

TOPEKA : BUSINESS : INDEX

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The Western School Journal, TOPEKA, KANSAS.

OFFICE STATE SUPT. OF PUBLIC INSTRUCTION, TOPEKA, KAS., January 16, 1889.

The County Superintendent:—I have this day designated the Western School Journal as the official organ of this department, through which medium, by agreement with the editor of the Journal, shall in each issue reach superintendents, teachers and many school officers. This designation is complete evidence of my confidence that the Journal can be safely introduced by superintendents as a paper which should be in the homes of every teacher.

Very respectfully yours, GEO. W. WINANS, State Supt. Public Instruction.

The Western School Journal publishes monthly all the opinions and decisions of the State Superintendent, Attorney General, and Supreme Court on questions relating to our schools. These opinions and decisions will be worth much more than the cost of the Journal to any school officer. According to an opinion given by the Attorney General school officers have the power to subscribe for an educational journal and pay for it out of the district funds. Our regular rate is \$1.25 a year, but to district boards, if three copies be taken, we can make the rate \$1.00. Please remit by money order, postal note, or registered district order. Address WESTERN SCHOOL JOURNAL, Topeka, Kansas.

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WEATHER PREDICTIONS.

By Prof. C. C. Blake, Topeka.

[Parties interested in this Weather Department will please send their subscriptions for the KANSAS FARMER to C. C. Blake, Topeka, Kas. All others will please send to the KANSAS FARMER direct. See advertisement of Blake's Weather Tables on another page.]

SPRING CROPS.

We are under obligations to the readers of the KANSAS FARMER for the large number of kind letters with which they have favored us recently, and will do our best to merit a continuation of their kind regards. We do not know how we can do this better than to use our best endeavors in helping them to plant such crops as will pay the best. We have shown in our "Tables" that in about two-thirds of this State the amount of rain during the coming crop season will be enough to insure a large crop of the ordinary variety of corn. In such localities the farmers do not need much meteorological advice, except as to the best time to plant. But the "Tables" show that in the other third of the State the rainfall will not be sufficient to produce ordinary corn, while it will be abundant for wheat and oats. Our book also shows that after the present warm spell terminates, a very stormy spell will ensue ending with hard freezing. On account of this cold spell in March and April we dare not advise sowing oats now or in March in the northern part of Kansas, and if oats are not sown before the middle of April we are fearful that they will not make a good crop, especially this year. But we know that wheat can be sown in February with perfect safety, as subsequent freezing will not harm it, and the sooner it is in the ground in all parts of Kansas the better it will yield. If sown early it will mature before drouth can harm it in all parts of the State, and it will also avoid much of the danger from chinch bugs. In case of bugs, the last ten days is very important. Many of us have seen fields of wheat entirely destroyed by chinch bugs, while other adjoining fields ripened a week earlier and were unharmed. But even in those localities where the rain will be abundant, as an average for many counties, it is more than possible that there may be local streaks that will be too dry; hence it would be well for each farmer in the State to sow more or less of spring wheat, unless he has a good acreage of winter wheat, so as to have something if a dry streak or spot should visit his county or township. All farmers can afford to do this at present for several reasons. There is not one year in five when all the conditions are as favorable for spring wheat as they are and will continue to be this year. The work can be done now while there is nothing else to do. And last but not least, the price of wheat will be very high about harvest time, so that it can be sold directly from the threshing machine. We are not unmindful of the fact that since our predictions were published in the "Tables" the "bears" in Europe as well as in America have used every possible sort of tactics to reduce the price of wheat so as to compel the producers to sell it cheap in order that they may own it all when they run "the big corner." Some may think that the great grain dealers pay no attention to our predictions, but we are in a position to know bet-

ter; we have no better class of patrons for our "Tables" than the great grain dealers. A great many of the largest grain houses in Chicago, St. Louis, New York and other cities have sent in orders for the "Tables." And such parties hardly ever take one copy; they generally order a quantity. They would not do this if they placed no confidence in our predictions. But while these parties are among our best customers, we frankly state that our sympathies are with the producers and consumers rather than with the middlemen. We are satisfied that the price of wheat would not have been as low as it has but for our predictions. But when these great dealers saw our predictions, they knew that a very great shortage in the world's crop of wheat this year was inevitable, no matter how much Kansas might produce. They then concluded that the first thing to do was to reduce prices to as low a point as possible and compel farmers who were in need of money to sell cheap. But they have not succeeded to as great an extent as they intended. We have what we consider reliable information that they intended and have repeatedly tried to put the price of wheat in Chicago down to 70 cents per bushel; but the confidence in our predictions among a very large class of people has been such that whenever the price was materially reduced a vast number of buyers sprang up from unexpected quarters, and so quickly and quietly absorbed all offerings, no never large, that the bitter has repeatedly been bitten and so severely that it hurts.

Since the first of January, the predictions in the "Tables" have been so nearly fulfilled that all over the land people are fearful that our terrible predictions for next summer will also be fulfilled, and it is producing hundreds of new investors in grain. In January the rainfall was less than predicted in a few localities and correspondingly more in others, while in a majority of places it was almost exactly as calculated. In the whole country at large it was within less than 1 per cent. of the amount calculated. The same was true as to temperature. The mean temperature in Kansas was a little higher than calculated, and in a few other places it was a trifle lower, while in most places it was almost exactly as calculated in the "Tables." The postmaster at Stolzenbach, Marshall county, Kansas, writes us under date of February 5 that the temperature there was 8 deg. below zero January 20. On the first of February the Topeka ice dealers were cutting ice here that was ten inches thick, which indicates that the temperature had been not far from what we predicted. Thus far the February weather indicates that our predictions for this month will be very closely verified. The cry of "infallibility in my township" has about spent its force. Intelligent men no longer expect that the maximum, minimum and mean temperature, and the predicted number of inches of rainfall as an average for a whole State are all to be verified in the township where they reside. They now take a more comprehensive view and notice what the weather has been in other counties and other States; in so doing they find the verification all that could reasonably be desired. This gives confidence; confidence breeds action, and action makes business lively.

Therefore we do not think it possible for the "bears" to force the price of wheat to a lower point than they already have done, because every time they try it they get the worst of it, and even a bear will be cautious after he gets his hair singed, his claws clipped and his teeth knocked out a few times. But in a few months from now, when it becomes manifest that only a few favored spots can hope to raise much of a wheat crop, even the malmed "bears" will climb for it, if they have vitality enough left to make a struggle. Therefore we affirm that Kansas farmers will find it to their interest to at once seed extensively with spring wheat, with every possible assurance of a large crop and large prices as soon as threshed from the shock. A few thousand dollars in July will come very handy in wiping out that mortgage which hangs like a millstone about your neck. Old subscribers will remember the story we published in this paper last summer about the \$20,000 mortgage which an Illinois farmer paid in full with his wheat crop of 1879, and which he seeded on the strength of meteorological information obtained from us in the summer of 1878, at a time when he was entirely discouraged and about to give up the ship.

Since writing our article of last week we find that plenty of Odessa wheat is still grown in Kansas, only that it is known by another name. It is called "grass" wheat. Odessa and grass wheat are one and the same thing. The Capital Elevator company, of North Topeka, Kas., now have 1,400 bushels of it on hand which they are selling at present for \$1 per bushel. We are also this day, February 15, in receipt of the following letter:

BELOIT, KAS., February 11, 1889.

C. C. BLAKE:—I have your last three Weather Tables, and read closely what you say in the KANSAS FARMER. I want to farm according to your plan this year, but am in a quandary what to do about wheat for seed. I can't find any one that knows what Odessa wheat is unless it is what we call out here "grass" wheat. It is either spring or fall wheat, owing to when you sow it. A great many think it and the Odessa must be the same. It is the kind that is mostly raised here. Can you give any light on the subject. Are they the same? You will confer a favor on a convert of yours by answering the above. We had two inches of snow last Saturday. R. A. MOORE.

Also, under date of February 14, 1889, Jas. W. Bouk, the seedsman of Greenwood, Neb., replies to our letter as follows:

C. C. BLAKE:—In regard to the Odessa or "grass" wheat you speak of in your letter, it has been discarded by almost every farmer in this section of the country. I consider the Saskatchewan Fife wheat as the best spring wheat to sow on new ground, and in regard to its withstanding frost, two years ago I had trouble with its living over through the winter and a volunteer crop coming the next spring, enough to bother in tending corn planted on the wheat stubble. Will quote you this wheat when taken in full two-bushel sacks at \$1.40 per bushel. For sowing on old ground I consider the Minnesota Blue Stem or "velvet chaff" wheat the best. Will quote you same price, viz: \$1.40 in full two-bushel sacks. I mail you to-day samples of both of the above-named varieties.

The samples mentioned have been received, and are very fine. They can be seen at the KANSAS FARMER office. It seems that the Saskatchewan Fife will endure hard freezing as well as the Odessa or "grass" wheat. It is a very fine wheat and brings a high price in the market. It might be well for some of the Kansas farmers in the northern counties to send for it and introduce it into this State, if they have it not. But during the present scarcity of money we think the Odessa or "grass" wheat which can be had cheaper and nearer will do well this year.

