl; and yet, sometimes one thinks there is nothing more disappointing.

We are going to discuss the average girl as she has seemed to us, noting her virtues and her graces, yet not overlooking her faults and weaknesses. We shall take up her failings first so as to get the disagreeable part out of the way.

The average girl is silly. Do not be indignant—I was a silly girl, myself, once. But there is no use in trying to deny that girls are silly, for everybody knows it. It is silly to giggle so excessively. There are horrid people who affirm that women and girls have no sense of humor, whatever, and yet they know there is no other creature who laughs and giggles as much as a girl. How do they reconcile their theory with this fact? The truth is simply this, a girl's too frequent giggle is not caused by fun, amusement, jollity; but by excitement, embarrassment, or self-consciousness. A giggle is merely a weak imitation of a laugh. I do not agree that girls have no sense of humor. They are frequently the quickest to see a point, to grasp the pith of a joke, to take in the whole of a funny situation, and their laughter is most spontaneous and most appreciative. It is a pity they have ruined their reputation for humor by their over-ready giggle.

Don't you think the average girl's conversation might be more sensible? It is true, is it not, that girls talk a great deal about clothes and boys, and about many trivial things. I can look back to my girlhood and remember many an hour spent with other girls which was absolutely wasted; in which we talked eagerly and enthusiastically about—nothing at all; in which I had neither learned anything to make me stronger or wiser or nobler, nor imparted anything of value. There are many helpful things to talk about, things that are worth while. In all this wide beautiful world about us, we ought to be able to find things to talk about, without ever having to discuss personalities and trivialities.

Do you know, I think girls are not always perfectly honest. I have known a good many girls who were, unqualifiedly, liars; but they, I am glad to believe, were not the average girl. But it is true that the average girl will resort to subterfuges, will withhold a part of the truth, will sometimes act the hypocrite, will agree for the sake of peace when her convictions are quite different. It is sometimes very difficult to be sincere, yet sincerity is a mark of strength that every one recognizes. It brings one the respect of her neighbors, and, what is most precious of all, the respect of her own best self.

We have almost reached the end of our list of weaknesses, yet there is still one thing to be said. The average girl is inclined to be self-centered. She is the center around which in a great circle the rest of the world moves. Ruskin says, "Girls should be like daisies; nice and white, with an edge of red if you look close; making the ground bright wherever they are; knowing simply and quietly that they do it, and are meant to do it and that it would be very wrong if they did not do it." You see, girls, like daisies are put here, not only to absorb the moisture and to breathe in the bright sunshine, they are to make the world all around them brighter and

better for their presence. A girl must give of her brightness, her beauty, her young strength. She must not expect the world to re-arrange itself at her bidding. The self-centered life is not the happy life; it is of all lives the most unhappy.

Now, having completed the ugly list of the girl's shortcomings, let us turn the page and see if there are any virtues there. Let us just think, for a moment, what the world would be if all the girls were taken out of it. Let us see what would be left. A great many old men and boys and a few old women. The men would grow crabbed and cross, the boys would be coarse and rough, the old women would soon be worn out with care and overwork, and everybody would be gloomy and lonesome for the want of sympathy and love and good cheer. Indeed I should dislike to live in the world if all the girls were taken away.

Then perhaps girls are of some use in the world—perhaps they have some virtues. Girls are helpful, girls are gentle, dainty and refined; girls are sympathetic, faithful and loving. But best of all, girls are strong. Their strength is not like a boy's strength, to do, to dare, to fight; a girl's strength is the quieter, deeper strength, to bear and forbear, to love and to forgive, to hope against hope, to comfort others though she need comfort herself. This is a girl's strength and this is her glory.

The Rose Tree.

"Rose! Thou art the fondest child
Of dimpled spring, the wood nymph wild!
Even the gods, who walk the sky,
Are amorous of thy scented sigh!"

The rose is of a royal family, but, contrary to the usual royal custom, it is a large and prosperous one. To it belong the peach, pear, apricot, almond, mountain ash and the brambles. But the rose tree itself was produced by a miracle, according to the Jewish traditions.

In the long ago there lived in Bethlehem a Jewish maiden, named Zillah by Southey. Zillah was so surpassingly fair and gentle that all Judea praised her virtue and loveliness. Her dark eyes were radiant with the revelations of a beautiful soul. So great was the charm that all who looked upon her could never efface the remembrance from their hearts, and many there were who pined for love of the heart that they knew yearned only for the divine one. In despair they sighed, and their hearts bowed in homage to the gentlest of souls, all except one, Hamuel, who saw, desired, despaired and then despised. In his hatred for the purity that repulsed his brutal love, he vowed revenge.

He managed to have the report spread that Zillah was possessed of evil spirits. Envious tongues repeated the tale to jealous ears, and Zillah was condemned to die at the stake. Zillah calmly raised her eyes to heaven in blissful trust as the fagots blazed about her. The flames raged and hissed, then concentrating in one lightning flash, blasted Hamuel, who stood looking on with fiendish glee. To the amazement of the people, the stake branched, budded and bloomed, embowering the innocent and unarmed maiden in roses, red and white—the first seen on earth since the loss of Paradise.

The Rose of Jericho or Rose of the Virgin is the well-known resurrection plant. It is believed to have first bloomed at the birth of Christ. It is said to remain in bloom from Christmas to Easter. There is another tradition to the effect that it sprang up in the footprints of the Virgin Mary as she alighted during her flight through Egypt with the infant Jesus. Its name, resurrection plant, is derived from the fact that during drouth the green parts die, leaving only the lignous framework, which rolls into a ball in drying and is uprooted by the wind and rolled away, but on the return of the rainy season it revives.

In history the rose was destined to play a most important part. In that disastrous struggle, the Wars of the Roses, that desolated England between 1455 and 1485, the red rose was the badge of the house of Lancaster and the white rose the badge of the house of York. The Tudor rose is a combination of the two, and was adopted after the marriage of Henry VII to Elizabeth of York, thus uniting the two houses. It is sometimes a white rose charged on a red rose, and sometimes a single rose quartered red and white.

The fourth Sunday in Lent is called Rose Sunday, at which time the pope blesses a golden rose. Such a rose was presented to Henry VIII by Pope Leo X, and a few other kings have been honored the same way.—E. M. Barrett, in Home and Flower.

Possibilities of a Bar of Iron.

The man who takes the first bar may be a rough blacksmith who has only partly learned his trade, and has no ambition to rise above his anvil. He thinks that the best possible thing he can do with his bar is to make it into horse-shoes, and congratulates himself upon his success. He reasons that the rough lump of iron is worth only two or three cents a pound, and that it is not worth while to spend much time or labor on it. His enormous muscles and small skill have raised the value of the iron from one dollar, perhaps, to ten dollars.

Along comes a cutler, with a little better education, a little more ambition, a little inner perception, and says to the blacksmith: "Is this all you can see in that iron? Give me a bar, and I will show you what brains and skill and hard work can make of it." When his work is done, he shows the astonished blacksmith two thousand dollars' worth of knife-blades, where the latter only saw ten dollars' worth of crude horse-shoes. The value has been greatly raised by the refining process.

Still another workman, whose processes are so almost infinitely delicate, whose product is so little known by even the average educated man that his trade is unmentioned by the makers of dictionaries and encyclopedias, takes but a fragment of one of the bars of steel, and develops its higher possibilities with such marvelous accuracy, such ethereal fineness of touch, that even mainsprings and hairsprings are looked upon as coarse, crude and cheap. When his work is done, he shows you a few of the minutely barbed instruments used by dentists to draw out the finest branches of the dental nerves. While a pound of gold, roughly speaking, is worth about two hundred and fifty dollars, a pound of these slender, barbed filaments of steel, if a pound could be collected, might be worth hundreds of times as much.

Just as each artisan sees in the crude iron some finished, refined product, so must we see in our lives glorious possibilities, if we would but realize them. If we see only horseshoes or knife-blades, all our efforts and struggles will never produce hairsprings. We must realize our own adaptability to great ends; we must resolve to struggle, to endure trials and tests, to pay the necessary price, confident that the result will pay us for our suffering, our trials, and our efforts.—Success

FOR THE LITTLE ONES

A SLIGHT MISTAKE.

Young Billy boy came running home
As fast as he could run,
And quick unlocked the stable doors
And opened every one.
For you may guess with what delight,
Upon that very day,
To Mr. Brown, the carpenter,
He'd heard his father say:

"I think you have a horse to sell."
"Yes, two," said Mr. B.
"Well," Billy's father answered him,
"Please send them both to me."
And now through little Billy's head
Danced many a vision bright;
In fancy on those horses' backs
He rode from morn till night;
Or else adown the village street
He drove each fiery steed,
Till all the boys throughout the town
Were envious, indeed.

Alas, alas! for rosy dreams
The castles in the air;
The next day home the horses came,
But what a fall was there.

They stood on four legs strong and stout,
As every pony should;
But oh, alas! alackaday!
They both were made of wood.
—Helen Standish Perkins, in St. Nicholas.

Ellen's Queer Babies.

Mary Parton had all the dolls she wanted—little dolls, big dolls, china dolls, rag dolls and wax dolls; dolls with real hair, dolls with no hair, dolls that could close their eyes and dolls that could talk; boy dolls, Japanese dolls, baby dolls, lady dolls, Brownie dolls, and paper dolls. And when Ellen Brown went to see her she thought Mary must be the happiest girl alive, because she had so many, many dolls. But she was not. No, she was often discontented and unhappy. But Ellen did not know this, and so when she asked Mary to come and see her, she said "I haven't as many dolls as you, but I'd like for you to come anyway." So Mary came, and when she had taken off her hat and was sitting on the nice green grass, under the beautiful shade trees, Ellen said "Now, what shall we play, Mary?"

"Oh—let's play that you are Mrs. Brown and I am Mrs. Parton, and I'll live here and you live down there near that corn-field."

So they played that way. Mary lived

the EGGS

the coffee roaster uses
to glaze his coffee with—
would you eat that kind of
eggs? Then why drink them?

Lion Coffee

has no coating of storage eggs,
glue, etc. It's coffee—pure,
unadulterated, fresh, strong
and of delightful flavor
and aroma.

Uniform quality and
freshness are insured
by the sealed package.

in the house under the trees, and Ellen lived down by the corn-field.

"Oh, Mrs. Brown," called Mary, "I'm coming to see you this afternoon. Will you be at home?"

"Yes, indeed, Mrs. Parton," called Ellen, "and I shall be so glad to see you."

So pretty soon, Mary put on her hat and pretended that she wore a long dress, and she pulled up a tall sunflower for a fine silk umbrella and went down to the corn-field and pretended to knock. Ellen came and took her by the hand and led her into her play parlor.

"I am so glad to see you, Mrs. Parton," said Ellen. "I was just dressing my little girl. I will bring her in and let you see her."

Well, what do you suppose she had for her baby, a doll? No, a little baby corn-cob. The long silks were her golden hair, the soft inner husks were her clothes, and Ellen had pushed aside the silks and marked eyes and nose and mouth upon the cob.

"Oh, what a lovely doll," said Mary. "Make one for me, won't you Ellen?"

Of course Ellen did, and Mary said it was much more like a real baby than a hard, stiff china doll.

After a while they both grew tired of their babies, as little girls will, and so they laid them down in the shade of the corn and started off toward the house.

"Oh Ellen, what lovely four-o'clocks!" said Mary, pointing to a clump of red and white flowers.

"I can make you another dollie, if you want me to," said Ellen.

Then she began to pick the four-o'clocks from the bushes. One of them she took for the doll, pulling off the little green cap that covered the small round head. Then she cut off three or four other flowers at the middle and slipped them over "Miss Dollie's" head and crowded them down, so they looked like ruffles on her lovely red dress.

"Oh Ellen, you dear girl," said Mary. "You are the very smartest girl I ever knew. I'm coming to see you every day."

That night Ellen was a very happy girl for she had learned that she had some playthings that were nicer than those that are bought at a store.

FOR OVER SIXTY YEARS

An Old and Well-Tried Remedy. Mrs. Winslow's Soothing Syrup has been used for over Sixty Years by Millions of Mothers for their Children while Teething, with Perfect Success. It soothes the Child, softens the Gums, allays all Pain; cures Wind Colic, and is the best remedy for Diarrhoea. Sold by druggists in every part of the world. Be sure and ask for Mrs. Winslow's Soothing Syrup, and take no other kind.

Twenty-five Cents a Bottle.

WANTED!