We had intended to write about other crops in this issue, but have so many letters inquiring about wheat, which should be sown at once, that we defer other matters till later as they are not urgent, and we have not space for both. We would suggest, however, that those who do not intend to sow wheat and who intend to plant corn as early as possible should now be plowing, as it probably will not do, at least this year, to put in early corn with a lister. The lister will do after the ground becomes warmer. But Mr. A. A. Disney, who was mentioned in the "Tables" as having raised two good crops on the same ground last year and then put in a third crop, fall wheat, was in our office this week and says he adopted our suggestion in regard to subsoil plowing; that as he had no regular subsoil plow he used the lister last fall in preparing his ground for corn to be planted early this spring; that as he had plenty of large horses he put three of them onto a strong single-shovel plow and with it opened up the subsoil in the bottom of the furrow made by the lister to a depth of twelve to fourteen inches, letting the soil roll back again; that he will harrow the ridges down somewhat this spring and then drill his corn early in these furrows. We do not see why this is not a good plan where farmers have plenty of horse power. But a regular subsoil plow will do as well and takes much less power. This loose subsoil will allow the water to soak down to furnish moisture during the dry weather, and will leave the top soil dry where the corn is planted. We think this plan will produce a large yield of corn, and do not perceive why corn ground cannot now be prepared in that way so that it will become warm and ready for early planting in April in those sections that are to be pretty dry in July and August.

Since writing the above, most of the precipitation predicted for February has fallen in the shape of snow in all parts of Kansas. As soon as it melts, wheat seeding should be vigorously continued. Those who wait till into March may be so bothered with rain, sleet and snow, as well as freezing, that they cannot sow wheat till too late.

Publishers' Paragraphs.

Send to A. W. Livingston Sons, box 284, Columbus, Ohio, and you will receive one of the most novel and handsomest catalogues published.

For several years Prof. J. A. Lawrence, of New York, has advertised "catarrh cured" in this paper. He informs us that he will send a free receipt for treatment to any person sending their name and address. See his adv.

The mail service in the West is certainly doing a "helter skelter" business, judging from the vexatious delay in handling paper mail. We mail our papers regularly and promptly, and yet it often takes a week to reach subscribers 100 miles distant.

Have you ever gotten up a club for the KANSAS FARMER? If not, try and see how easily it is done. Nothing is more appreciated than to have any of our readers send us one or more new subscribers. And And we are glad to reward such efforts too.

The mammoth 150 page catalogue of "Everything for the Garden" for 1889, by Peter Henderson & Co., Cortlandt St., New York, is at hand, and must have been very costly to publish. It will be sent to any one on receipt of 25 cents in stamps, which amount may be deducted from the first order. It is a thing of beauty and worth having. Send for it.

The Smalley Seed Company, of McPherson, Kansas, place their advertisement in this issue of the KANSAS FARMER, and it is with pleasure they are commended to your patronage. This firm imports, grows and deals in field, garden, flower and tree seeds. They carry large stocks of field seeds of superior quality, making a speciality of seed corn. Their list of early corn contains the best to be had anywhere, and from a visit to the Smalley Seed Company's mammoth stores, it is safe to say that they have the largest and best equipped establishment of the kind west of Kansas city. It will pay you to patronize them.

Notwithstanding the introduction of orchids and other rare flowers, new varieties of such old popular favorites, as sweet peas, pansies, balsams and phlox, recently developed by skillful hybridizing and selection are really entitled to rank among the most beautiful of all flowers. W. Atlee Burpee & Co., the Philadelphia seedsman, advertise in this issue a remarkably cheap diamond collection of fifteen best varieties for fifty cents, containing new improved strains of their own growing, which will doubtless prove a pleasant surprise to many of our readers. They have mailed us a sample collection, neatly done up, each packet bearing an illustration of the variety, with concise directions for cultivation.

Alden & Faxon, Newspaper Advertising Agents, Nos 66 and 68 West Third Street, Cincinnati, Ohio, have just issued a very neat catalogue of the leading American and Canadian newspapers. It is very attractively gotten up, the typographical work being above reproach. A very interesting feature of this catalogue is the publication of sample advertisements, and instructions to new advertisers as to the best method of making money out of newspaper advertising. This firm are especially good counsel in the direction of newspaper advertising, from the fact they have written the advertisements and made successful some of the most prominent firms in the United States. This list will be sent free on application.

THE INAUGURATION

Of the President-elect will take place at Washington, on March 4, 1889, and should be witnessed by all who can possibly spare the necessary time. For this occasion the "BURLINGTON ROUTE," with its usual liberality in such cases, has made the remarkable low rate of one fare for the round trip, and will sell through tickets to Washington and return at this rate, thus placing the excursion and a short vacation within the reach of all. From the Missouri River a choice of routes is offered, viz: via Chicago, St. Louis or Peoria, in connection with any line desired east of these points. The equipment of the Burlington Route is surpassed by none in the way of comfort and elegance, and its time is as quick as the quickest. Tickets will be on sale from February 27 to March 2, inclusive, and will be good returning until March 16. Go yourself and persuade your friends to go, and buy your tickets over the Burlington Route (H. & St. J. R. R.)

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The Stock Interest.

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

FEBRUARY 27.—Public sale of Percheron and French Coach horses, by Degen Bros., Ottawa, Ill.

English Red Polled Cattle.

EDITOR KANSAS FARMER:—As we have had about five years experience in breeding the English Red Polled cattle, with your permission we would write a few lines upon the subject. We have about one hundred head of registered pure-bloods, mostly imported from England, and about one hundred and fifty head of one-half, and three-fourths blood, raised by the use of the pure-blood Red Polled bull with Short-horn cows. We are very much pleased with them, as a large size, very hardy, handsome, and hornless breed of cattle. We are satisfied that these cattle will come to the front as the very best combination of good qualities. It will be seen by the weights given of the prize animals at the London Smithfield Show, held December 10 to 14, 1888, that these cattle are of a large size and early-maturing breed. In the 2-year-old class, Mr. J. J. Colman's first prize steer, at 2 years and 2 months, weighs 1,722 lbs.; the second prize steer, owned by Mr. A. Taylor, at 2 years and 11 months old, weighs 1,831 lbs. In the 3 year-old class, the first prize steer, owned by Mr. H. Bullard, at 3 years and 9 months, weighs 1,854 lbs.; the second prize steer, owned by Mr. Colman, at 3 years and 10 months, weighs 1,972 lbs. A 3 years and 9 months heifer weighs 1,510 lbs., a 3 years and 8 months heifer weighs 1,518 lbs., and a 3 years and 2 months heifer weighs 1,736 lbs. Mason, the head of our American herd, weighs 2,050 lbs., and his sire, Slasher, weighs 3,150 lbs. I send you, herewith, the testimony of another American breeder:

"For fifty years, Suffolk Co., England, has been celebrated for its dairy products, chiefly from Polled cows, and accepted authority in England says, in substance, that some, in the height of the season, gave eight gallons of milk daily. A large dairy, near London, found Red Polls to be deep milkers and rich in quality. In a year's test, the Royal Agricultural College of England, between a Red Poll cow and two others, each of them of the best family of milkers, the Red Poll gave the richest milk of any, except one Jersey; and made the most butter, except one Guernsey."

McLain Smith, in the *Breeders' Gazette*, says:

"There has been, so far as I know, but two public tests of Red Polled cows in the country. The first was that of a 2-year-old heifer from my own herd, entered in the test at the West Virginia State Fair in 1886. She came fresh a few days after she was 2 years old, and at the time of the test had been milking seven months, and was six months in calf. She went to Wheeling from our State Fair at Columbus, and for several weeks had not a bit of succulent food of any sort. She gave in the test, according to the official report, a little over 50 lbs. of milk a day, containing 14 per cent of cream. No chemical analysis was made.

"At the Iowa State Fair last year a two-days' test was held, in which, among others, the celebrated Holstein cow, Tritomia, was entered. Tritomia, I believe, is considered by the editor of the *Dairyman*, as the best Holstein cow in the West, if not in the United States. She was sold recently at a public sale, if I remember rightly, for about \$1,700. In the same test was Gen. Ross' Red Polled cow, Floss 2d. Tritomia, in the

two days, gave 182 lbs. of milk, which made 2.97 lbs of butter; Floss 2d gave 78½ lbs. of milk, which made 2.72 lbs. of butter—just one quarter of a pound of butter, in two days, less than Tritomia.

"At our Centennial Exposition in Ohio, this fall, it was proposed to have an elaborate thirty-day milk test, in which account should be taken not only of the yield of milk and butter, but of the food consumed. My Red Polled cow, Lady of Tuttlehall, was the only animal to face the music. Holstein and Jersey breeders seem to have considered discretion the better part of valor. Not a cow of either breed was entered."

From the above statistics, we show the very best combination of beef and milk qualities. And our own experience proves that the first cross with any other breed, gets all calves without horns, and nearly all of a deep red color.

J. S. & L. K. HASELTINE.

Dorchester, Mo., February 11, 1889.

The Beef Combine—Why Dally in the Matter?

EDITOR KANSAS FARMER:—Doubtless the above question presents itself to the mind of every farmer and cattle-raiser in the State when he reads the recent action of the State Senate upon what is known as the beef and pork combine. Mr. Gillett, in his remarks upon his resolution, as reported, claimed that this combine had absolute control of the beef product, and had so depreciated prices that one of the most important industries in Kansas was being ruined. Now, if Mr. Gillett knows that to be a fact, why did he introduce the resolution that he did? The resolution provides that the Governor shall open up a correspondence with the Governors of other States interested, with a view of securing joint action of such States; also take steps to secure a convention of representatives of the several States, with a view of securing uniform legislation upon the subject. I ask again, why dally in the matter? If these evils exist, and Mr. Gillett says they do, why not at once introduce a State live stock inspection law, as recommended by the KANSAS FARMER some time since? The action of the Senate, if concurred in by the House, simply defers action upon the matter for two years more, for we all know the Legislature will adjourn long before the action referred to in the resolution can be taken. The farmers and cattlemen of Kansas have already suffered from the rapacity of that outrageous combine for the past three years, and why should we be compelled to submit to it for two years more, simply because the members of the Legislature choose to handle the matter very gingerly? The majority of them owe their election to the farmers, and if they can't help us any they had better at once resign and go home. It is said the members of the combine are becoming frightened. No doubt of it; but not from reading Mr. Gillett's resolution. It was from the action taken at the recent national conference of cattlemen and butchers. It is claimed they spent \$25,000 in four days in order to defeat the object of that conference. It is alleged they are robbing us of \$50,000,000 annually. If so, why delay action for another two years, and allow them to fleece us to the tune of \$100,000,000, simply because our legislators want to investigate. Investigate something they already know, and so declare. If the mouth disease breaks out, or the Texas fever prevails among our cattle, and we all know it, do we stop and investigate before the passage of a law to suppress it? The legislators can introduce bills for the purpose of compelling farmers

along the highways to keep their hedges trimmed just five feet high; and to make new judicial districts; and to keep us from voting any more bonds to railroads; and provide a commission to revise the statutes of the State; and to provide for the drawing of their pay; but when it comes to enacting an inspection law in order to cripple this gigantic combine that is sucking the life-blood out of our cattle industry, why, then they must investigate and let it have its own way for two years longer. If the House concurs in the Senate's action, no bill will be passed this winter.

J. F. COULTER.

Russell Springs, Kas.

Roots for Stock.

EDITOR KANSAS FARMER:—There are few Western farmers who make any effort, whatever, to grow roots for stock. If upon harvesting the crops in the fall, there is a surplus of potatoes, turnips or beets that cannot be marketed to advantage, they may be fed out, but to grow them especially for this purpose is done by but few. Yet there is no doubt but that in many cases they could be made a substitute for corn, lessening in many cases the cost and securing better health. There is no doubt but that in many cases too much corn is fed. That in the West it is one of the cheapest and best foods that can be used is not to be denied, yet it can be fed to excess; better results could be obtained with more of a variety. In addition to this the risks of failure in having a full supply of feed will be much less if a variety of crops is grown than when the whole dependence is placed on one crop. Two or three of our farmers tried this plan last year and more will try it again this year, as it is becoming evident that if the fertility of the soil is to be kept up and good crops secured a change from a continual growing of corn must be made.

In a loamy, sandy soil, well prepared and properly planted, large yields of roots can be secured, much larger than is possible with almost any other crop, and while the labor of harvesting may be something more than with corn, the increased yield, with the advantage of having a variety and of growing a variety, will more than balance this. I would not advise any one to go into the growing of roots for stock too extensively at first, yet I am satisfied, and so much so that I intend trying a patch this spring myself, that with many it would be a good plan to try a small patch, taking pains to have the soil in a good condition before planting the seed, and then securing good seed, planting carefully, and thinning after the plants make a good start to grow and giving good cultivation. All things considered, mangel wurzels will probably give the largest yield, although I am planning to plant mangel wurzels, artichokes and parsnips. The cost of making a trial would be small, while, by keeping an account of the work done, each farmer could determine whether or not they could be raised profitably. I am satisfied from what experience I have had that it will be advisable to prepare to grow some crop that can be used with corn to make up a good variety.

N. J. SHEPHERD.

Eldon, Miller Co., Mo.

Catarrh Cured.

A clergyman, after years of suffering from that loathsome disease, Catarrh, and vainly trying every known remedy, at last found a recipe which completely cured and saved him from death. Any sufferer from this dreadful disease sending a self-addressed stamped envelope to Prof. J. A. Lawrence, 88 Warren St., New York city, will receive the recipe free of charge.

Farmers Must Have Relief.

EDITOR KANSAS FARMER:—For some time during the campaign a great many farmers thought your paper simply a guide-board to direct the farmer to a political party; but of late it is becoming to be understood that the FARMER is going to be what it claims, viz.: "the farmer's right arm." We are under lasting obligations to you for the fight you have inaugurated in favor of economy and reform in our legislative halls. You are right about interest. Six per cent. is enough as long as agriculture only pays 3, and of late far below cost of production. The senseless cry that Eastern capital would be withdrawn if interest is reduced to 6 per cent is for the purpose of preventing legislation. I personally know that Eastern capital wants rates reduced, from the fact that they now loan on good real estate security at from 6 to 7 per cent. An agent of one of the heaviest institutions represented in the West says that if the law should pass to reduce to 6 per cent, and made strong enough so as not to be disregarded, he can get all the money he wants to loan at that rate, but if the present state of affairs continues one-half the farms of Kansas will, inside of two years, pass into the hands of the parties who hold the mortgages. The reason is that Eastern men do not care to let their money go out where the law is such that any one who by any means is unfortunate enough to have to make a temporary loan is robbed by the vultures whose hands he falls into until he can never meet his interest nor principal on his farm. Ex-Gov. Martin put it just as it is, only it is far worse than anything can be conceived from what he said.

Our Western farmers need not think that a failure of crops is all that ails them. Here in this county where I write, corn and all other crops were good, oats especially so, and the farmers are in the greatest distress. One of my neighbors was sold out yesterday on chattel mortgage. His cows brought \$11 apiece; corn, 11 cents a bushel; oats, 10 cents a bushel; horses, \$20 to \$36 each; an imported Norman stallion that four years ago he paid \$1,000 for at 2 years old, brought \$84. All this property was sold on time, as there is no money in the country to pay cash for anything.

I mention these things to show our brothers of western Kansas that they are not the only ones that are hard-up, and that if they can fight off the mortgage fiend and the usurer they will be all right, sorghum or no sorghum.

I have seen the best sod corn in western Kansas I ever saw in my life, and I feel sure that it will yet put its villifiers to shame. Send in a petition to Congress asking for \$25,000,000 for sugar works in the West. It is a national interest, as much as any other. You need not expect to get it; but I want to hear the howl of "paternal government" that will go up from the bond-holders who are asking and getting \$30 premium on each \$100 of bonds, that originally cost them 50 cents on the dollar.

You say in your last issue that "a large majority of the members of the Legislature came to Topeka to amend our interest laws, but find a different atmosphere there." Well, tell them for me, that however that may be, the atmosphere at home is the same as it was, only a good deal more so. I felt last fall, when the farmers were following the Jim Crow lawyers and Shylock bankers around with their torch-light processions, that probably the mere plank in the platform would be all they would get. Six per cent. interest, a three years stay law, and one or two other laws that the KANSAS FARMER has proposed will be the only salvation of the farmers of Kansas. This state of affairs has been partly brought about by the infamous system of laws we have had to live under, as is well illustrated by ex-Gov. Martin. But that is not the root of the evil by any means. If any of your readers want to get at the "true inwardness" of the robber schemes of finance, let them get Senator Plumb's speech on the bond purchase bill, and Senator Stewart's speech in the Senate on the first day of last May on the subject of "The conspiracy of the money power of this country and England to ruin the industries and cheapen the products of this country;" also Senators Beck and Reagan and others on same question.

In conclusion, let me say that cheap money goes where it is the safest, and that farmer is the safest who can not be robbed according to law. If S. M. Alexander, Zionsville, Grant Co., Kas., will write to J. B. French, Burrton, Kas., he will hear of a farmer's organization that is beginning to help farmers very much in this part.

AN ALL-OVER KANSAN.
Burrton, Harvey Co., Kas.

In the Dairy.

Our Dairy Interests.

Extract from the annual address of President Otis, before the State Dairy Association, February 5, 1889.

Kansas people, as a rule, are not fond of writing or speaking upon topics wherein Kansas fails to come to the front, but when any important branch of industry in our own State seems to fall behind a like industry in any other sister State, it is continually the part of wisdom to inquire into the cause and if possible apply the remedy. All of us readily admit the great and growing importance of the dairy interests in the diversified agriculture of our State and country. There is no one branch of husbandry that surpasses it, and in the present condition of Kansas agriculture our dairy interest should come to the front. It will help us to pay our debts. From the fifth biennial report of our State Board of Agriculture we learn that the total number of milk cows in Kansas in 1886 was 627,481, valued at \$15,637,025, making an average of a little less than \$28 per head. The amount of butter produced from these cows during that year was 25,495,836 pounds, valued at \$3,824,375.40, or an average of less than 15 cents per pound; number of pounds of cheese manufactured from the same, 442,734 pounds, valued at \$53,128.08, or an average of 12 cents per pound; and the total value of milk sold, other than that made into butter and cheese was \$376,057. This makes a total production from these 617,481 cows in milk and its products of \$4,253,560.48 or a little less than \$6.78 for each cow. In other words, these 600,000 milk cows are not producing annually in dairy products a sum equal to the cost of keeping—placing that at \$10 per annum. It will perhaps be urged that the cows each raised a calf during the year that was at least equal to the cost of her keeping and that the owner had the value of her dairy product as profit, less taxes and interest on his capital invested. Admit this to be true and still the annual return from our milk cow is vastly too small. Wisconsin, with about the same number of cows reports an annual product of nearly \$25,000,000, or a little over \$38 to the cow, and this is not one-half what many good dairy-men report as the dairy product of a good No. 1 dairy cow for one year. Now the question naturally arises, how does this happen? Why is it our census shows only a little over \$6 per head profit on our milk cows, when under favorable conditions it might be over \$30?

If these 627,481 head of cows in our State could be made to yield an annual dairy product of the value of \$60 per head instead of \$6.78, as shown in 1886, the annual addition to the wealth of our State from this source would be \$38,000,000 instead of four and one-half millions as now. Or, if you please, put the standard a little lower and suppose we could make each cow average \$40 per head. We would then have twenty-five millions as the annual yield instead of four and one fourth, as it now stands, and the saving of over \$20,000,000 to the farming population of our State is a matter worthy our careful consideration. In the light of these facts and as subjects for thought and discussion at this meeting we would make the following suggestions:

First—That we transform some milk cows into dairy cows.