YOUNG MEN AND YOUNG WOMEN. We can place them in GOOD POSITIONS through our Employment Bureaus. Must be good Stenographers or Bookkeepers. We prepare such at **The Kansas Wesleyan Business College.** Largest and best equipped Business College west of the Mississippi; highest standard, national reputation. Fourteen professional teachers. Positions guaranteed to all competent Stenographers and Bookkeepers from our school. Tuition low. Board cheap. For Journal Address, **T. R. ROACH, Supt., Salina, Kans.**

SEVEN GREAT SCHOOLS. Chillicothe Normal School
Chillicothe Commercial College
Chillicothe Shorthand College
Chillicothe Telegraphy College
Chillicothe Pen-Art College
Chillicothe School of Oratory
Chillicothe Musical Conservatory

Last year's enrollment 720. \$130 pays for 48 week's board, tuition, room rent, and use of text-books. For FREE Illustrated Catalogue, address **ALLEN MOORE, President, Box O, CHILLICOTHE, MO.**

SHORTHAND

Typewriting, Book-keeping, 12 professors, 1,000 students, \$100,000 college building, cheap board and reasonable tuition. Graduates secure good situations. 64-page Illustrated Catalogue Free. Address **D. L. Musselman, Pres. GEM CITY BUSINESS COLLEGE, Quincy, Ill.**

The Home Circle.

KANSAS WHEAT.

(Written for the Kansas Farmer.)

Oh, the biscuits, biscuits, biscuits,
In a waving field of wheat!

Biscuits hot, with butter on them!
Biscuits sweet with clover honey!
Biscuits, light bread, sweet bread, dough-
nuts,
Crackers, wheatlet, gingersnaps!

Grape nuts, toasted flakes, and "Force"
food,
Plecrusts, tarts, and apple-fritters,
Graham, whole wheat, best White Patent,
Cream of wheat and pancake flour!

Food for babies, food for women,
Food for laddies, food for maidens,
Food for invalids and old folk,
Food for manhood in its strength.

Glucose, nitrogen, and phosphates,
Starch and sugar and albumen,
Brain food, nerve food, food for muscle,
Food for cattle—butter-fat!

Good for calves and sheep and turkeys,
Good to produce soft goose feathers,
Fairly good for dromedaries,
Good for camels with soft hair.

Full of wealth to creer the owner,
Wealth to send his boys to school,
Comforts in the home he's strove for,
Joys to her who's helped him win!
Oh, such potential energies,
In a Kansas field of wheat.

-X-

The Life Beautiful.

FLORA D. REED, ST. CLERE, POTTAWATOMIE
COUNTY.

The editor has asked the women,
through the medium of the KANSAS
FARMER, to answer the questions, what
do we need to help us in the "refining
and spiritualizing of our menfolk" and
how can we live "the life beautiful" our-
selves.

If we are to exercise a refining and
spiritualizing influence over our men-
folk, we will undoubtedly have to be-
gin by living "the life beautiful" our-
selves. Precept without practice will
never accomplish anything worth re-
cording. We are all responsible, in a
great measure, for the moral, mental,
and spiritual status of every one with
whom we associate. If we are lacking
in refinement or spirituality we must
not expect to exercise an elevating in-
fluence upon others. The "life beauti-
ful" must be lived and its influence ex-
erted from within.

Culture and refinement can not be
donned like a garment to be worn only
on state occasions, and be productive of
any good whatsoever. The garment
will surely blow aside, revealing the clo-
ven foot. No amount of pretence, af-
fectionation or outward gilding will suf-
fice to conceal the sham. She who rules
the ideal home from which emanates
the highest type of manhood is not the
club woman, the political woman, the
masculine woman, in short the new wo-
man, but she who is every inch alive
to her duty as wife and mother; who
realizes that the physical, spiritual, and
intellectual growth of her family are her
especial care; whose keen perception
and intelligent forethought comprehend
each individual's needs and strives for
his advancement in that particular line
for which his inclination and natural
bent direct him. In that home may be
nothing to indicate wealth, position, or
power but what is infinitely more to the
purpose, there is that peace, happiness,
and contentment which tend to the pro-
duction and growth of character. The
subject of one of the graduating ora-
tions of the Kansas Agricultural Col-
lege this year was "As a man eateth so
is he," which solves, no doubt to the
mind of its writer at least, the problem
of the perfect man. Indeed there is
more in the subject than the unthinking
may imagine, yet we would not go to
the extreme that a Chicago professor
does and say that "a human being's
physical peculiarities, mind, and char-
acter are determined entirely by what
he eats when a child." The Kansas
City Journal commenting upon it, iron-
ically remarks that "future Grants and
Napoleons will be given a ration of gun-
powder and bomb-shells daily, and that
rice will be tabooed as a food, its ten-
dency being to make laundries," etc.
Seriously, can we expect to send from
our homes men Apollo-like in stature,
over-topped by a well-balanced head con-
trolled by a heart tender and true, yet
brave to do and dare in defense of right
and duty; whose physical being is sup-
ported on a daily diet of greasy fried po-
tatoes, fat pork and strong coffee? We
would not advocate an ethereal diet in
support of intellectual superiority, but
a "balanced ration" as it were; that
which is productive of the greatest
good to physical perfection and at the
same time not a menace to intellectual
growth. The progressive woman of to-
day regards this matter of feeding as
of vital importance. Let us hope that
at no distant day there will be a more

perfect understanding of the relation of
food to brains, to temperament, to a
proper adjustment of things spiritual,
mental, and physical. Then will come
of itself the love of the beautiful, the
artistic, the esthetic.

There will be no lack of refinement
in that home which is characterized by
intelligence, love, and charity; by that
bravery and cheerfulness which rise
above environments and make home,
however plain, a haven of peace and
rest. In that home will be found rep-
resentatives of "the life beautiful" in
each of its inmates.

Some Alaska Lore.

A million dollars a month is the es-
timate made by the Bureau of Statis-
tics of the present value of the market
which "frozen Alaska" offers the pro-
ducers and manufacturers of the United
States.

"Commercial Alaska in 1901" is the
title of a monograph just issued by the
Treasury Bureau of Statistics. In it
are presented some striking figures
about this (until recently) little ex-
plored and little understood territory
of the United States. By reason of the
application of modern systems of travel
and transportation, Alaska is now as
accessible as Arizona. Three days of
travel by modern ocean steamers from
Seattle, among the islands and along
the coast which forms the southeast-
ern extension of Alaska, lands the trav-
eler at Skagway; twelve hours by rail
over the mountains carries him to the
head waters of the Yukon, where com-
fortable and well-equipped river steam-
ers carry him to the gold field of cen-
tral Alaska, or down the Yukon river,
which is navigable for more than 2,000
miles at this season of the year. From
the mouth of the Yukon another com-
paratively short trip, by steamer, car-
ries him to Cape Nome, the latest and
greatest of the gold fields of Alaska.

Gold, fish, and furs are, according to
this monograph, the principal indus-
tries of Alaska at the present time and
they send to the United States \$15,-
000,000 of their products, \$8,000,000 of
gold, \$6,000,000 of fish, chiefly salmon,
and the remainder, furs.

The cost of Alaska was \$7,200,000.
The revenue which the Government has
derived from it since its purchase
amounts to over \$9,000,000, and the
value of the products are now twice as
much every year as it cost. The total
value of the products of Alaska brought
to the United States since its purchase
is, according to the best estimates that
the Bureau of Statistics is able to make,
about \$150,000,000, of which \$50,000,000
is precious metals, \$50,000,000 products
of the fisheries, chiefly salmon, and
\$50,000,000 more, furs, chiefly seal fur.
Probably \$50,000,000 of American capi-
tal are invested in Alaskan industries
and business enterprises, including
transportation systems. In the salmon
fisheries, alone, the companies engaged
have a capitalization of \$22,000,000 and
the value of their plants, including ves-
sels, is given at \$12,000,000. In the
mining industries there are large in-
vestments; the great quartz-mill at
Juneau being the largest quartz stamp-
mill in the world, while several other
quartz-mills represent large invest-
ments. With the inflow of capital, the
development of transportation systems,
and the gold discoveries, has come the
building up of towns, and the develop-
ment of cities with modern conven-
iences of life. Nome City, which is lo-
cated but a comparatively short dis-
tance south of the Arctic circle, has now
a population of over 12,000; postal fa-
cilities have been so extended that the
number of post-offices is now about six-
ty, and mails are being regularly de-
livered north of the Arctic circle.

Agricultural possibilities in Alaska
have, until within a recent period, been
considered of but slight importance. As
the country was explored, however, and
its conditions of climate and soil studied,
its natural products observed, and ex-
periments made with various classes
of agricultural productions, it became
apparent that the agricultural possi-
bilities of the country, and especially
of the south and southeast, where the
climate is modified by the Japan cur-
rent, are of some importance in
view of the practicability of furnishing
at least a part of the food supply of the
population which the varied resources
of Alaska seem likely to sustain and
make permanent. These observations
and experiments lead those who have
participated in them to the belief that
vegetables in great variety can be pro-
duced all along the southern coast and
in the valley of the Yukon. The grasses
for the support of cattle are abundant,
and experiments with live stock thus
far justify the belief that this feature
of the food requirements of Alaska may
be partly furnished by the development



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of stock-farms in the southern sections.
In the north vast areas are covered
with a moss similar to that upon which
the reindeer thrives in other parts of
the Arctic regions, and in view of this
fact, the introduction of reindeer from
Siberia was begun a few years since
and has proved successful, about 3,000
now being distributed through north-
western Alaska, and the experiment has
advanced sufficiently to justify the con-
fident belief that the reindeer will, with-
in a few years, prove an important fea-
ture in furnishing both the transporta-
tion and food-supply of northern and
northwestern Alaska.

The Governor of Alaska in a recent
report states that the area is equal to
the combined area of the twenty States
of Maine, New Hampshire, Vermont,
Massachusetts, Rhode Island, Connecti-
cut, New York, New Jersey, Pennsyl-
vania, Delaware, Maryland, Virginia,
West Virginia, North Carolina, South
Carolina, Georgia, Florida, Alabama,
Mississippi, and Tennessee.

Dearth of Farm Hands and the Cause.

EDITOR KANSAS FARMER:—The Pitts-
burg Dispatch recently gave an account
of Kansas women compelling tramps to
harvest their crops at the points of
shotguns, and stated also that the great
dearth of farm hands in the wheat belt
was due to the fact that hands were
only wanted for a month. The Balti-
more American saw fit to republish the
account from the Dispatch.

The fact is there is a great dearth of
farm hands all over the country at all
seasons of the year. The dearth is
owing to aversion to the soil, which
aversion is produced by the schools.
For many years past, thousands of
articles have appeared in both prose and
poetry, asking but not answering, just
such questions as those in the follow-
ing poem by Elwin Hoffman:

THE INCAPABLE.

Below him lie the fields he scorns to till,
Above him shine the heights he can not
reach;
The sirens of the dream behaunt him still,
And still the burdened ox's groans doth
reach
Up from the length'ning furrow, that turns
down
Together hopes and daisies one by one!

Incapable! Hell coined that bitter word
To be the bearer of a special sting;
A sting more keen than felt by those
who've erred
Against the laws of God's adminis'tring!

Incapable! Paused halfway up the height
Hell sends its heralds to him with the
night.
A grievous plight is his, but who's to
blame?
Where stands the soulless father of the
fault?

Who sent him lust of power—dream of
fame—
And taught his soul from low tasks to re-
volt?
Who made him hate his sire because he
plots?
Who gave him frail desires and fragile
goals?

The answer to the above question is—
The Supporters of the Public Schools.

Our land is filled with these incapa-
bles, and their multiplication goes
steadily on.

Everywhere males and females are
leaving the farms. The negro in the
south as well as the whites in the
north. In both sections the farmer is
continually at his wit's end to obtain
help for the fields, and his wife is in
the same predicament regarding the
help for the house.

A howl has lately gone up from all
over Pennsylvania regarding the lack
of farm help. An employment agent in
Philadelphia said he had 900 calls for
farm help and none offering.

The people fail to see that, with the
spread of public schools and compul-

sory education, millions more are made
into incapables.

Every agricultural paper in the coun-
try should at least lay before its farm-
er readers the public school cause of
their troubles. Then, if they choose to
sustain the schools still further, they
would share the responsibilities with
the educators, ministers, the politicians,
and, sad to say, the philanthropists.

By the by, every planter of the south
should rise up in the condemnation of
the Rockefeller-Ogden-Baldwin educa-
tional combine that proposes to uplift
the South by public school processes.
It will damn it. I started the crusade
against this combine upon its first ap-
pearance. It is now well under way in
the South Atlantic States. The editor
of the Charlotte (N. C.) Observer writes
me: "What you write is the stuff."