Second—Increase the quantity of the animal dairy products of our State and improve the quality.

Raising Winter Calves.

EDITOR KANSAS FARMER:—After having the experience of raising calves at different seasons of the year, I have come fully to the conclusion that the winter season is the most economical and preferable in every respect. The most important point gained is, calves becoming of weaning age the middle or last of May, have all of the summer season to grow and thrive in, and will come up to the barn in the fall in prime condition to winter.

The first object in view is, to care for the calf as soon as there is an opportunity, and this will occur three or four weeks before being dropped, when the cow should be messed with bran, middlings and ground oats to fully develop the calf when it is dropped. But this feed should be left off almost entirely before her time is up to come in.

Before deciding to raise a calf we should be sure that it is of good form, and has an intelligent head or is a fool; but be sure the fool is not on the wrong head, and if it is a dude, fatten it for the butcher.

I am well aware that there are various opinions as to the proper age to take a calf from a cow to feed, but I am well satisfied, everything considered, that when about a week old is the best age, although it may take some time longer to teach it to drink than younger, but its system will not be thoroughly cleansed out till about this age, and it is very difficult for a calf a day or two old to properly digest its milk without the aid of all gastric juice or saliva possible, and to take a calf from a cow as dropped would seem to come under the head of "cruelty to animals." When commencing to teach a calf to drink, I let it take about two-thirds of its allowance from the cow, and take it off gradually. The most convenient dish to use is one with a handle to it. Then get astride of its neck with the palm of the hand on its nose, two fingers in its mouth. I give it the first lesson in drinking. If it bites your finger grin and bear it, don't cuff or swear at it. I continue to feed with new milk until it will eat hay, which it will do in about two weeks if it has access to it, and it should be bright-colored or fine hay. Then add some skimmed milk, and also a teaspoonful of flax seed or a large spoonful of oil meal steeped in a jelly. When three or four weeks old the milk may be all skimmed that is fed to it, but it should have a ration of bran, middlings and sifted oat meal given dry, and better, if given in connection with its hay. I have no particular rule to govern the quantity of feed, but every man should exercise his own judgment as to what a calf requires. But with commencing any new feed the quantity should be small at first, and increased as to age and size. But be sure and not to overfeed to bring on the scours. When skimmed milk is fed it should be tested with a cream thermometer to ascertain the warmth, and should range 90 to 100 deg. The feed should be continued a short time after turned to grass and lessened gradually.

The next winter don't confine it on the sunny side of a wire fence, but provide a comfortable place for it, and give it a ration of bran, oat meal and middlings and add a little salt, and if intended for beef in the future, add a handful of corn meal.

I do not claim this to be a perfect ration of feed, but present it with the hope that it may draw out from others a more perfect mode of feeding.

CHARLES M. CASE.

Enterprise, Dickinson Co., Kas.

Henry Stewart says that in churning, the temperature must be kept at 65 degrees in winter and not over 61 degrees in summer

The crank churn should not exceed eighty revolutions per minute, and as soon as the butter gathers in small granules as large as wheat grains, stop; then draw off the buttermilk and wash with clear, cold water or brine. Pour the water or brine in, turn for a few times, draw off and repeat till the water comes away clear.

About Corn.

EDITOR KANSAS FARMER:—One year ago I was among the first to advance the idea of planting early varieties of corn, especially that from Northern seed; how well this plan has been carried out, and with what degree of success the farmers of this State have been benefited, a perusal of the files of the KANSAS FARMER since the last harvest will fully testify. I notice now that nearly all in writing on the subject, or in advertising corn for sale, make this a special point. That is all right, let your light shine. If we discover a good thing let the world know it, particularly if any benefit is to come to our brother farmers in Kansas. Now, Mr. Editor, I wish to ask for the liberty of a little more space to bring before the readers of your valuable paper a discovery which may be of additional value to the tillers of Kansas. In experimenting with different varieties of early corn I have found one that will not sucker to speak of, or to that extent which retards the full development of the ears. I never considered suckers on corn of any benefit, even in the way of fodder; being shorter than the main stalk if cut off they fall to the ground and are lost; whereas if no suckers grew, all that sap will follow the main line and give us more and larger ears. Last season I used a lister for the first time, and am well satisfied that there are many points far ahead of other methods. I prefer to use the listing plow, and after the ground has been opened a day or two, and the cold soil which has been laid bare has a chance to get warm, then go on with a drill and put in the corn, covering very lightly. By this method the plants will come up quicker and grow faster in the first few weeks. Many farmers have had to replant their crop by using the combined lister, as the cold bed upon which the corn fell would prevent its ever sprouting. I think the best plan is to turn over stubble land in the summer and fall, letting the plow run deep, then when the lister is put to work there will be a loose soil bed for the reception of the seed, and the ground will not get as hard as where only the lister is used year after year. A. E. JONES.

Topeka, Shawnee Co., Kas.

Interest is Too High.

EDITOR KANSAS FARMER:—Interest is too high; it will not justify the giving for the use of capital in the ordinary business of life. Isolated cases should not be sought after to keep the present rate of interest any more than to reduce it to an unreasonably low basis. Can the farmer use capital at the present rate in carrying out his farm work, purchase stock, &c., and have any assurance that he will make any money out of his borrowed capital? Can he use it in payment of his debts and at the end of the year find a surplus on hand after sale of his products to more than pay the interest? Then it is too high.

If with the greatest economy (and the people have been studying that for the past three years), they can't pay a part of the principal after paying running expenses, they might as well "throw up their hands." The same principal applies to the mechanic and artisan. Capital is the tap root of progressive industry, and to establish a healthy plant, neither should be allowed to absorb the other. Capital is entitled to its just record; equally so is labor. If the "prosperity of this country depends on the success of the farmer," and all the parties agree that is a good argument to use, would it not be safe to legislate in his interest to such an extent as to insure his success? By such a procedure would not the securities we give advance as the rate of interest lowered to a healthy basis? If by any law we are better enabled to pay our principal and a reasonable interest, just alike to the lender and borrower, and retain our present people on their homes, would it not be infinitely better than to retain our present high rate and let our "people go?" for with many thousands it has reached that pass.

It is absurd to think to frighten us by saying that the eastern capitalist will at once

WELLS, RICHARDSON & Co's IMPROVED Butter Color.

EXCELS IN STRENGTH
PURITY
BRIGHTNESS

Always gives a bright natural color, never turns rancid. Will not color the Buttermilk. Used by thousands of the best Creameries and Dairies. Do not allow your dealer to convince you that some other kind is just as good. Tell him the BEST is what you want, and you must have Wells, Richardson & Co's Improved Butter Color. Three sizes, 25c, 50c, \$1.00. For sale everywhere. WELLS, RICHARDSON & CO. Burlington, Vt.

withdraw his capital if rate of interest are reduced. The same argument has been used in every State east where interest was reduced, but the results following the reduction proved it untrue. But little of this high rate goes to the eastern capitalists. They get but from 4 to 7 per cent., the balance goes to the agents here by way of commissions. If a reduction of interest should result in the closing of the office of some of our sub-agencies, if they can't get employment more suitable to their tastes, every farmer extends a welcome to them to "put their hands to the plow" and help redeem the wild lands of the State. The 80,000 majority who elected the present Legislature demands it as a redemption of the plank in the platform of 1888, and will hold the Legislator responsible who shirks his duty. HENRE COMSTOCK.
Cheney, Sedgwick Co., Kas.

Opposition to Remedial Legislation.

EDITOR KANSAS FARMER:—There seems to be a good deal of correspondence to the *Capital-Commonwealth* in regard to the proposed legislation on the interest and redemption question, the most of which seem to be from bankers and money-lenders, and naturally enough they all condemn it as detrimental to the interests of Kansas, and if passed, would be the means of driving Eastern capital out of the State, because (they say) the Eastern money-lenders would feel insecure in lending money here. These money-lenders and bankers claim that it would have a tendency to defraud them out their money. Every borrower and every lender of money knows that when a mortgage is given on real estate for money borrowed, the realty must be of three times the value of the amount borrowed, and that the title must be good. Is not this generally the case? and why make all this noise about the law crippling the securities? Mortgaged property is first-class security and would be just the same if said proposed law was enacted. Where the shoe pinches is here: They (the money-lenders) would be required to accept a smaller rate of interest in Kansas than formerly. Isn't the security that they are afraid of, as is claimed.

The farmers of Kansas have been the hens that laid the golden egg for the money-lender. I don't see as there would be any wrong done to any person if the farmers of Kansas should have at least one law to protect them. Poor crops for the last three years previous to 1888 has made it very hard for a great many farmers to live, say nothing of keeping up their interest. Many, many farmers ran behind hundreds of dollars; still interest must be paid when due, or the mortgages are liable to be foreclosed. The money-lender keeps reminding the farmers of the clause in the mortgage, that if interest and taxes are not paid when due, the mortgage is subject to foreclosure any time. Yet the man that loans the money says that he don't want to foreclose, but that he wants his money. Just let a man have a good farm and not pay interest when due, and see how soon the money-lender will commence action. He knows that the farmer is pressed for funds and is hard-up, and he knows that the farm is worth three times more than the amount borrowed on it, and there is a chance for speculation. Let the Legislature give the farmer a little protection and time, that is all we ask. L. T. RICE.
Wabaunsee Co., Kas.

Patrons' Department.

The KANSAS FARMER wants to aid every worthy movement which has the agricultural interests in view.

Grange Matters.

M. Bros, Boston, Col., asks: "Is there any wholesale Grange supply house in Kansas or Colorado?"

-Strictly speaking we should say no. But at the Patrons Co-operative store in Olathe, Johnson county, Kas., you can buy almost anything you may wish from a hoe to a self-binder or from a pound of groceries to a car load of dry goods.

Our correspondent also asks: "Does any reader want to let range cattle out for three years on shares?" Let our readers answer.

As to the best methods of tanning raw hides, we have no experience.

We clip the following from a report of the committee on the good of the order of the Massachusetts State Grange: "Every Grange should take cognizance of all great events that have economical questions of political economy underlying them.

A stockman from Northern Kansas writes us regarding loss of stock from feeding in stalk-fields, that "care about turning in too long at a time at first, will not entirely remedy the evil, although it greatly diminishes it.

Wm. T. Dudley, Roscoe, Graham Co., Kansas, writes that his imported horses and other stock are keeping in fine condition this winter.

A visit to M. B. Keagy's breeding establishment of English Berkshires and Plymouth Rock poultry at Wellington, last week, was highly satisfactory.

On Sunday of last week a very interesting Farmers' Institute was held in the opera house at McPherson, with A. F. Waugh, president, and John Richey, secretary.

The first paper after dinner was by Wm. Stroppe, and treated on "The Best Method of Raising Oats."

Next came a paper on "The Best Method of Raising Potatoes," by B. Riebert, who proved by large samples that he could grow potatoes with but ordinary care.

Other subjects were: "Best Breed of Horses for Farmers to Raise;" "Small Fruits for the Farm," etc.

The attendance was large, both ladies and gentlemen, and the proceedings full of interest. The next institute will be held April 11th, at 10 a. m.

I will mail a valuable present to any minister, teacher or friend of education on receipt of address. THOS. J. BYANT, St. Joseph, Mo.

Gossip About Stock.

Any of our readers desiring to see how the Haaff free chute looks can get illustrations by writing to E. P. C. Webster, patentee of the Webster chute advertised in this paper.

Notice the new card of J. M. McKee, breeder of Poland-China hogs, in the Directory of this and ensuing issues of our paper.

We have received the new catalogue of the select herd of Berkshires owned by G. W. Berry, Berryton, Shawnee county, Kansas.

Mr. W. H. Wilson, Cynthiana, Ky., has sold to W. P. Brock, of Maud, Bucks Co., Pa., the bay yearling colt, Gray's Ferry, by Simmons, 2:28; 1st dam Carrie Almont, by Abdallah Mambrino 3715; 2d dam Margaret, by (Rankin's) American Boy, son of American Boy.

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Don't fail to observe the special annual sale of Cleveland Bay and Shire stallions and mares, advertised this week by Geo. E. Brown & Co., Aurora, Ills.

The writer had the pleasure, last week, of visiting one of the most extensive and representative swine-breeding establishments of the West, owned by Hon. T. A. Hubbard, Wellington, Kansas.

saw so large a herd that was so uniformly good. Mr. H. had the good judgment as well as the means to stock his herd with the best and has never repented, what must have seemed at the time, lavish expenditure.

Inquiries Answered.

LISTING CORN.—The lister is not recommended for use in hard ground.

COW PEAS.—The Crowder pea is a "cow pea," when sown in fields and raised for feed of stock.

G. A. R.—The proposition to appropriate public money to erect G. A. R. reunion buildings has no constitutional authority.

SPRING WHEAT.—Odessa is believed by many to be the best variety, though Mr. Bouk, of Nebraska, recommends Saskatchewan. Sow early as the ground will work to cover.

COAL ASHES.—Will you please to inform me whether coal ashes is worth anything as a fertilizer on land?

—Coal ashes is worth little or nothing as a fertilizer. It makes a good mulch about trees.

MOLES AND GOPHERS.—Will some of the KANSAS FARMER readers give a receipt for a solution to soak seed corn in to kill moles and gophers without affecting the germinating qualities of the seed?

—While waiting for a correspondent to answer, let us suggest that some corn—not that used for seed—be soaked in strychnine, and dropped with the seed corn.

SILO—ENSILAGE.—A silo need not be expensive; the important thing is to keep air out of the stuff to be preserved. Green corn stalks stacked will spoil on the outside in a short time, and will spoil all through in longer time.

Physicians are justified in denouncing proprietary medicines which claim to cure everything. A medicine, for instance, that will cure rheumatism in one person, will not necessarily cure it in another.

NEW ADVERTISEMENTS.

- Bush & Son & Meissner, Grapes.
Bruber, E. P., Holstein cattle.
Buckeye Card Co., Cards.
Booth, Wm., Jr., Mammoth Bronze turkeys.
Brower, B. F., Wanted.
Banner of Life, Startling Disclosures.
Bearinger, Wm., Early seed corn.
Blackledge, R. I., Land wanted.
Cecil, J. F., Shawnee Nursery.
Deming, N. P., For sale.
Henderson & Co., Peter Seeds.
Howard M'g Co., Will Do It.
Hidden, Jno. S., Wanted.
Inventor, Corn wanted.
Jones, A. E., Seed corn.
Martin, F. H., Horse for sale.
Missouri Nursery Co., Want salesmen.
McKee, J. M., Breeder's card.
Moore, M. E., Breeder's card.
McCoy, Chas., Seed corn.
Meecham, S. M., Agents Wanted.
Mitchell, L. G., A Sufferer.
Mast & Co., P. P., Buckeye Sunbeam Cult'r.
Madison, M., Wants Jersey bull.
Mason, T. H., Plymouth Rocks.
N. Y. Door Plate Co., Wanted.
Owen, Thos., A New Departure.
Park, G. W., Seeds Given Away.
Parry, Wm., Pomona Nursery.
Perkins Windmill & Co., Windmills.
Primm, C. F., Seed sweet potatoes.
Stout, Frank H., Florida.
Stray List, Stray notices.
Sawyer, Geo. M., 640-Acre Ranch.
Smalley Seed Co., Seeds.
Smith, W. H., Seeds.
Smith & Son, M. H., Sweet potato seed.
Union Pacific Railway, A New Train.
Wisconsin Central Ry., Where to Go.

Money.

Write or call on the National Loan and Trust Co., of Topeka, for loans on real estate. Rates reasonable and terms favorable.

Patents.

The following list is reported through the official records for the week ending February 5, 1889, by Higdon & Higdon, Patent Lawyers, office rooms 55 and 56 Hall Building, Kansas City, Mo., and room 29 W St. Cloud Building, Washington, D. C. By applying to them at either office a printed copy of any patent here named can be obtained for 25 cents.

MISSOURI

- Valve for fluid pressure-brakes—Herman Guels, St. Louis.
Machine for delimiting cotton—Thos. P. Sullivan, St. Louis.
Demagnetizing watches, etc.—John Greaves, St. Louis.
Telephone paper pad holder—John B. Seymour, Jr., St. Louis.
Siphon valves for water closets—Charles H. Harkins, St. Louis.
Street sprinkling apparatus—Michael Haughey, St. Louis.

TRADE MARKS.

The representation of a man holding the shell of an open oyster on one hand—A. Booth Packing Co., Kansas City.
The words "Old Faithful"—Andrew J. Jordan, St. Louis.

KANSAS.

- Cultivator—Thomas S. Warner, Frankfort.
Leveling instrument—Charles A. Karr, Green Elm.
Vehicle spring—Edwin Jarrell, Harper.
Seal lock—Orrin T. Welch, Topeka.
Snap hook—Horace G. McLellan, McPherson.

A Young Girl's Grief

at seeing her charms of face and form departing, and her health imperiled by functional irregularities, at her critical period of life, was turned to joy and gratitude after a brief self-treatment with Dr. Pierce's Favorite Prescription.

A NEW TRAIN.

The connecting link between Nebraska and Kansas has just been placed in service by the UNION PACIFIC RAILWAY. This train leaves Council Bluffs daily at 4:45 A. M.; Omaha at 5:05 A. M.; Valley 6:20 A. M.; and runs through without change to Manhattan, Kansas, making direct connections there with the Kansas Division of the UNION PACIFIC RAILWAY for all points in Kansas and Colorado.

Returning, train leaves Manhattan at 2:25 P. M., arriving at Beatrice at 6:25 P. M., Lincoln at 7:50 P. M., Valley at 9:55 P. M., Omaha at 11:20 P. M., and Council Bluffs at 11:40 P. M., making direct connection with Kansas Division trains from Kansas City, Lawrence, Topeka and the East, and from Denver, Salina, Abilene and all points West, enabling passengers to visit the principal points in Kansas and Nebraska in the shortest possible time.

Bulls for Sale.

Fifteen choice Short-horn bulls, from 8 to 20 months old; also a choice number of heifers. Will sell at reasonable prices on terms to suit purchasers. Address T. P. Babst, Dover, Shawnee Co., Kas.

Harrison's Inauguration.

The Wabash Western railway announces that tickets will be sold from all stations to Washington and return, for the inauguration of President Harrison, at Half Fare. Rate for round trip from Kansas City, \$27 50. Tickets will be on sale February 27 to March 2; good returning until March 10, 1889.

See Tincher's cedar ad. in 2-cent column.

There are less than 40,000,000 sheep in the United States, against 200,000,000 in Europe and 75,000,000 in Australia and New Zealand.

KANSAS FARMER.

ESTABLISHED IN 1868.

A TWENTY-PAGE WEEKLY,
Published Every Thursday by the
KANSAS FARMER COMPANY.

OFFICE:
KANSAS FARMER BUILDING,
Corner Fifth and Jackson Sts.
S. J. CRAWFORD, - - - - - PRESIDENT.
J. B. McAFEE, - - - - - VICE PRESIDENT.
H. A. HEATH, - - - - - BUSINESS MANAGER.
W. A. PEPPER, - - - - - MANAGING EDITOR.