FRANCIS B. LIVESEY.

Sykesville, Maryland.

[Our correspondent has fallen into
the error of supposing that because
some kinds of public school education
have the faults complained of, therefore
all public school education is to be con-
demned. Radical modifications of edu-
cational methods may be needed, but
public attention is turning to the re-
forms needed. Learning that—which
one needs to know never makes "incapa-
bles."—EDITOR KANSAS FARMER.]

Eve's Apple.

A fruit supposed to bear the mark of
Eve's teeth is one of the many botan-
ical curiosities of Ceylon, says an ex-
change. The tree on which it grows is
known by the significant name of "the
forbidden fruit," or "Eve's apple tree."
The blossom has a very pleasant scent,
but the really remarkable feature of the
tree, the one to which it owes its name,
is the fruit. It is beautiful and hangs
from the tree in a peculiar manner.
Orange on the outside and deep crim-
son within, each fruit has the appear-
ance of having had a piece bitten out
of it.—California Fruit Grower.

To the above there are two serious
objections. First. The Bible says noth-
ing whatever in any place about our
Mother Eve having anything to do with
an "apple" of any kind. It was the
fruit of "the tree of the knowledge of
good and evil"—otherwise, curiosity—
the satisfaction of knowing by trial,
right or wrong—what it tasted like—
that tempted her.

Secondly: She did not take a bite
and drop the fruit, whatever it was,
in this condition, but she gave it to
Adam and he ate the whole thing; judg-
ing by the way men act nowadays when
anything is found that suits the taste of
the ladies. They surely know what is
good and the men are ver ywilling to
eat greedily from the same tree. I do
not believe that Adam or Eve left any
bitten fruit laying around that might
have been perpetuated in Ceylon, which
is said to be the Eden of to-day. Eve
has already been blamed too much, so
let us not believe this latest scandalous
insinuation.—H. E. Van Deman, in
Green's Fruit Grower.

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The Hessian Fly.

(Continued from page 733.)

very important one, as illustrated by the season of 1899-1900 in the Ohio valley.

Exceptionally, also, this insect may remain dormant in the flaxseed state for a year or more and still bring forth the adult, a provision of nature which is doubtless intended to prevent the accidental extermination of the species. The migrating and scattering brood of adults is the one developed in the fall; the spring brood is less apt to scatter from the field in which it is developed.

The important feature in the life-history of the Hessian fly, from the standpoint of control, is the time of emergence of the fall brood or broods of adults. This arises from the fact that the chief means of preventing loss from this insect is in sowing late enough in the fall to avoid infestation. For the average season or normal conditions, dates at which sowing is comparatively safe have been determined for the principal winter-wheat districts. For example, the dates after which sowing may be safely undertaken in the State of Ohio, as shown by the very careful investigations of Professor Webster, vary over a period of at least a month from the northern latitudes of the State to the southern latitudes, or from approximately September 10 in the north to October 10 in the south. Wheat sown after the dates mentioned, or after intervening dates for intervening latitudes, will germinate, in normal seasons, after the Hessian fly has disappeared and be free from attack.

The question of latitude, however, is not the only one to be considered, since temperature is affected also by altitude, and in mountainous States, like West Virginia, as shown by the very careful studies of Doctor Hopkins, the altitude must be taken into consideration in determining the proper date for planting. The normal safe date for planting must be determined for each locality separately. Ohio farmers are referred to Bulletin No. 119 of the Ohio Experimental Station, by F. M. Webster, and West Virginia farmers to Bulletin No. 67, of the West Virginia Experiment Station, by A. D. Hopkins.

Unfortunately, also, it is not possible to give a uniform date for seeding which may be relied on year after year. The extraordinary development of the Hessian fly and the serious consequent losses to the crop of 1899-1900 have emphatically demonstrated this fact. The loss from the Hessian fly for the crop mentioned has been one of the worst in the history of this insect in America, and probably amounted to fully 80 per cent of the normal yield throughout the infested region, which covered the main winter-wheat districts of the Ohio valley, and amounted to a loss of from thirty-five to forty millions of dollars' worth of grain. The extraordinary multiplication of the fly for the season mentioned resulted from an unusual scarcity of the parasitic enemies of the insect and a series of very favorable weather conditions, the latter, as indicated by Professor Webster, being the long drought of the autumn of 1899, which prevented the normal early hatching of the Hessian fly, and the mild autumn and winter following, which enabled the insects to con-

tinue breeding and ovipositing much later than is ordinarily the case, so that few fields escaped fall infestation. A favorable winter carried these insects through safely, and the enormous number of flies which emerged for the spring brood resulted in all late-sown or other fields which had escaped the fly in autumn being infested by hordes of these insects in the spring; in other words, under the conditions of the season in question all ordinary rules and preventives failed absolutely, and the loss of the wheat crop was almost total.

The breeding of the Hessian fly during the autumn of 1900 continued in some localities very late. Mr. E. P. McCaslin, Seymour, Ind., who has been making very careful study and frequent reports on this insect for this office, supplies data showing that the wheat sown in that locality between October 9 and 15 was badly infested by the fly. The insect began hatching as early as September 1, and continued in evidence until October 1, a supplemental brood appearing after October 22. The winter was so mild that undeveloped larvae were abundant in wheat into the second week of December. A short period of zero weather in the middle of December did not destroy the larvae, but a prolonged cold spell, beginning about December 22, killed most of the larvae that had not passed into the flaxseed stage. That the insect will hatch from the flaxseed stage without long hibernation, if kept in a warm place, was illustrated by material coming into this office which yielded flies in great numbers during January and February, and deposited eggs from which young larvae emerged.

The effect of drouth on the Hessian fly was very interestingly shown by the season of 1899-1900. As pointed out by Professor Webster, a severe dry spell sufficient to prevent the germination of wheat, such as was experienced in the Ohio valley in the fall of 1899, will retard the development of the Hessian fly; but a week or ten days after a drenching rain, following such a dry spell, flies will come forth from the flaxseed stage in numbers. All of these conditions, therefore, must be borne in mind in attempting to determine when it is safe to sow winter wheat, and when the conditions are very unfavorable it will probably be wiser to plant other crops than those which the Hessian fly infests, as indicated in the consideration of preventives and remedies.

Effect on Wheat.—The first indication in the fall of the presence of the fly in wheat is the much darker color of the leaves and the tendency to stool out rather freely. This is very noticeable, and gives the wheat for the time being a very healthy appearance. The leaves are also broader, but the upright central stems are wanting, having been killed by the fly. Later, the infested plants turn yellow or brown and die in part or altogether. The spring brood of larvae attacks tillers or laterals that have escaped the fall broods, awaring the stems and weakening them so that they usually fall before ripening and can not be successfully harvested. The excessive stooling or tillering of wheat attacked by the fly is doubtless due to the natural tendency on the part of the plant to offset the injury by forming new lateral stems, and therefore a wheat that has a natural tendency in this direction is less apt to be seriously damaged by the fly. Other things being equal, also, wheat with stiff, flinty stems is less damaged by fly attack, chiefly because the straw does not bend or break so readily at the point weakened by the spring brood of larvae.

Natural Enemies.—The Hessian fly in the larval and pupal periods is subject to the attacks of important natural parasites—small four-winged flies which develop in the bodies of their hosts. There are several native parasites, and in Europe there are many others, one of which is remarkably prolific, and the department has attempted its artificial introduction into this country. This species, *Entedon epigonus*, has been liberated in several States, and seems to have obtained a foothold, and considerable good may be expected from it. In general the parasites are effective only in limiting damage and are useful where other preventives are neglected, but can never take the place of active measures, where perfect immunity is desired. It is practically impossible to save a field once severely attacked by this fly, and under such circumstances it is better to plow the wheat under deeply and plant to corn or other spring crop. In cases of mild infestation the best procedure is the prompt use of fertilizers, which may enable the wheat to tiller sufficiently to yield a partial crop. Pasturing in fall of early-sown fields is also recommended, and may do some

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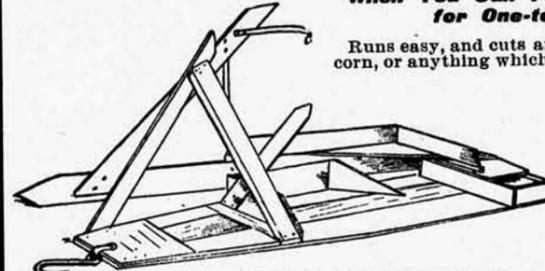
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good by reducing the numbers of the pests.

Somewhat in line with pasturing of early-sown fields is an interesting experiment made in the spring of 1900 by Mr. E. P. McCaslin. Finding that the flies were ovipositing abundantly on wheat which had reached a height of six or eight inches, he conceived the idea of cutting it off closely with a mowing-machine as soon as all the eggs of a spring brood had been deposited, keeping close watch to determine the proper moment. The theory was that the severed tops of the wheat with attached eggs would dry up in a day or two, and the larvae, not being able to move freely, except down the green leaf-blades, would fail to reach the live stubble. Wheat so cut threw out new stalks and gave every promise of a good yield; but, unfortunately for the success of the experiment, the fly was so extraordinarily abundant everywhere in the spring of 1900 that the stubble was reinfested and the experiment came to naught. Nevertheless, under a less extraordinary instance of general fly infestation some benefit might reasonably be expected from the procedure, and it is perhaps worthy of further trial.

By some such means as the above a crop of wheat may be partly saved, but in the main the measures of really practical value against this insect are, of necessity, chiefly in the direction of preventing future injury. These are all in the line of farm methods of control, and are arranged in the order of importance as follows:

Late Planting of Winter Wheat.—As already indicated in the paragraphs on habits and life-history, late planting of winter wheat is undoubtedly the best and most practical means in normal seasons of preventing damage in regions where infestation is to be anticipated, and this is true in spite of the failure of this means of control during the season of 1899-1900. The most that can be advised under this head, however, is to give a general statement covering normal years and climatic conditions. The actual date after which planting may be safely made must necessarily be fixed for each locality separately, and be subject to yearly modification to meet varying seasonal conditions. In a general way, to avoid fly injury, planting should be made in the northern winter wheat districts after September 15 or 20, and in the more southern districts between October 1 and 15. If the right time be selected, neither early enough to be attacked by the fly nor yet so late as to cause danger of winter-killing, much of the damage in normal seasons to winter wheat from this insect may be avoided.

Burning Stubble.—The fact has been noted in the life-history that the second brood develops in the lower joints of the wheat and is left, for the most part, in the field in the flaxseed state at harvesting. All these individuals may be destroyed by promptly burning the stubble. Burning may be more easily effected if a rather long stubble be left, and especially if it be broken down by rolling. If the burning of the stubble be neglected until the rank growth of weeds has sprung up which usually follows harvest, it will be well to run a mower over the fields, cutting off the stubble, weeds and grass as close to the ground as possible, and burning over as

soon as the weeds and grass dry sufficiently. Careful burning will very largely prevent an abundant fall brood of flies, and may be supplemented by burning all screenings of the wheat, if threshing precedes the fall appearance of the fly.

Plowing Under Stubble.—In line with burning, and of nearly equal importance, is turning the stubble under by deep plowing, and afterwards rolling the field to compact the earth and prevent any flies which may mature from issuing.

Rotation of Crops.—The regular practice of a system of rotation in the growth of crops is of the utmost importance in avoiding damage. Its value may be offset at times by invasion from neighboring fields of wheat on other farms, but usually comparative freedom from attack will result, and the benefit will extend to the other crops coming in the system adopted in checking the insect enemies of these at the same time. In seasons like that of 1899-1900, and possibly also 1900-'01, where the fly is very generally present, rotation of crops may fall very largely in being protective, and it may be even necessary to abandon wheat planting for a year over an entire county or State. Undoubtedly the Hessian fly can be starved out almost completely by the abandonment of the culture for one year of the crops in which it breeds, namely, wheat, rye, and barley, and occasions will probably arise again when this course will be advisable. To gain the full benefit of such a procedure, all volunteer wheat, rye, or barley must be destroyed.

Trap or Decoy Plantings.—One of the earliest preventives recommended, and one of considerable value, is the early planting of narrow strips of wheat to act as decoys to attract the flies, with the object of turning the infested wheat deeply under with the plow in late fall. This procedure will greatly reduce the numbers of the pest and should give greater immunity to late-planted wheat.

Destruction of Volunteer Wheat.—The supplemental fall brood antedating the principal brood will come to nothing if all volunteer wheat be plowed under or destroyed within a few weeks after its appearance. This is of especial value in the North, where spring wheat is grown, and where the brood developed on the volunteer wheat may be the principal means of carrying the insect through the winter.