SUBSCRIPTION PRICE:
ONE DOLLAR A YEAR.
An extra copy free one year for a Club of six, at \$1.00 each.
Address **KANSAS FARMER CO.,**
Topeka, Kansas.

ADVERTISING RATES.

Display advertising, 15 cents per line, agate, (fourteen lines to the inch).
Special reading notices, 25 cents per line.
Business cards or miscellaneous advertisements will be received from reliable advertisers at the rate of \$5.00 per line for one year.
Annual cards in the *Breeders' Directory*, consisting of four lines or less, for \$15.00 per year, including a copy of the *KANSAS FARMER* free.
Electros must have metal base.
Objectionable advertisements or orders from unreliable advertisers, when such is known to be the case, will not be accepted at any price.
To insure prompt publication of an advertisement, send the cash with the order, however monthly or quarterly payments may be arranged by parties who are well known to the publishers or when acceptable references are given.
All advertising intended for the current week should reach this office not later than Monday.
Every advertiser will receive a copy of the paper free during the publication of the advertisement.
Address all orders,
KANSAS FARMER CO.,
Topeka, Kas.

Reports indicate a good condition of wheat in all parts of the State.

Farmers were sowing oats in the southern part of the State last week.

A friend inquires if the rumor that the *KANSAS FARMER* is threatened with a boycott is true. No. They will hardly undertake that.

A six-inch snow fell in this region Sunday last. It extended to the north line of the State, and as snow or rain, it was pretty general throughout the State.

Prof. Snow's report shows that last month was the warmest January since '82. There were five warmer Januaries since 1868, viz.: those of 1869, '76, '78, '80 and '82.

Report from S. B. Jackson, Greeley county, shows that in January the temperature was 4 deg. below normal and rainfall was one-half above normal. Farmers plowed three-fourths of the time.

A Stafford county farmer writes: "I believe if the farmers would raise more early corn and sorghum, sweet potatoes, peanuts and such things, together with better stock, we would come out all right."

The bill to create a department of agriculture with its chief officer a member of the President's cabinet was approved Monday of last week, and Hon. Norman J. Coleman, present Commissioner of Agriculture was nominated for the new office of Secretary of Agriculture. Col. Coleman justly deserved this mark of approval. He has been an active, earnest, faithful officer—what we call out West, a rustler.

The Douglas county Horticultural Society held their regular monthly meeting, at Snow Hall, University grounds, last Saturday. It is the most energetic and vigorous society of the kind in the State, and that is nothing to the discredit of any of the other thriving horticultural associations, for it began many years ago, and its members have grown old in the work. The present officers are young men, but the members, many of them, have seen more than half a hundred years.

THE LEGISLATURE.

Both bodies were hard at work last week, holding three sessions daily, though very little was accomplished in the way of completed legislation. Saturday morning three short laws were published in the official State paper, and only two had been published before that, and none of the five was one of general interest.

The discussions were animated on the bills proposing to reduce rates of interest, to reduce salaries of county officers, and appropriations to State educational institutions. We can understand why objection is made to large appropriations for the State Normal school, for its friends two years ago, promised that if certain things were done no further appropriations would be asked for, and those certain things were done. The State University has always been liberally treated, Snow hall was built within the last two years with public money. But why the State Agricultural college should receive such niggardly treatment we do not understand. Twenty thousand dollars to the University more freely than \$5,000 to the college. The money squandered on useless clerks would be wisely appropriated for use at the college in the interest of Kansas agriculture.

When a vote was taken on striking out the enacting clause of the county salary bill it was saved by only twenty-two votes. In committee a majority voted against the bill; but a motion to disagree with the report prevailed. Gentlemen voting for striking out were: Messrs. Admire, Andrews, Bailey, Barber, Boles, Campbell of Cowley, Caanon, Chambers, Coates, Deupree, Duvall, Fall, Gillespie, Guthrie, Hanna, Hay, Herron, Hock, Jones, Kenea, Lacey, McFarland, McLennan, Palmer, Perry, Rankin, Reeder, Rhea, Rice of Barton, Rice of Bourbon, Roach, Safford, Smith of Franklin, Steele, Stevenson, Sutton, Walker, Wisler, Young, Younkman.

Gentlemen in the negative were: Messrs. Atherton, Batty, Bishop of Bourbon, Bishop of Hamilton, Boyle, Brewer, Brigham, Brown, Burnett, Burton, Campbell of Stafford, Coley, Davies of Riley, Doty, Douglas, Edwards, Elder, Elliott, Evatt, Faulkner, Ford, Gibson, Gordon, Hale, Heber, Hileman, Honnell, Horner, Janeway, Kenyon, Legate, Linscott, Loomis, McAfee, Martin of Harper, Mechem, Miller of Lyons, Miller of Neosho, Needham, Nichols, Phillips, Poe, Reitz, Ritchie, Rowe, Sherman, Simpson, Smith of Phillips, Spencer, Stocks, Street, Stewardson, Timmons, Tucker, Wade, Walrond, Weaver, Wellhouse, White of Jewell, Wright, Ziegler and Mr. Speaker.

Gentlemen absent or not voting were: Messrs. Benton, Berry, Bland, Carpenter, Carter, Cranston, Crew, Davies of Republic, High, Lee, Limerick, Malaby, Martin of Neosho, Maule, Miller of Lincoln, Morgan, Swallow, Swensson, Williamson and Wilson.

The Senate passed a bill amending the law relating to the age of consent in women, changing it from eighteen years where it was placed two years ago, to twelve years. That is bad legislation; surely members of the House will not allow the bill to pass that body.

A resolution passed the House proposing an amendment to the constitution extending the sessions to ninety days and fixing the pay of members at \$5 a day. If a ninety-day session were run as the present one is it would be an expensive luxury. Let us learn to use the time of a short session well before asking for a longer one. Better have a commission to suggest legislation that

is needed; then a thirty days session would be long enough.

Senator Mohler's stay bill was defeated, and properly, we think. Its effect in practice would be to increase the burdens of poor men who believe themselves compelled to borrow, and it certainly would increase rates of interest, because it extends the period of collection to at least twice the time now allowed. The remedy needed is not a stay law nor any proceeding which will delay, hinder, or defeat the creditor's remedy, which ought to be certain, direct and speedy; but it consists in allowing the debtor a reasonable time after the creditor has enforced his remedy, in which to redeem the land. That hurts nobody, impairs no security, but gives the debtor a chance to save his home.

The beef combine movement seems to have been side-tracked. The proposed convention at St. Louis, March 12, will put the whole thing over two years and then, probably, the farce will be repeated.

A good many ugly questions will be asked after this Legislature adjourns.

Whole number of bills introduced up to Saturday evening—House bills 708, Senate bills 385, total 1,093.

INCREASE THE NUMBER OF SUPREME COURT JUDGES.

It has been impossible the last half dozen years for the Supreme Court of Kansas to dispose of the business before it within a reasonable time after docketing. The number of cases has been increasing steadily from year to year. Beginning four years ago, when 379 new cases were filed, the record shows 454 the next year, 578 in 1887, and 699 in 1888. Three Judges can dispose of about 300 cases in a year—one case for every working day. The Legislature, two years ago, provided for three court Commissioners to assist the regular Judges in the disposition of the Court business, and their help has been a positive benefit, the three Commissioners adding to the working power of the court about two-thirds. But that is not enough. The whole number of cases disposed of by the court last year with the aid of the Commissioners, was 564, while the number of new cases coming into court was 699, leaving 135 of that year's cases undisposed of, saying nothing of the new cases of 1888. The court is falling behind every year. There were 900 undetermined cases on the docket the first day of this month, February 1889, as we are informed by Mr. Brown, Chief Clerk. At the rate of last years' work, 564 cases disposed of, and if there was not another case brought during this year, there would be 336 cases left on the docket at the end of the year. Adding to these 336 as many cases as were brought in 1888, and we have 1035 undetermined cases with which to begin the work of 1890—more than three times as many as three Judges can handle in one year.

It is evident, then, that the number of Judges must be increased. The Commissioner system is better than no change, but it is not what is needed; besides, it is too expensive. Three men ought not to be employed to do work that two men can do if better equipped. As Commissioner, a man will perform quite as much labor as he would if he were a Judge; but so long as he is a Commissioner, his work must be passed upon by the court—the regular Judges—who are responsible for the work of the Commissioners. As it works in practice, then, while the three Commissioners work as hard and as faithfully as the Judges do, their product, instead of doubling that of the court, increases it only about two-thirds. This can be remedied by hav-

ing Judges instead of Commissioners, for a Judge counts as a Judge, and not as one whose work, however good, must be examined and sent out as that of an officer or tribunal provided for by the constitution.

This change can only be made, however, by an amendment of the constitution. Two years ago, the *KANSAS FARMER* opposed the adoption of an amendment to increase the number of Judges, not, however, because there was no need of increase, but because it was proposed to increase the salaries as well as the number of Judges. We were then and are now opposed to increasing salaries. The people are in no mood for that. A resolution is now pending in the Legislature proposing an amendment increasing the number of Judges to seven, leaving the matter of salary just where it is—that it shall not be less than fifteen hundred dollars a year. Let the resolution pass. There is no question about the need of additional Judges in the Supreme Court, the objection is to increasing salaries.

NO MORE DISTRICT JUDGES NOW.