Growth of Resistant Wheats.—As indicated in the paragraph, "Effect on Wheat," the importance of selecting varieties which are less injured by the attacks of the fly will be at once apparent. Such wheats are those having coarse, strong stems, and varieties which tiller freely, or develop numerous secondary shoots. Among such wheats are the Underhill, Mediterranean, Red Cap, Red May, Clawson, etc. No wheats are, however, absolutely "fly proof."

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(Talk No. 7.)

A Mistake.

There is a popular opinion that glasses should never be worn so long as the eyes can possibly get along without them. There was never a greater mistake. The very first symptoms of defective eyesight, the first indication of fatigue, should be recognized as Nature's call for help. To persist in forcing the eyes to perform work too great for their endurance is simply an abuse of the most precious sense we have. I believe that a greater percentage of diseases of the eye is brought about by this habit than from all other causes combined. If you have the slightest suspicion that your eyes are not perfectly correct, I want to look them over. I want you to feel at liberty to consult with me at any time. If you need glasses, I will furnish them at a reasonable cost. If not, I will charge you nothing.

My exclusive attention is given to fitting glasses.

CHAS. BENNETT,
OPTICIAN,

730 Kansas Ave., Topeka, Kans.

ESTABLISHED 1879.

WEEKLY WEATHER CROP BULLETIN.

Weekly weather crop bulletin for the Kansas Weather Service, for the week ending July 15, 1902, prepared by T. B. Jennings, Station Director.

GENERAL CONDITIONS. While the temperature has ranged slightly below the normal the rainfall has been excessive. There were, practically, three centers of excess in rainfall and three of deficiency; the former centered around Morton, Jewell, and Marshall, while the deficiencies were found in the extreme northwestern and southeastern counties and the central portion of Shawnee.

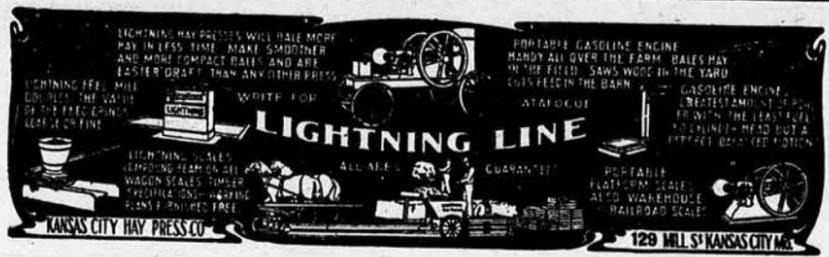
EASTERN DIVISION. The heavy rains in the northern counties have swollen all streams north of the Kaw. The Blue and Kansas rivers overflowed in places and carried away many shocks of wheat and oats. Wheat in shock is sprouting or is otherwise damaged by the rains and damp weather in several of the northern counties; it is being stacked in some of the central and southern; threshing from the shock is progressing rapidly...

fodder crops making rapid growth; wheat and oats stacked; fall plowing begins soon. Chautauqua.—Oats yielding 40 to 60 bushels per acre, wheat 30 to 25 bushels; second crop alfalfa cut; cutting fine crop of hay; flax being cut; corn doing fine; early plums nearly gone, late ripe.

Cherokee.—All crops doing well; corn improving; wheat yielding 7 to 25 bushels per acre. Coffey.—Some cultivation of corn, some wheat a loss on account of wet fields; hay being cut. Crawford.—Some corn weedy, but about nine-tenths in good condition; threshing shows wheat 18 to 30 bushels per acre, oats, 30 to 60, quality good; hay excellent; plums ripe, trees loaded; apples good; tomatoes fine.

Elk.—Corn will soon need rain; stock doing well on pastures; cutting flax. Franklin.—All crops doing well. Geary.—Much damage to wheat and oats by high water and rains, wheat growing in shock; corn doing fine, tasseling, silking, and setting, heavy yield indicated.

Jefferson.—Crops in bottoms badly damaged; fields too wet for cutting oats; that in shock in bad condition. Johnson.—Wet week; wheat growing in shock, very little in stack; timothy haying delayed by rain; blue grass in shock; corn rapid growth. Leavenworth.—Harvest done, threshing progressing; all crops looking well; potatoes fine;



fine yield; corn dark green color, good stand, one-half laid by, some tasseling, sweet corn on table; apples growing nicely, some trees heavy laden; meadows and pastures fine and cattle doing well; some early potatoes rotting in ground; still planting late potatoes and corn. Wilson.—One-third of wheat not cut on account of rain; corn good growth but weedy; flax good; pasture and hay grass fine; oats look well and wheat threshed a good yield; potatoes good.

Woodson.—Threshing continues, wheat making 20 bushels per acre; corn doing well; some haying this week. Wyandotte.—Some wheat not yet stacked; corn growing nicely, most of it in tassel; grass good but too wet for haying; much oats will have to be mowed.

MIDDLE DIVISION. Wheat harvest is over, except in some of the northern counties where it was retarded by rain, and threshing from the shock has begun in many of the counties, developing poor yields in some counties, fair yields in others. Oats harvest delayed by rains in the northern counties, and the crop has lodged badly; a good crop in the central and southern counties. Grass is fine. The corn prospect is very good; the corn is growing rapidly and has good color; it is in roasting ear in the south. The second crop of alfalfa is growing well, and is being cut in some counties. Potatoes are very good, though some are rotting in Saline, Clay, and Washington. Apples are good in Ottawa, and the early are ripe in Washington; they are dropping in Barber, and some have blown off in Clay. Plums are ripening in Barber.

Barber.—Apples dropping; plums ripening; corn, forage, and alfalfa making rapid growth; cattle in fine condition; threshing. Barton.—Wheat harvest over; threshing from shock with poor yield; cutting hay; grass good; ground fine for fall plowing.

Clay.—Much damage by continued rains and high water; oats badly lodged; fields too wet for harvest; corn growing nicely, not much damaged; potatoes rotting; apples blown down. Cloud.—Harvest retarded by soft ground; wheat not half cut, over ripe and damaged; oats rusty and chaffy; crops in bottoms badly damaged; heavy second crop alfalfa ready to cut.

Ellsworth.—Wheat nearly harvested; oats crop good; corn doing well; pastures and hay fine. Harper.—Threshing delayed by rains; wheat of poor quality; oats crop good; corn in fine condition. Jewell.—Corn growing rapidly; wheat harvest nearly finished; fine oats crop nearly ready to cut; alfalfa making good second crop; pastures fine.

Kingman.—Threshing hindered by rain; corn in good condition; potatoes very good. Lincoln.—Much wheat too weedy to cut; corn growing nicely; oats badly lodged. McPherson.—Harvest over, threshing begun, yield and quality fair; oats big crop; corn prospects fine; second crop of alfalfa heavy, being cut; potato crop heavy.

Ottawa.—Wheat almost harvested; oats damaged by wind; corn doing finely; forage crops and alfalfa fine; potatoes best in years; fruit, except apples, not good. Phillips.—Harvest about finished; corn in good condition. Pratt.—Some damage to wheat and fruit by hail in the southeast; harvest finished, threshing begun; quality of wheat poor, yield light; corn in roasting ear.

Reno.—Good rains; threshing begun; wheat fair yield and quality; oats good; corn looking well. Republic.—Some pieces of wheat not yet cut, that in shock sprouting; oats badly lodged.

Rice.—Good second crop alfalfa being put up; potatoes good crop, but many rotting; wheat about harvested, poor quality; corn doing well.

Russell.—Corn being cultivated and doing well; forage crops doing nicely; pastures and hay land good. Saline.—Much wheat uncut and in shock injured by wet weather; oats harvest almost finished; corn doing well, some weedy; potatoes good.

Sedgwick.—Pastures and hay fine; corn in roasting ear, promises large yield; some damage by hail. Smith.—Many fields of wheat very weedy; corn and all other crops doing nicely; grass good and stock doing well; some damage by hail. Stafford.—Some wheat threshed, poor grade; corn promises good yield.

Washington.—Oats dead ripe and badly lodged; wheat sprouting in shock; corn rapid growth, early tasseling; potatoes good crop; early apples ripe; grapes good crop.

WESTERN DIVISION. Wheat and barley harvest about over. Oats harvest finished south, begun north. The second crop of alfalfa is ready to cut in Sheridan, and is being cut in many counties; some is being left for seed in Finney; the crop is light in Kearney but fine in Wallace. Grass is good. Corn is doing well and in Decatur is tasseling; it needs rain in Thomas. Forage crops are doing well. Plums are ripening in Kearney, a good crop. Apricots and peaches were knocked off by hail in Morton. Cattle are doing well.

Clark.—Cool and cloudy, good growing weather; harvest retarded by heavy winds. Decatur.—Harvesting well advanced, threshing commenced; quality of grain excellent, yield fair; corn tasseling, prospects fine. Finney.—Rain needed; cutting second crop alfalfa well advanced, some left for seed; fruit light.

Ford.—Fine growing week; wheat, barley, and oats about harvested; corn looks fine; prairie grass good and cattle in good condition. Graham.—Cool week; harvesting done; threshing commenced; yield good and quality fine; stock doing well.

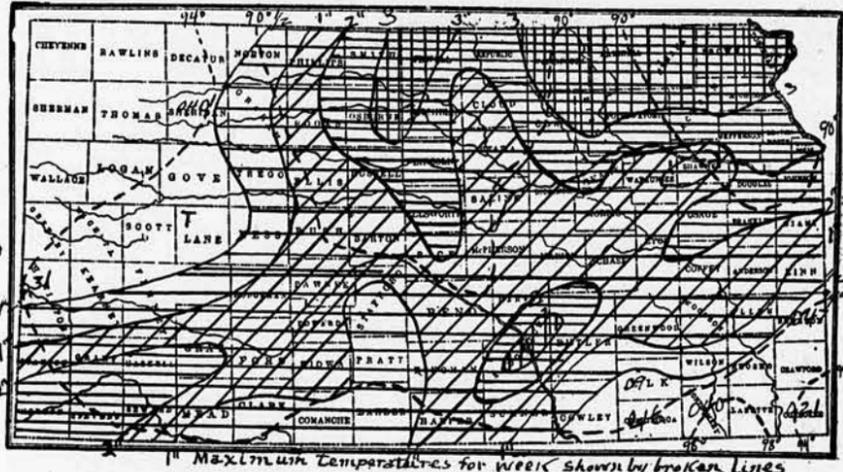
Hamilton.—Good growing weather with plenty of moisture west, rain needed northeast portion. Kearney.—Very dry; second crop alfalfa light; good crop plums ripening. Lane.—Corn and forage crops doing well; second crop alfalfa, good yield, being cut; wheat ripens slowly, some to cut yet; some damage by hail.

Morton.—Apricots and peaches torn off by rain and hail; shower beneficial to grass and forage crops. Norton.—Fine growing week; oats harvest begun; wheat in shock without damage, prairie grass hay on market; cutting second crop alfalfa; stock doing well.

Sheridan.—Wheat a fine quality; alfalfa ready to cut; corn looking well; pastures good and stock doing nicely. Thomas.—Grain in fine condition, harvest nearing completion; corn needs rain; Kafir and cane growing rapidly; second crop of alfalfa being cut.

Wallace.—Second cutting alfalfa fine crop; harvest of barley, rye, and wheat finished; range grass good; irrigated gardens fine; unirrigated crops need rain.

Rainfall for Week Ending July 12.