A judicial apportionment bill is pending before the Legislature. It proposes to make seven new districts, which will give the State thirty-six instead of twenty-nine districts, increasing the expense of our district courts \$17,500 in Judges' salaries alone. This would be agreeable to at least a dozen aspiring lawyers, and as many lay gentlemen who would sacrifice themselves in clerkships; but we need not so much more Judges as more efficient ones—men who will dispose of the court business in a business-like way. Judge Chandler, of the Eleventh District, learning that it was proposed to cut his district in two, immediately sent up a protest, stating that he is able to take care of that district himself. And so he is. The district is composed of Crawford, Cherokee, Labette and Montgomery counties; containing a population of more than a hundred thousand people. Judge Chandler is a working man and a competent officer. He wastes no time. He conducts the business of the court as a master mechanic does a machine shop; everything is in order and performing the work assigned to it. Twenty-five men like Judge Chandler could do all the business in the district courts of Kansas, and do it well. We need no more District Judges now.

It is argued that some of the new districts in the West are too large, and that may be true. But instead of increasing the number of districts, either enlarge some of the older districts; or, if that is not advisable, lessen the number of terms in the newer counties of the large districts. It is not at all necessary, however, at this time to make any changes at all. If the present Judges cannot get along with the work and will say so, the *KANSAS FARMER* will agree to find a good lawyer in every such district who will take the place of the retiring Judge, and promise in advance to dispose of all the business on the dockets. This is no time to increase expenses unnecessarily.

Oak Grange Institute.

An interesting Farmers' Institute was held last Thursday and Friday, at Oak Grange Hall, some seven miles south-west of Topeka. We have a full report of the proceedings but cannot print it this week. It will appear in our next issue.

A resolution is pending in Congress, to appropriate \$50,000 to make a special American corn exhibit at the Paris Exposition, which opens next May. This ought to have been attended to last fall, but it is better late than never.

Reading Lessons for Farmers.

A plan of general reading conducted by a central agency was established at Chautauqua, New York, some years ago, and it has since been applied in other directions. Farmers in Pennsylvania began a like system some four years ago. It is unquestionably of very great worth. The KANSAS FARMER called attention to the subject five years ago, but it did not seem to be practical and nothing more was said about it. The subject is now revived by a note from Mr. E. C. Cowles, of Sibley, Douglas county, this State, in which he refers to a paper read before the Douglas county Farmers' Institute, in which Chautauqua reading for farmers was discussed.

The writer recommended that a committee of the Institute prepare a course of reading and study for the farmers of the county; that in each school district, the teacher, director or any one interested in the matter call a meeting at the school house, form a reading circle, elect a leader who shall confer with county committee as to course and books, lead in meetings of circle, carry on discussions and examinations. The circle to meet as often as once a week. At the first Institute after a three-months reading was finished, a general examination to be held in forenoon, and in the afternoon lectures given by persons previously appointed upon the subjects studied. The subjects to be at first farm topics, that is, how plants grow; physiology of animal life; history and characteristics of breeds of animals, character of soils, etc., etc.

This move is a good one. The particular plan above suggested may not be the best, but a little experience will be helpful. We wish our Douglas county friends would go ahead with it and report success.

Ex-Governor Martin's Offense.

Ex-Governor Martin is being roundly abused because he spoke in the common language of the time when referring to lending and borrowing money in his recent message to the Legislature. It is but another instance of the improper use of words—a habit, indeed it is almost a custom, which has grown so fast that many words have lost their meaning. To steal means the felonious taking and carrying away the property of another. When Governor Martin wrote that "it ought to require something more than a mortgage to steal a man's farm," he did not mean that any body could pick up a farm and carry it away; nor did he mean that when one person lends money to another person and takes a mortgage on the borrower's farm as security for payment of the debt, he is deliberately planning to defraud the borrower and wrongfully deprive him of the use and ownership of his farm. What the Governor did mean, probably, was that unscrupulous men who, either as principals or agents make unconscionable bargains with men who cannot, or who do not know how to help themselves, and obtain from them promises which are unreasonable, ought to be prevented by law from collecting more than what is reasonably and lawfully due; in other words, that a mere writing, a mortgage, if you please, if it is tainted with fraud or made to secure an obligation fraudulently imposed, ought not to be held sufficient to justify the selling of a man's home by officers of the law.

There is a great deal of business done by some persons who advertise themselves as money lenders, which, in morals, is no better than stealing, and which has about the same as robbery (stealing by force) and it was this class of men, we suppose, the Governor had in mind when he used the words which

gave offense. He meant right, and if he never makes a greater or worse mistake, he will hardly miss his final reward.

Institute at Wellington.

We have a report of a Farmer's Institute at Wellington, last week. President Fairchild, from the State Agricultural college and Hon. Wm. Sims, late President of the State Board of Agriculture, were present and took part in the proceedings. Mr. Forney read a paper on the need of organization among farmers; President Fairchild showed the relation which the Agricultural college sustains to the people, and also, in another address discussed "speculation on the farm." The use of early seed corn, and corn culture in general was discussed, the prevailing opinion being that seed grown in Kansas is as good as any, and that large corn, on an average is as good as small corn. One man recommended plowing ground in July and August for the next year's corn crop.

Major Sims talked on "silos and ensilage," Miss Hannah G. Miller discussed the question—"Does education unfit girls for household duties?" Stock-raising was treated by M. B. Keagy, and G. W. Bailey and Geo. D. Armstrong read papers on fruit and culture.

Next meeting of the Institute will be held the second Saturday in March.

Peabody Farmers' Institute.

From a report kindly sent us by the Secretary, Mr. D. J. Fraser, we learn that a permanent organization was effected at Peabody, to be known as the Golden Belt Farmers' Institute of Peabody, Kas. Its object is the discussion of all matters of interest to the agricultural community. The following program was adopted for the meeting March 7, commencing at 6:30 a. m.:

MORNING.

"Preparing for and Planting corn," P. Wagner; "Sorghum Feed," T. M. Potter; "Raising Roots and Value as Feed," Rennet; "Future of Stock Industry" (continued), C. F. Stone.

AFTERNOON.

"Seed Corn," D. D. Perry; Oats—How to Grow and Profit," O. C. Brown; "General Farming and Stock-Raising" (continued), F. H. Kollock; "Tame Grasses," M. Daintey; discussed by D. J. Fraser.

EVENING.

"Growing Potatoes," A. B. Pease, Sr.; discussed by M. H. Dawson; "Vegetable Garden," Mrs. P. K. Hannah; "Outdoor Home Adornment," Mrs. Nichols; discussed by Mrs. Patton; "Small Fruits and Grapes" (continued), A. J. Hesson.

The officers are—T. M. Potter, President; F. H. Kollock, Secretary; and A. G. Spencer, Treasurer, with one Vice President from each township, and an Executive committee of three, consisting of President, Secretary and one member. The following Vice Presidents elected: G. H. Rood, East Branch; M. H. Dawson, Peabody; J. W. Tavenner, Catlin; J. Hinebaugh, West Branch; O. C. Brown, Wilson; D. J. Frasen, Fairplay; Charles Barker, Doyle; W. B. Freeman, Center; Willis Pope, Clear Creek.

An interesting meeting of the farmers was held recently at Hutchinson, where matters of interest to Kansas agriculture were discussed. Meetings of that character are being held in different parts of the State, a good sign, showing that our farmers are beginning to see their way out of difficulties. Education is the great need of the time, not the education of the schools, but that broader and more practical education which comes from the meeting of people who want to enlarge the field of

their observation, multiply their facilities for transacting business and acquiring new and better methods of work.

State Historical Society.

We have received from Hon. F. G. Adams, Secretary, the sixth biennial report of the Kansas State Historical Society. The report covers the period from January 18, 1887, to November 19, 1888. During this time there have been added to the library of the society, of bound volumes, 1 619; unbound volumes and pamphlets, 9,250; volumes of newspapers and periodicals, 1,995; single newspapers, 1 734; maps, atlases and charts, 116; manuscripts, 662; pictures and works of art, 275; scrip, currency, coins and medals, 32; war relics, 12; miscellaneous contributions, 229.

The library additions of books, pamphlets and newspaper files, not including duplicates, number 12 864 volumes. Of these, 12 001 have been produced by gift, and 863 by purchase.

The whole number of volumes in the library at the present time is as follows, namely: 9 971 bound volumes; 30,353 unbound volumes; 7,981 bound newspaper files and volumes of periodicals; in all, 48 305 volumes. Of the newspaper volumes, 5,757 are of Kansas.

The report contains a list of Kansas newspapers and periodicals now published, from which it appears that they now number 827 in all. Of these 45 are dailies; 733 are weeklies; 1 semi-weekly; 40 monthlies; 1 semi-monthly, 2 bi-monthlies; 4 quarterlies, and one occasional. They are nearly all being received by the society, and are bound and placed on the library shelves for reference. They come from all of the 106 counties of Kansas, and record the history of the people in all the communities.

The list and tables which the report contains show that there is being made up by this society for the use of the people of Kansas a library of history and reference, remarkable in its growth, and still more remarkable in the character and value of the materials which it contains. They show that the growth of the library and collections has steadily continued from year to year during the thirteen years of the society's existence, and that in that time there have been placed on the library shelves more than 48,000 volumes of books, newspaper files and pamphlets; and in addition to these, this and former reports show a collection of manuscripts, pictures, statuary, relics and objects of historical illustration of every kind and description almost countless in number.

Kansas Indians.

According to the annual report of John Blair, United States Indian agent, at the Pottawatomie and Great Nemaha agency, in Kansas, there are five tribes of Indians under his charge. They are the Prairie Band of Pottawatomies, the Kickapoos, the Iowas, the Sacs and Foxes of Missouri, the Chippewa and Muncie, or Christian Indians. There are 1030 in all on the different reservations. The Pottawatomies are in Jackson Co., Kas.; the Kickapoos are in Brown Co., Kas.; the Chippewas and Muncies are in Franklin Co., Kas.; the Sacs and Foxes of Missouri are in southeastern Nebraska; and the Iowas occupy an adjoining reservation in north-eastern Kansas.