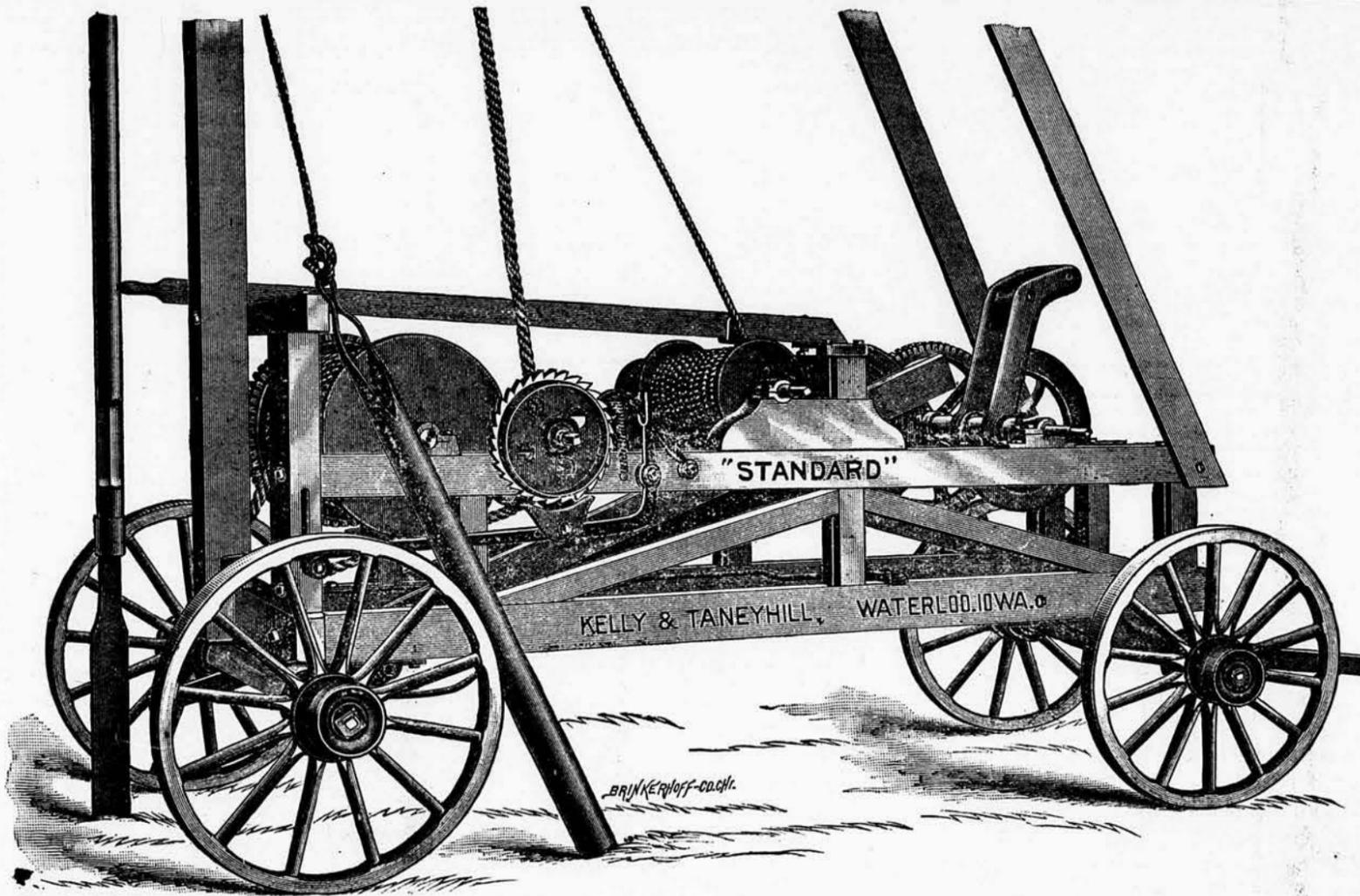
SCALE IN INCHES.

Less than 1/2. 1/2 to 1. 1 to 2. 2 to 3. Over 3. T. trace.

ly where the conditions are favorable, giving fair yields ranging from 10 to 25 bushels in Chautauqua, 7 to 25 in Cherokee, 18 to 30 in Crawford, 20 to 30 in Linn, and averaging 20 bushels in Woodson. Oats are generally in the shock, a fine crop; some threshing showing fine yields. Corn has grown rapidly, it is in the silk in Allen, has silked and is filling in Chase, is tasseling and silking in Geary, is in the roasting ear in Chautauqua, while in Linn the early corn is in the roasting ear. The corn prospect at present is unusually fine, though corn is needing rain in Elk. Flax is good in Wilson, is ripe in Allen, and ready to cut in Linn. Potatoes have been injured in several of the northern counties by the heavy rains. Haying is progressing in Chautauqua, Coffey, and Woodson, and is about over in Allen. Apples are good in Crawford but are dropping in Leavenworth; in Shawnee some trees are heavily loaded. Late plums are ripe in Crawford and ripening in Chautauqua. Plowing for fall wheat has begun in Allen, Coffey, and Montgomery.

apples dropping; few peaches and plums; stock doing nicely. Linn.—Wheat mostly in shock; threshing progressing favorably; oats being harvested; flax about ready to harvest; wheat yielding 20 to 30 bushels per acre; corn growing rapidly; early corn in roasting ear. Marshall.—Wheat, oats, and potatoes damaged by too much rain; corn prospect fine; tame grass and pastures good. Montgomery.—Threshing in progress, yields and qualities variable; oats good; corn doing fine; pastures good; hay a good crop; plowing for fall wheat commenced. Nemaha.—Small grain, especially wheat, damaged by excessive rain; some corn growing weedy; very little wheat in stacks; oats mostly standing; corn prospects good; vegetation rank. Osage.—Corn in fine condition and growing well; alfalfa being cut second time; pastures good. Pottawatomie.—Great loss of crops in river bottoms. Riley.—Wet week; very little work done; crops greatly damaged by high water. Riley.—Crops greatly damaged by high water; wheat being stacked; ground too soft to harvest oats; corn fine; hay promises a good crop. Shawnee.—Oats in shock and promise very

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The Kelly & Taneyhill Co., Waterloo, Iowa, established in 1867, are pioneer manufacturers of well drilling machinery. Their card appears in our columns in which they advise our readers that their machines are portable and drill any depth both by steam and horse power. They invite our readers to send for free illustrated catalogue of forty-two different styles. The writer hereof considers this firm thoroughly reliable.

Grange Department.

"For the good of our order, our country, and mankind."

Conducted by E. W. Westgate, Master Kansas State Grange, Manhattan, Kans., to whom all correspondence for this department should be addressed. News from Kansas Granges is especially solicited.

NATIONAL GRANGE.

Master.....Aaron Jones, South Bend, Ind.
Lecturer.....N. J. Bachelder, Concord, N. H.
Secretary.....John Trimble, 514 F St., Washington, D. C.

KANSAS STATE GRANGE.

Master.....E. W. Westgate, Manhattan.
Lecturer.....A. P. Reardon, McLouth.
Secretary.....Geo. Black, Olathe.

Do We Make as Much as We Should of Our Opportunities in the Grange?

MRS. ANNIE LINN, AT MUSKINGUM CO., O., POMONA.

How often do we hear the remark made that it does not pay to belong to the Grange—there is no money in it. If that is so, why does it not pay? Who is to blame? How many have investigated the matter? As there are always two sides to a question, let us see which one is right, the chronic grumbler or the Grange.

Let us review "The Declaration of Purposes of the Grange" and see what our opportunities are. United by the strong and faithful tie of agriculture, we mutually resolve to labor for the good of our order, our country, and mankind. We heartily endorse the motto, "In essentials, unity, in non-essentials, liberty, in all things charity." We shall endeavor to advance our cause by laboring to accomplish the following objects: To develop a better and higher manhood and womanhood among ourselves. To enhance the comforts and attractions of our homes, and strengthen our attachments to our pursuits. To foster mutual understanding and cooperation. To maintain inviolate our laws, and to emulate each other in labor, to hasten the good time coming.

Do we endeavor to develop a better and higher manhood and womanhood among ourselves? Have we the charity to do as we would be done by, to put ourself in their place, to try to elevate the farming population in the scale of intelligence, to instill into the minds of the young more correct ideas of morality, and to cement in one common fraternal brotherhood and sisterhood all who are engaged in agricultural pursuits? Are we working together for our mutual protection. It has been said that a man's first duty is to his home and family, the second to his government, and the third to better the condition and advance the interest of his chosen occupation.

There are conditions existing that must be met and overcome to obtain results desired by the farmer. What legislation is needed, must be secured by his combined efforts. As an individual among seventy millions of people he is infinitesimally small and hopelessly helpless to do one thing to obtain relief. Hence the necessity of uniting and working together to be able to maintain our laws inviolate, to emulate each other in labor, and to hasten the good time coming.

Our educational opportunities are numerous. Education is the foundation-stone of our order. The Grange accepts the broad view of the word education and applies it to every line and department of its work. It seeks to overcome the hindrances to success in farm life, and gives the farmer an opportunity to become the peer of any man in other classes, in ease of manner, fluency of speech, practical common sense and logical conclusions in regard to current topics and questions of State or national importance.

No other organization extant possesses such valuable opportunities. Are we making the most of them? The Grange is an agricultural college where political economy and domestic art are taught in a practical way. We must learn from others; their observations and experiences are invaluable to us. Individually we can hope to get but little from the great storehouses of wisdom and knowledge. The laboratories of nature are too numerous and life is too short to enable us to make a special study of all the soils, plant growths, food nutrients and animal life; we must depend on the knowledge and experience of others.

The agricultural colleges, experiment farms, farmers' institutes, all testify to this fact, and offer us opportunities to benefit us, if we will only accept them.

There is nothing equal to the Grange in giving opportunities to the boys and girls on the farm. In every age and condition of life, the development of the mind is carried forward to a greater or

HOT WEATHER WEARINESS

This misery is caused by bad digestion which has clogged the system with impurities. The liver is overworked, the kidneys weak and the bowels irregular, producing low spirits, tiredness, poor appetite, unrefreshing sleep, loss of energy and ambition. And, what is worse, it breeds diseases that are serious.

PRICKLY ASH BITTERS

IS A THOROUGH SYSTEM CLEANSER.

This great purifier exercises its reviving influence in every part of the body. Relaxes the bowels and urinary organs, drives out badly digested food, cleanses the system of impurities, sets the whole internal organism to working smoothly and harmoniously thereby creating new life and energy. It is the best known remedy for removing that dull bilious feeling so common in hot weather.

SOLD AT DRUGGISTS.

Price, \$1.00 Per Bottle.

less extent, and the experience of others of mature years, who have made a success of farming, may

Ope the way and blaze the tree bark,
Snap the twig, and mark the pathway,
For the youth that now is waxing,
For the good time that is coming.

Postal Banks in Belgium.

Belgium is little, but it has a good record with respect to its postal savings-banks. These banks were established in 1865, and in 1896 there were 881 of them scattered over the 11,373 square miles of Belgian territory and furnishing safe saving facilities for the thrifty people of that country.

Under the savings-bank act of 1891 interest on sums not to exceed 3,000 francs (\$579, the franc being worth 19.3 cents) is paid at the rate of 3 per cent. So popular are the postal savings-banks that in 1890, twenty-five years after they were established, there were 731,057 depositors out of a total population

Old line rates on \$1,000 for 5 years are.....	17.50
Saving to our patrons in six months.....	1,644.75
No. of losses in six months.....	9
Fire loss.....	\$724.85
Tornado.....	549.00
Lightning.....	59.67
	1,333.52

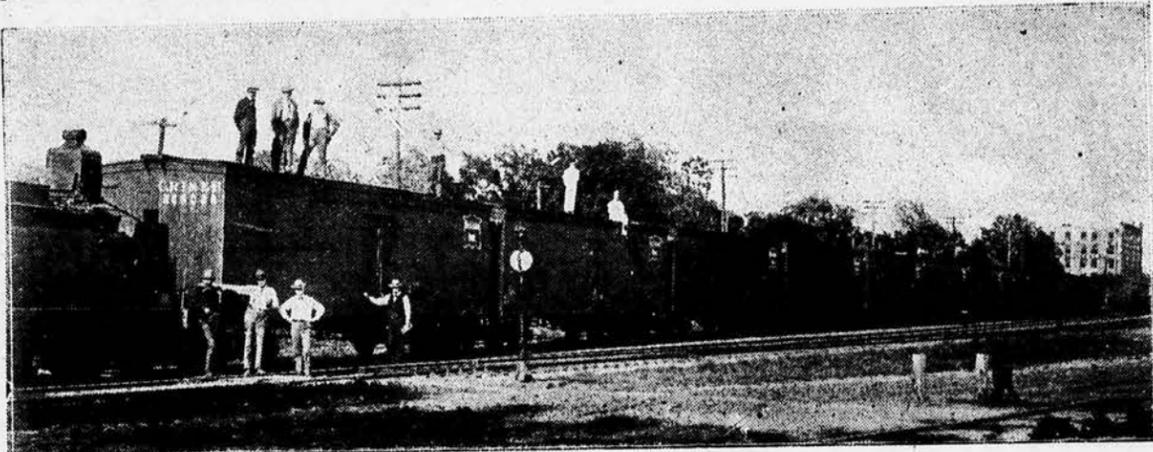
Here is a saving of nearly fifty per cent on insurance that is not a theory but a demonstrated fact and though we can scarcely hope always to be so fortunate, yet for thirteen years the average cost has been very close to these figures.

A Kansas Butter Business.

On Saturday night July 5 the first train load of butter that has ever left Kansas was shipped to the New York Navy Yard from the plant of the Continental Creamery Company of this city. The train consisted of twelve cars and the aggregate net tonnage was 300,000 pounds at an approximate value

butter but as to the dispatch with which the contract was filled. The filling of this contract in the manner in which it was insured other big contracts coming to Kansas which will be a source of great revenue for the dairy farmer of the State.

The Continental Creamery Company's plant in Topeka has a capacity of 50,000 pounds of butter per day. The day of this shipment was a record breaker. Five cars of cream were received at the plant besides the twelve cars of butter shipped. The milk season is now at its highest and the receipts of cream are taxing the plant to its utmost. The creamery building covers an area of 40 by 100 feet, four stories high and has an actual working area of 160,000 square feet besides storage rooms, box and tub rooms, and supply department. An average of 110 persons are employed in the creamery aside from office force. The separating room of the plant is in operation



The First Trainload of Kansas Butter.

of 6,069,321—a savings-bank account for every eighth person in the kingdom. Six years later, the population having increased about a half a million, there were 1,238,601 depositors with accounts in these banks. Every fifth person had a savings-bank account—practically one for every family.

These banks are for the people. Rural letter-carriers are allowed to accept deposits for those who find it inconvenient to go to the bank, although the first deposit must be made in person, in order to sign the required declaration concerning his knowledge of the laws and regulations. Postage-stamps may be used in making small deposits.

The result of the accumulation of more than a million deposits is seen in the amount of money on deposit at the end of 1896, the latest year for which figures are at hand. At that time the banks held 453,429,304 francs—about \$90,000,000, or \$75 for each depositor.—Grange Bulletin.

Report of the Fire and Tornado Association.

A letter from I. D. Hibner, secretary of the Patron's Fire and Tornado Association, contains the following account of its business for the last six months:

Total risk Jan. 1, 1902.....	\$1,857,000.00
Total risk July 1, 1902.....	2,014,250.00
Net gain in six months.....	157,250.00
Cash in treasury Jan. 1, 1902.....	3,128.95
Premiums collected in six months.....	1,705.28
Paid on losses.....	1333.52
All other expenses.....	401.35
Balance in treasury July 1.....	3,099.86
Average risk for six months.....	1,935,600.00
Cost on each \$1,000 during six months.....	.90
This would make a 5-year rate on \$1,000 of.....	9.00

of \$75,000. The butter was all Kansas product, made from cream gathered from 200 plants which the Continental Creamery Company has scattered over a great part of the State. The shipment was to cover a contract with the United States Government for butter to supply the New York Navy Yard and was by far the biggest contract ever filled by a single creamery. Heretofore these contracts have been given to jobbers who parceled them out over great stretches of land in the east. These contracts have generally been filled by snippers from Ohio, Indiana, Illinois, Wisconsin and many other heavy dairy States. The size of the Continental Creamery Company's plant and their facilities for filling a contract of this kind was the principal reason for the placing of the contract in Kansas.

This butter was packed in three-pound tin cans, hermetically sealed, and put up at the rate of 10,000 pounds per day. The special machinery was designed for the packing of this butter and the sealing of cans. Twenty-four three-pound tins were packed in a box with sawdust. The boxes were made with screws instead of nails and bound with strap iron.

R. A. Pearson, Assistant Chief of the Dairy Department at Washington, attended to the inspection of the butter and Major Lang of the Interior Department attended to the shipment. The butter was inspected both for specifications of packing, and as to purity, sweetness, quality and hygienic conditions. Both Major Lang and Mr. Pearson were profuse in their praise of the way this contract was handled. Not only with regard to the quality of the

twelve hours of every day in the year, twenty-five cream ripeners with a capacity of 1,500 pounds each are in operation in the ripening room and are filled many times daily, six combined churns and butter workers are kept busy in the churning room. The churning room and ripening room run night and day every day in the week.

All machinery is run by electricity which insures steadiness of motion and does away with all heat which comes from steam power. Cream is received from 200 branch stations scattered throughout Kansas. At these points whole milk is received and cream is separated and pasteurized and prepared for shipment and reaches Topeka in the company's own refrigerator express cars operated over three principal lines of railroad. Besides cream so shipped, large quantities of cream are shipped locally.

Of these branch houses more than 15,000 farmers are patrons and the aggregate sum paid by this company to the Kansas farmer for milk in the month of June amounts to \$200,000. A large number of small creameries have found it unprofitable to conduct their business on a small scale and are now selling their cream product to this company.

In connection with the butter business this company operates twenty-three cheese factories scattered over the State. The Continental Creamery Company placed the cheese business of the State on a strictly commercial basis and made Kansas cheese known to the markets of the world. Cheese business of Kansas is rapidly growing in importance and the production of

this company alone is about 200,000 pounds per month.

In territory where this company has no skimming stations farmers are buying hand separators and ship their cream direct. A large number avail themselves of the opportunity of getting milk checks and the number of these hand separator shippers is rapidly increasing.

In the Dairy.

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

Fourth Report on Cow Test Experiment.

For March, April, and May records see KANSAS FARMER for April 10, May 15, and June 26, respectively. The following is the record for June:

No.	Name of cow.	Selected by—	Fresh—	Milk, lbs.	Yield Test, lbs.	Butter-fat, lbs.	Grain consumed, lbs.	Judge's rank for profit
243	Cowslip	J. W. Bigger	Nov. 3, '01	658.9	4.65	30.64	180	3
236	Haster	E. C. Cowles	Dec. 10, '01	793.0	4.3	34.10	180	1
244	Rose of Cunningham	J. W. Cunningham	Jan. 28, '02	1,055.5	3.45	36.41	206	2
238	Clover Leaf	M. L. Dickson	Jan. 12, '02	593.9	3.7	21.97	90	7
245	Molly	A. H. Diehl	Jan. 20, '02	742.5	3.9	26.73	120	5
241	Rose of Industry	C. Elssasser	Jan. 15, '02	664.6	3.9	25.92	120	8
240	Daisy Bell	S. A. Johnson	May 3, '02	999.3	3.45	34.48	180	9
246	Floss	C. C. Lewis	Oct. '01	438.3	5.45	23.89	120	6
242	May Queen	G. W. Priest	Dec. 25, '01	613.0	5.35	31.80	180	4

RECORD FROM MARCH TO JUNE INCLUSIVE.

No.	Name of cow.	March		April		Yield May		June		Total	Grain consumed, lbs.	Roughness consumed, lbs.
		Milk, lbs.	Butter-fat, lbs.									
243	Cowslip	761.6	33.89	762.1	32.00	797.5	35.88	658.9	30.64	2,980.1	132.41	865.5
236	Haster	849.5	32.28	743.7	29.00	878.4	36.01	793.0	34.1	3,264.1	131.39	891.0
244	Rose of Cunningham	1,200.1	36.00	1,090.1	35.97	1,241.2	41.58	1,055.5	36.41	4,586.9	149.96	948.0
238	Clover Leaf	733.1	21.62	642.9	20.25	745.7	23.86	593.9	21.97	2,715.0	87.70	592.5
245	Molly	824.0	25.95	726.8	24.34	830.3	29.47	742.5	26.73	3,123.6	106.49	672.5
241	Rose of Industry	802.9	25.27	791.5	26.91	838.1	33.10	664.6	25.92	3,096.2	111.20	672.5
240	Daisy Bell					876.4	29.79	999.3	34.48	1,875.7	64.27	337.0
246	Floss	508.6	25.08	477.0	25.04	564.6	30.49	438.3	23.89	1,983.5	105.10	659.5
242	May Queen	630.3	30.88	582.8	29.43	687.3	35.39	613.0	31.8	2,513.4	128.50	839.5

No hay was fed during June. All the cows had access to tame grass and oat pasture day and night. The amount of grain varied with the amount of milk and butter-fat produced, the aim being to give them what they will consume profitably in keeping up the milk flow.

Rose of Industry was bred June 4 to the Guernsey bull, Shylock of Darlington 4579. May Queen was rebred June 8 to the Jersey bull, Brown Elsie's Grandson 60412.

The horn-fly has been a torment to all classes of cattle during June and it will be noticed that all the cows except Daisy Bell (she being fresh) fell off in milk yield.

For the four months under consideration these cows have held nearly the same relative rank for total production of butter-fat, Rose of Cunningham first, Cowslip second, Haster third, and May Queen fourth. Molly and Floss have alternated for sixth place. Daisy Bell has been giving milk for only two months.

The final test as stated by the judges is to be based on the element of profit, in which case the value of the skim-milk and the cost of feed are to be considered. These latter points have not been considered in the monthly reports but will be in the final windup.

D. H. O.

Conclusions Drawn from Prominent Dairymen's Opinions Concerning the Value of a Good Sire.

E. B. HALL.

Mr. O. H. Simpson, of Ford County, says it is not right to use inferior bulls on pure-bred cows. If it is ever done it is by some one lacking the means to purchase a better one or one who does not know a good sire when he sees one. Mr. Simpson says it is nothing short of a crime to castrate such calves, so long as there is one farmer left who will use a bull sired by a Hereford out of a Jersey cow, as came under his notice a few weeks ago.

A party in charge of a creamery showed Mr. Simpson the bulls that the farmers were using, only four used pure-bred bulls of any kind, all the rest used just bulls, anything to get the cow with calf.

Mr. J. F. Claggett with an article in the Breeders' Gazette says that all calves not coming up to the standard should be castrated. And if they do not castrate them and the farmer thinks they are all right, he should be made to have a certificate of registration of same.

The trouble is that man and nature can not always get together. Man is not always able to judge all the latent qualities possessed by an unfortunate animal. Many good animals have been buried by belonging to the wrong man. There is a little article in the report of the Kansas State Board of Agriculture which says that a good grade cow may yield as much milk and butter as a pure-blood but a grade of any kind has

not the power to transmit its qualities to its offspring as has the pure-blood for the reason that the latter has received qualities for which the breed is noted through a long series of years.

When you are selecting a sire for beef or dairy you ought to trace back and find out what kind of beef or dairy animals were the ancestors. If they were not very good you had better not take them to breed up a herd of milch cows or beef cattle. At the Kansas State Agricultural College the cows Zargola and Zastona show you that they did not possess very much milking quality. The ancestors of these cows probably were not a milking strain. It does not pay to breed a dairy cow to a scrub bull or to a bull of the beef type nor should you breed a beef cow with a dairy bull. You will find out in the end that you can not have a beef cow and a dairy cow at once. It will not pay to raise a calf of the best beef type for a dairy cow

These qualifications when exercised at a skim station should be paid for.

When a merchant wants to develop a new country, he does not send his cheapest traveling men there but his very best, even if their sales do not come near paying expenses for the first year or two, and we believe that this idea might be followed with advantage in the skim station system.

We want to say, that any profession is what we make of it and that because a man does not have a chance of sending butter to the convention and winning official honors, he is nevertheless as important as the mainspring in the watch in producing good butter.

Any good buttermaker will acknowledge that it is easy to make good butter from good cream and on the skim station operator does it depend whether he shall succeed or not.

The skim station operator may in one sense be compared with the stokers

and engineers down in the large men of wars, who do their work under far more trying conditions than the gunners on deck, who get the excitement and the glory.

The skim station operator gets no sociable calls from the perennial salt-color-tub-agents with their more or less fragrant cigars offered and their pleasant and very often instructive gossip from other creameries.

They get no subtle flattery and funny stories from the eloquent commission solicitors to break the monotony of their work.

A steady grind of giving, giving, and but seldom receiving these important mental refreshments is the doom of the skim station operators.



SHARPLES
Cream Separators
Have Tubular Bowls,
no disks, easy to run, reliable,
durable and effective. Catalog 165
and treatise, "Business Dairying"
free. The best dairymen say they are
the best separators.
Sharples Co., P. M. Sharples,
Chicago, Ill., West Chester, Pa.

The Easiest to Operate, the
Closest Skimmer, Simplest and
most Durable, is the
KNEELAND OMEGA
Cream Separator.
We want you to know how good it is
before you buy any other kind. Send
for our free book, "Good Butter
and How to Make It."
The Kneeland Creamery Co.,
25 Concord Street, Lansing, Mich.

A RECORD BREAKER.

The long list of new patrons that were influenced by the experience of their neighbors to ship us their cream in May, and the sudden change of hundreds to this market since pay day in June, all testify to the merits of our system and is farther proof that these cuts represent the keys that unlock the safe containing ALL the money that is to be had in the dairy business.

They are the Corner Stones of a modern, live, wide-awake, up-to-date 20th Century Creamery Business

They are the gateway to the Dairyman's Klondike which he has been seeking for forty years as he wandered through the gathered cream and skimming-station wilderness. They remove difficulties and make dairying profitable. This is the business. This is the year. This is the plan, and we have the market.

We Want Your Cream

Write to us immediately. We are "The Pioneers" of the plan that increased the revenue of the Kansas and Missouri Dairyman one-quarter Million Dollars in one Month.

BLUE VALLEY CREAMERY CO.,
ST. JOSEPH, MISSOURI.



Brain Markets.

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

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

The Way to Win Success.

The way to win victory for the Farmers' Co-operative Grain and Live Stock Association is to persevere on the lines on which we started; stand firmly together; broaden out, improve, and amend the work of our own association when it is necessary. Do one thing at a time and remember that which grows slowly endures.

Stand up for and work with the majority. Any other policy means division, weakness, disintegration, and failure. The little flurries, side organizations, and efforts to divide us will accrue to our benefit and strengthen us when we show that we have the nerve and back-bone necessary to withstand it. After it has subsided we will be stronger. Don't be discouraged if the weak points in our ranks are broken.

Impatience is a weakness and impatient people never accomplish any great undertaking. If we do one thing at a time and do it well all branches necessary to the success of our industries will be reached in succession. We did not start out to build up a one-man movement; we have laid the foundation for a farmers' movement on cooperative lines to be owned, controlled, and operated in their interests.

Cooperation.

Farmers are beginning to realize the benefits of mutual protection in selling their produce. By thoroughly organizing, the wheat-growers of one section in Kansas actually whipped the elevator trust and drove it out of business, so far as their shipping point was concerned. Prior to this they had been suffering from all sorts of trade indignities in addition to considerable financial loss.

In one of the Michigan fruit sections, the farmers have for years paid a high rate to the only express company in that section for very poor service. By cooperation they have formed an association that not only transports fruit for one-third of the former rate but sells the fruit in Chicago, thereby delivering direct from the grower to the consumer.

Formerly a fine basket of peaches that cost a householder in Chicago \$1.50 only netted the grower about 50 cents; the transportation company, the commissionman and other middlemen got the dollar. Under present arrangements it costs the farmers less to ship and sell their fruit than the express charges amounted to under the old plan.

These reforms, however, come slowly because of the little jealousies that almost immediately crop out when farmers commence doing business together. Business men combine and accept the necessary restrictive regulations without a murmur, but farmers lack the business training that fits a man to push ahead to the amount of his individual interest, instead of pulling back when the others undertake to better his condition as well as their own. Farmers should pull together in these matters. Other lines of business are organized, and labor is organized, but farmers continue to seesaw in the balance, while other interests continue to take advantage of their condition.—Central Farmer, Omaha, Nebraska.

"An enterprise when fairly once begun, should not be left till all that ought is won."—Bacon.

Don't let people discourage you. Go right along attending to your own business and you will succeed.

On account of the busy work of harvesting we have no organizers in the field for the last six weeks.

To make a cooperative movement a success it must be founded on equitable principles as well as business plans.

When any of our associations build or buy an elevator or begin the building want to hear of your progress along these lines.

Farmers have plenty of capital to finance any movement that will aid their interests. All that is lacking is confidence in themselves.

Farmers of Kansas, Nebraska, and Oklahoma can market more than 10,000,000 bushels of grain through their own cooperative associations. By do-

ing their own business through their own selected agents they will discover the barriers in their way and remove them.

The Farmers' Central Cooperative Association is developing rapidly. Everywhere farmers are becoming interested in cooperative shipping.

Our associations in Nebraska and Oklahoma are now building elevators and will soon be ready to ship their grain in an up-to-date manner.

The cooperators of Topolohampo trusted everything to one man. The cooperators got left. The one man proved to be a dictator and tyrant.

All movements have their impetuous, impulsive, impatient alarmists, who are moon-eyed and from whose points of view everything is going to the bows.

The grain-growers of Kansas would no doubt appreciate the assistance of true cooperation but they are not ready to be swallowed up by capitalistic dictators.

The farmers of Nebraska are waking up and we predict that our association will have in operation at least twenty elevators and shipping associations before the end of the year.

If farmers want our organization to become more useful and stronger they can easily make it so, by subscribing to our capital stock and by giving our association their patronage.

Why should not the farmers organize, own, and operate a Farmers' Trust Company on the cooperative plan? Such a company would greatly aid in advancing the grain-growers' movement.

Our associations now own thirty elevators, some in operation and some in process of building, and many more are to be built as soon as lease privileges can be secured from the railroads.

Three modern flouring mills with a daily capacity of one thousand barrels each can be purchased or built at three of the best and most centrally located points in the State for less than \$300,000.

Farmers need a terminal elevator to mix and grade their grain much more than they need a mill. Nearly all can reach a terminal elevator if properly located and a mill would benefit only a few.

Be very careful about loading damp grain into cars to ship. It will heat and destroy other grain that you put into the car. Remember that if the grain heats the shipper will be the loser.

"Great works are performed, not by strength, but by perseverance. He that shall walk with vigor three hours a day, will pass in seven years a space equal to the circumference of the globe."—Johnson.

The Stafford County Grain Company and the associations at Jennings and Anthony have taken stock in the central association. The first-named association took ten shares and the other two five shares each.

"Some men give up their designs when they have almost reached the goal; while others, on the contrary, obtain a victory by exerting, at the last moment, more vigorous efforts than before."—Polybius.

When men are too busy to explain a business proposition they are pushing or soliciting for, they are usually busy for a purpose. It is a good thing for you to let them alone until you understand what you are doing.

Notwithstanding the little stanza we keep standing at the head of this department, there are people who ask, Why don't you do it the other way? It is an easy matter to plan how to do a certain thing; but to do it is sometimes a task.

It is well to consider work that our association may do to advantage but we should not lose sight of what we started out to do and should accomplish that first. We started out to market our own grain to the best possible advantage. We should not be side-tracked or hooked onto any other scheme until our first object is fully accomplished. If we undertake too much we are sure to end in disappointment and failure.

When writing advertisers please mention the Kansas Farmer.

\$200,000 COLD CASH!

That is what the Continental Creamery Company paid for butter-fat to its patrons during the month of June. Think of it! Never in the history of butter-making in the world has such a sum been paid out by one concern for this product. Watch us grow.

A Train Load of Butter.

Twelve cars of butter, aggregating 250,000 pounds, left Topeka last week for New York. Ten cars of it were for Uncle Sam's navy and two cars were for regular customers. The value of the train was \$75,000, and the dairy farmers of Kansas had been paid \$65,000 for the butter. The butter was billed from the Topeka plant of the Continental Creamery Company.

Don't YOU Want Some of It?

There's nothing like the dairy business in Kansas now. Butter is on the rise. The prices will go higher this winter than ever before. Get some cows and let us make you some money. There's no easier way in the world. Feed will be cheap and the work is light. If you want a separator let us sell you a DeLaval—the very finest on the market, on reasonable terms. We are paying our regular 2 1-2 cents below the top New York market for butter-fat. Try a Continental milk check.

THE CONTINENTAL CREAMERY CO.,

Topeka, Kansas.

THE MARKETS.

Kansas City Live Stock Market.

Kansas City, Mo., July 15. Prime corn-fed beefs were scarce here last week and prices soared to another record mark. On Wednesday C. B. Williams, of Cleburne, Kans., marketed three loads of dehorned Kansas cattle, averaging 1,483 pounds at \$8.50, the best price of the year and the highest on record. With the exception of corn-finished beefs, cattle were in good supply and prices show a break of 15¢ for the week. Cheaper grades of half-fat cattle broke 35¢@50¢. Out of a total cattle supply amounting to 43,800 head, nearly half or 19,200 head, consisted of quarantines. Killers are getting a liberal supply of grass beefs this season and on that account are enabled to dictate prices on all but corn-fed stock. The outlook for good beefs continues bright. Some traders predict that \$9 will be reached before the new corn crop jamps prices down to a lower level.

Grass steers and cows broke 25¢@50¢ for the week and some of the outside sales showed 75¢ loss. Liberal receipts alone accounted for the decline. The stocker and feeder market was a great contrast to that of the same week in 1901. Then the drought was beginning to be felt and the feeder market was in a bad condition. During the past week feeders sold well, although a heavy supply caused a break of 25¢ towards the close of the week. Good feeders are worth \$5@5.25. A fair class of catters is worth no more than \$4.50, however. Quality cuts as much figure as weight.

Hogs touched another high point for the season, selling at \$1.17½ on Wednesday. Frank Crawford, of Bucyrus, Kans., set the distinction of topping the market at that figure. Hogs advanced 25¢@30¢ during the week. Good swine are now worth \$8. This is about \$2 per hundred weight higher than the same week in July, 1901. Pigs continue strong, although the packers look at little stock last week. Receipts of hogs here last week approximated 27,800 head, against 122,300 the same time in 1901. This is the heaviest decrease as compared with a year ago, that has been had in any previous week this year. The drought forced in hogs during the corresponding period of 1901.

Buyers were after lambs with a long knife last week and took 50¢@65¢ from prices current in our last report. Receipts ran largely to lambs. This condition prevailed over the entire country and the big decline resulted. Top lambs now sell at \$6.25. Shippers would do well to figure on a no higher basis than this and watch out for further declines. Sheep sold steady with the exception of Westerns, which weakened a little. The outlook for muttons is good for another week. Later than that there is no certainty as to the market holding up, for

about the latter part of the month receipts of Utah and other Western stock should begin to depress the market once more.

Horses and mules ruled dead dull all week. The only feature of the former trade was the special sale of rangers. Kansas and Missouri buyers predominated at the sale. Prices were no more than steady with the opening of the season. The offerings lacked quality and flesh. Tops sold for \$32.50 per head, while a great many horses sold around \$15. About 600 horses were sold.

The egg market continues to hold steady in spite of the hot weather. Canned eggs are still quoted at 14¢ a dozen. This is a high price for the summer months. Poultry ruled firm and in active demand. Springers showed a shade of weakness.

Quotations are:
Spring chickens 13½@14¢; live hens 8½¢; roosters 20¢ each; ducks 6¢, young ducks 8¢; geese 4¢; turkey hens 10¢, gobblers 8¢.
Best creamery butter steady at 19½¢; dairy 15@18¢. POWELL.

Last Week's Grain Market Review.

Topeka, Kans., July 14. Excepting the excitement existing in the Chicago corn pit, where corn for July delivery is cornered, very little interest is being taken in the markets. Of course the running up of No. 2 corn to 80 or 90¢ per bushel does not interest the Kansas farmer at this time, but it is of great importance to the Illinois and Iowa farmers, many of whom are now reaping a rich reward by having held their corn. Wheat for some reason seems to lag in price, notwithstanding the strength of its statistical position. The increased primary receipts, while not large, are beginning to be sufficiently heavy to keep the visible supply from decreasing. The visible supply has been about stationary at 19,000,000 bushels for the last two weeks. Of course this is not large and unless farm deliveries increase largely the supply will not increase until the spring wheat movement begins. The world's visible supply is very low, and would warrant higher prices for wheat. There is nothing discouraging to holders of wheat who can hold up their supplies until after the rush is over and we believe such action will be richly rewarded. The real estate and railroad lars have got in about all their work about the magnificent Kansas wheat crop and the threshing machine is now beginning to have its inning at not guessing, but telling the actual results. The Southwestern Grain Journal of Topeka has replies to over a hundred letters sent out asking about wheat yields, and the summary places the yield of Oklahoma at one-half that of last year and the Kansas wheat at about one-third of last year's crop. One thing is certain, should foreign demand continue to be as great as it was last year, much higher prices would finally result. According to

THE L. A. ALLEN Cattle Commission Co. L. A. ALLEN } Salesmen.
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References—Inter-State National Bank and Cattlemen Generally.

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

the Government report issued July 10, there is still 52,000,000 bushels of wheat in farmers' hands, with 19,000,000 in the visible and 7,000,000 in private elevators, making a total of 78,000,000 of old wheat carried over, which with a growing crop of about 600,000,000 makes supplies over 100,000,000 less than they were last year. Of course supply and demand no longer govern prices; prices are usually the result of manipulation in this age, and if the farmers will persist in rushing their wheat off, prices may not advance for some time to come.

Markets closed weak and lower to-day: Chicago.—No. 2 red wheat, 76¹/₂¢; No. 3 red wheat, 73¹/₂¢; No. 2 hard winter wheat, 75¢; No. 3 hard winter wheat, 73¢; September, 72¹/₂¢; No. 2 corn, 80¹/₂¢; No. 3 corn, 69¹/₂¢; No. 2 oats, 49¹/₂¢.

Kansas City.—No. 2 red winter wheat, 72¢; No. 3 red winter wheat, 70¢; No. 2 hard winter wheat (new), 72¢; No. 2 hard winter wheat (old), 73¢; No. 3 hard winter wheat, 68¢; No. 4 hard winter wheat, 64¢; September, 66¹/₂¢; No. 2 corn, 67¹/₂¢; No. 2 oats, 49¹/₂¢.

To a student of economics a study of the grain market is quite perplexing at this time. No. 2 corn sells much above No. 2 wheat in Chicago. This no doubt is the result of the corner; but pound for pound both corn and oats are much higher than wheat. In every cash grain market of the country this state of affairs obtains and the producer might well ask himself the question, is not wheat much too low in price at present?

F. W. FRASIUS.

The Poultry Yard.

Summer Management.

A. H. DUFF.

Mid-summer carelessness is the great evil to successful poultry-raising. The poultry runs get dirty and filthy, the houses get full of lice, the storms come and destroy large numbers of growing chicks, the hawks, and other enemies get their share, while the owner wonders why he has such bad luck, after working hard all spring in starting a good flock. Filth and dirt, lice and disease must be fiercely fought in mid-summer.

Keep the growing chicks in clean, sweet quarters during the night. Large varieties are long about getting up on roosts of slats or poles, so they must sit on the floor. Throw fresh earth mixed with a little lime on the floors daily, and clean all out frequently. Spray the houses with disinfectants such as carbolic acid and kerosene oil. This is cheap and effective and should be freely used in and about the roosting places, and coops that chicks are confined in at night, etc.

Any variety of fowls may fail to do well with you for a season or two, when at the same time it is no fault of the variety, but the fault of your breeding. You may have selected some breeders that are not perfect, which is often the case with cockerels that are not vigorous and prolific breeders. This is no cause why you should discard the breed or variety, but keep trying to improve, and you will come out all right.

The incubator may never be complete until some one invents an attachment to it for the purpose of drying and dressing the newly hatched chicks as they come from the shells. In this, the incubator is far behind the mother hen. This is not only the most serious matter in regard to this, but the newly hatched chicks in the egg chamber being long of drying, are floundering about over the eggs not yet hatched, covering them over with a slimy paste, thus closing the air pores and killing the chicks yet in the shell. Is this not the reason so many more chicks die in the shells in the incubator than under the hens? The ordinary run of brooders are not capable of taking care of chicks as they come from the shell.

Stagnant water pools should have no place about the poultry yards and runs of poultry. No water at all is to be preferred rather than stagnant water containing impurities. Where fowls have the run of plenty of green food they do not require much water, but it is very beneficial to their best welfare to have at all times pure, fresh water. When water is kept in watering vessels for them it should be changed frequently, for it will become very filthy in a short time, and nothing will spread disease faster. One affected fowl will spread disease through the whole flock very rapidly from the use of drinking vessels. A pond of fresh water is less dangerous, and a stream of running water is much the safest and best. Any one having a windmill can easily supply a running stream, and even a very small one will answer the purpose. Disinfectants are used in the drinking water and will be found very valuable in warding off disease. Probably as good as may be used for this purpose is the "Douglas mixture," which consists of two ounces of sulphuric acid and one pound of sulphate of iron, dissolved in one gallon of drinking water. Two tablespoonfuls of this may be added to a gallon of drinking water for the fowls. This may not be given constantly, but about twice a week.

To Tell the Age of an Egg.

A German bakers' and confectioners' organ gives the following methods of determining the age of an egg:—

The age of an egg is now discovered by immersing it in a solution of salt containing about eight ounces to the pint. When the salt has thoroughly dissolved, the egg to be tested is dropped gently in the glass containing the solution. If the egg is only one day old it sinks immediately to the bottom; if three days old it sinks just below the surface only, and from five days upwards it floats.

Another process has just been awarded a medal in Saxony by the National Society of Poultry Breeders. It is well known that the air cavity at the blunt end of the egg enlarges as the age of egg increases. Consequently if the egg be placed in a solution similar to the one described above it will have an increasing tendency to float with the long axis vertical. A scale or angles is placed at the back of the vessel, and from the inclination of the egg to the horizontal the age can be gauged almost to a day. A new-laid egg lies horizontally at the bottom of the vessel. When three to five days old the egg raises itself from the horizontal, so that its long axis makes an angle of about 20° with the horizontal. At eight days this angle increases to about 45°; at fourteen days it is 60°; at about three weeks it is about 75°, while after four weeks it stands upright on the pointed end. If the egg is bad or is over five weeks old it floats.

Poultry Notes.

N. J. SHEPHERD, ELDON, MO.

To fatten a chicken rapidly it must not be allowed too much liberty or its food will literally run away. It must not be allowed too much light or it will fret on account of its confinement. Let the fattening place be well ventilated and kept scrupulously clean. Two weeks of good feeding will, in nearly all cases, be sufficient to fatten well.

Even in summer it is not best to allow ducklings to have free access to water until they are about 6 weeks old, when usually they are reasonably well feathered. Allowing them to go in the water too young causes cramps. After they are reasonably well feathered they can be allowed a free range and will need very little attention until cold weather sets in.

Ducks to be profitable must find a considerable portion of their own food. They should have the range of a good pasture with a good pond or stream of running water. They require very little attention after they are sufficiently well feathered to be turned out, until cold weather sets in, when they should have dry, comfortable quarters provided. As a table fowl the duck ranks next to the turkey in quality and price.

It is quite an item to have fowls intended for exhibition, tame. They will pass through an ordeal of that kind in a much better condition, suffering but little from frights or changes, and when brought before the judge will appear to a much better advantage than if frightened at a touch.

When hens have been laying for quite a while the eggs at the close of the prolific period will not produce as strong chickens as those laid earlier. It is claimed that the layer begins to diminish by this continued effort and the eggs are not sufficiently endowed with vitality near the close of the laying period.

There is no fresh food that may be served in so many palatable ways as eggs, nor so easily obtained by farmers. A pound of eggs contains more nourishment than a pound of meat and bone. They are a perfect food, like milk, containing all the constituents of nourishment, and are easily digested.

In rearing bantam chickens care must be taken to prevent the chickens from growing too rapidly. Most varieties feather early; hence it is possible to hatch them in August or September and still have them out of harm's way before severe cold weather sets in. The food should be such as will secure a good development of bone and feathers without developing too much fat.

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

FRANK J. CHENEY, Sworn to before me and subscribed in my presence, this 6th day of December A. D., 1886. A. W. GLEASON, Notary Public. Hall's Catarrh Cure is taken internally and acts directly on the blood and mucous surfaces of the system. Send for testimonials free. F. J. CHENEY & CO., Toledo, Ohio.

Sold by Druggists, 75c. Hall's Family Pills are the best.

A GREAT SNAP
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Stand for all that is best
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PILES

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

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

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

Ninety per cent of the people we treat come to us from one telling the other. You can have a trial sample mailed free by writing us full particulars of your case. Address, HERMIT REMEDY COMPANY, Suite 788, Adams Express Building, Chicago, Ill.

POULTRY BREEDERS' DIRECTORY.

EGGS FOR HATCHING—From pure Barred Plymouth Rocks. 14 eggs 50 cents. E. J. Evans, box 21 Fort Sott, Kans.

WHITE WYANDOTTES—Exclusively. Eggs for hatching, 50 cents per 15. Mrs. E. F. Ney, Bonner Springs, Kans.

**DUFF'S
POULTRY**

All our Fine Breeders of this season, also Spring Chicks for sale after the first of June. Barred Rocks, White Rocks, Buff Cochins, Partridge Cochins, Light Brahmas, Black Langshans, Silver Wyandottes, White Wyandottes, Silver Spangled Hamburgs, S. C. Brown Leghorns, and Belgian Hares. Buy the best now at the lowest prices. Write your wants. Circulars free. Choice Breeders and Show Birds.

A. H. DUFF, Larned, Kan.

The Stray List.

Week Ending July 3.

Summer County—W. E. Wood, Clerk.
MARE—Taken up by J. W. Whitacre in Valverde Township June 6, 1902, one light bay mare about 5 years old 14 hands high, great scar on left shoulder, is lame, white left fore foot, and some white on forehead, branded on left hip and on left shoulder; valued at \$18.

Cherokee County—S. W. Swinney, Clerk.
MARE—Taken up by John Colclozure in Shawnee tp., on June 19, 1902, one bay pony mare, 4 years old, 13 hands high, weight 700 pounds, right fore foot and right hind foot white, star in forehead and collar marks; valued at \$20.

Pottawatomie County
CATTLE—Taken up by T. J. Eddy, in Grant tp., (P. O. Havensville, Kans.) May 24, 1902, one 2-year-old heifer, white face, Dunlap; valued at \$24. One 1-year-old black steer; valued at \$17. One one-year-old black steer dehorned; valued at \$17. One 1-year-old blue speckled steer; valued at \$14.

Week Ending July 17.

Wilson County—C. W. Isham, Clerk.
HEIFER—Taken up by David Woodson, Coyville, Verdigris, tp. One red and white heifer, branded K on left hip, white horns, valued at \$18.

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

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

Special Want Column.

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

CATTLE.

FOR SALE OR EXCHANGE—For other cattle or land, 25 young registered Hereford bulls. W. L. Bass, Eldorado, Kans.

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

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

RED POLLED BULL—A fine well bred yearling for sale. W. J. Burtis, Fredonia, Kans.

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

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

SWINE.

FOR SALE—Ten choice Duroc-Jersey sows, bred for fall farrow. A. G. Dorr, Osage City, Kans.

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

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

CHESTER WHITE BOAR—For sale, 20-months boar by Eclipse. Sure breeder and guaranteed to be all right. Call at Seabrook, or address Robert Stone, 501 Jackson Street, Topeka, Kans.

HORSES AND MULES.

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

FARMS AND RANCHES.

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

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

160 Acres, 7-room house, timber, bottom land, well located. Buckeye Agency, Agrilco, Kans.

SOME BARGAINS in farms and ranches. Correspondence solicited. J. M. Patten and Co., Dighton, Kans.

SEEDS AND PLANTS.

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

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

PATENTS.

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

MISCELLANEOUS.

CREAMERY FOR SALE—At Neodesha, Kans. new four years ago, run two years and in good condition. Will sell or trade all or part. Ten horse power engine. Plant complete cost \$5,500; will sell for less than half first cost. F. F. Graham, Neodesha, Kans.

WANTED—Volumes of the American Hereford Record. W. L. Bass, Eldorado, Kans.

CLOVER LEAF FAMILY SCALES—We have on hand a limited consignment of the celebrated Clover Leaf Family Scales which we are closing out at cost to make room for farm scales. First callers will get the bargain of P. W. Griggs & Co., 208 West sixth st., Topeka, Kans.

WANTED—To take on shares, ten head of good dairy cows, for a term of three years; will breed to registered Shorthorn bulls. John G. Howard, Morgan, Chase Co., Kans.

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

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

THE BEST CUP OF COFFEE and plenty of good things to eat. Farmers' trade a specialty. Come and get something good. The Two Minute Restaurant, 522 Kansas Ave., Topeka, Kans.

DUROC-JERSEYS

DUROC-JERSEYS FOR SALE—20 fall and winter gilts. 125 spring pigs that are up to date. Prices reasonable. Newton Bros., Whiting, Kans.

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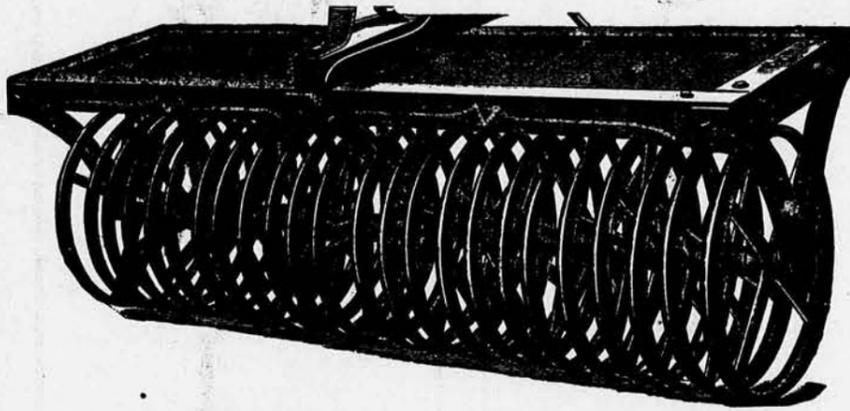
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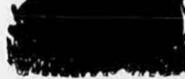
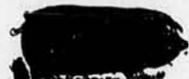
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