Nearly all of these Indians are engaged in farming and stock-raising, and the agent states they have made great advancement in the past few years. Many of the Pottawatomies have houses as neatly kept as many of the better class of white people, and all their surroundings indicate thrift on the part of the owners. All these tribes

except the Sacs and Foxes of Missouri live entirely in houses supplied with stoves and necessary furniture. The Sacs and Foxes are not so well supplied with houses, and seem to care less for them than the others do. The farms are well cultivated, and many of the Indians own thoroughbred cattle and take great interest in stock of all kinds.

No crime is reported and the agent states that very little intemperance among the Indians has come under his observation. In regard to their religious convictions, he says he is fully satisfied of their sincerity in their methods of worship. They all believe in the Creator, in future rewards and punishments and teach the practice of truth and charity as the greatest of virtues.

There are three industrial boarding schools operated in the agency. One is on the Pottawatomie reserve, another on the Kickapoo reserve, and the third on the Iowa reserve. Farms are attached to each of these schools, and are managed and worked in the manner of industrial schools among the whites. The agent says: "I have seen many evidences of the advantages the Indians are realizing from these schools. These do not consist alone in what has been learned from books, but are to be seen in their manner, mode of dressing, greater industry, their desire for refined associations and finer moral perceptions."

The Country's Manufactories.

According to figures obtained by the *American Exchange and Review* the capital employed in the United States at present in manufacturing is about \$3 000 000 000, in nearly 300 000 establishments. Fire loss per annum attending such value is about \$50,000 000, or an average of sixty cents per \$100 value in peril of fire. The estimated loss by strikes as regards the manufacturer is three-fourths of that by fire. Annual production of the manufactories reaches a value per annum of \$5 000 000 000, upon which the net earnings is approximately 7 per cent., or \$350 000 000. This gives \$700 000 000 as an aggregate insurable value upon the basis named, which value is subject to a loss of about \$15 000 000, or 2.15 per cent., or an annual tax upon the \$3 000 000 000, capital employed of one-half of 1 per cent., or 50 cents per \$100, if it should be so viewed. But in this case the capital is not taxed as the charge would be upon the profit, and whether it is worth while for those concerned to pay any expense of 4.30 per cent of the profit to save the rest, as matters are now proceeding, is for them to determine.

Kansas railroads have abandoned the late practice of weighing cattle in the cars and charging freight on the weight. The old system of car loads is re-adopted on suggestion and request of the State Board of Railroad Commissioners.

The latest is a gold dust scheme reported from Oklahoma. Let it alone—the whole thing is a fraud—published to get people in the Territory. The bill which passed the House some days ago provides specially that no white citizens shall settle there until after proclamation made by the President and that will not take place until after the consent of Indians has been obtained.

Strict regularity in the time of feeding and the quantity of milk given is essential to health and safety as well as to profitable increase of weights. These points about the feeding of skim-milk will apply to young pigs as well as calves. A gummy, thriftless hog is the necessary product of a careless and wasteful mode of feeding even excellent skim-milk, says the *Northwestern Agriculturist*.

Horticulture.

TREATMENT OF BLACK-ROT OF THE GRAPE.

The Commissioner of Agriculture, sends out the following:

The experiments made in 1888 have demonstrated beyond question that the copper compounds, especially the Bordeaux mixture, can be relied on to prevent black-rot. Where the remedies were properly applied from 60 to 70 per cent. of the crop was saved.

In view of these facts the preparations which furnished the best results in 1888 are here given, with the urgent request that one or more of them be thoroughly tested during the coming season.

(1) SIMPLE SOLUTION OF SULPHATE OF COPPER.

Dissolve one pound of pure sulphate of copper in twenty-five gallons of water. While this preparation has, in a number of cases, been used with beneficial results, its employment, especially when the foliage is young and tender, can not be advised. For spraying the vines in spring, however, before the leaves appear, it will doubtless prove as efficacious as any of the following mixtures, and is more easily prepared and applied.

(2) BORDEAUX MIXTURE.

(a) Dissolve sixteen pounds of sulphate of copper in twenty-two gallons of water; in another vessel slack thirty pounds of lime in six gallons of water. When the latter mixture has cooled, pour it slowly into the copper solution, taking care to mix the fluids thoroughly by constant stirring.

(b) Dissolve six pounds of sulphate of copper in sixteen gallons of water, and slack four pounds of fresh lime in six gallons of water. When cool, mix the solutions as described above.

This formula requires fresh lime. Air-slacked lime, or a paste made by allowing freshly slacked lime to settle, contains a large percentage of water; consequently, if they should be combined in the proportions indicated, there would not be sufficient lime to decompose the copper. Experience has shown that while four or even three pounds of fresh lime is sufficient to decompose six pounds of copper sulphate, it requires double that quantity of air-slacked lime and three times the amount of paste.

The manner of preparing the Bordeaux mixture may be modified in various ways. Colonel Pearson pulverizes the sulphate of copper, and then dissolves it in from two to four gallons of hot water. The lime is then slacked in the same way that masons slack it for mortar. This is strained into a box, left to settle and thicken, and then combined with the copper, adding water to the required amount.

(3) SOLUTION OF AMMONIACAL CARBONATE OF COPPER.

Into a vessel having a capacity of about one gallon, pour one quart of ammonia (strength 22 deg. Baume), add three ounces of carbonate of copper, stir rapidly for a moment, and the carbonate of copper will dissolve in the ammonia, forming a very clear liquid. For use, dilute to twenty-two gallons. So far as we know, this preparation has not been used in this country as a remedy against black-rot. As a preventive of mildew, however, it has given satisfaction. It is easily prepared and applied, and adheres firmly to the foliage.

(4) EAU CELESTE.

(a) Dissolve one pound of sulphate of copper in two gallons of hot water; when completely dissolved, and the water has cooled, add one and one-half pints of commercial ammonia (strength

22 deg. Baume); when ready to use dilute to twenty-two gallons.

(b) Dissolve two pounds of sulphate of copper in two gallons of hot water; in another vessel dissolve two and one-half pounds of carbonate of soda; mix the two solutions, and when all chemical reaction has ceased add one and one-half pints of ammonia, then dilute to twenty-two gallons.

TREATMENT.

To indicate a definite line of treatment that will be applicable to all regions is somewhat difficult. As a first step, however, every precaution should be taken to remove as much of the infectious material as possible. With this object in view the old leaves and rotten berries should be carefully collected in the fall or winter and burned or buried. The trimmings should also be burned as they often harbor thousands of the minute spores or reproductive bodies of the fungus.

In spring, after the vineyard has been pruned and put in order by the plow, but before vegetation starts, spray the vines thoroughly with the Bordeaux mixture, formula a, or with the simple solution of sulphate of copper. The object of this spraying is to destroy any spores of the fungus that may be hidden away in the crevices of the bark. About ten days before the flowers open, spray all the green parts of the vine with the Bordeaux mixture, formula b, taking care to wet the foliage thoroughly. Spray again with the same preparation when the flowers are opening, repeating the operation every three weeks until the fruit begins to color. The necessity for beginning the treatment early can not be too strongly urged; it is absolutely necessary to insure success.

For applying the remedies, spraying-pumps with specially-constructed nozzles are necessary. The Eureka sprayer, fitted with the improved Vermorel nozzle, answers the purpose admirably. With this machine, which is carried on the back, knapsack-fashion, a man can spray from five to six acres of vines per day, and the cost of treating an acre in an average season, using the Bordeaux mixture as indicated above, need not exceed \$12. The price of this machine, including all the fittings, is \$20.60. Good pumps, suitable for vineyard use, are also manufactured by the Nixon Nozzle and Machine company, of Dayton, Ohio. In all cases where the Bordeaux mixture is employed it will be best to use the improved Vermorel nozzles, for the reason that they are specially constructed to prevent clogging. These nozzles may be attached to any force-pump having the proper apparatus to make the connection. They are manufactured and sold by Thomas Somerville & Son, of Washington, D. C., the retail price being \$1.50 each, or \$15 per dozen.

Root-Grafts--Orchards.

EDITOR KANSAS FARMER:—With the editor's permission we will make a few criticisms on C. Hartzell's article in the KANSAS FARMER of January 17. First, his theory of whole roots for stocks in preference to pieces of short roots, is not substantiated by facts in every-day practice. If whole-root grafts are planted at the end of the first year of growth, or planted out at once in orchard in deeply prepared ground, the tap-root may penetrate to a greater depth than short-root grafts, but on the other hand, if these whole-root grafts are root-pruned by the nurseryman at the end of the first and second year's growth, has the stock any advantage then over the short-root stocks? A limited trial of 1,000 whole-root grafts the past season fails to convince me of their being of any material advantage

to the grower. Of course it is a taking card for the propagator at an advance of 25 per cent. in price over short-stock grafts; it is also capital to the salesman in soliciting orders for stock. After-culture, training, etc., are the main essentials for a successful orchard in Kansas; this question of stock is a secondary consideration—it had best be relegated to these Northern sections, where hardness of stock is a primary requisite.

For the southern half of the State, the theory of Mr. Hartzell on the height of the trunk has cost our orchards untold losses of time and money, his reflections on the "piles of brush" are the visible results of these costly teachings in the past. Has Mr. Hartzell ever thought or considered that this "brush" has been grown for the specific purpose of shading the trunk and main limbs from the effects of a tropical sun. Every tree so shaded is free from sun-scald and the flat-headed borers' depredations, the past three seasons of drouth, and all open high-headed trees the reverse, without regard to their culture or condition.

Another lesson we have learned, is to plant on slope or bottom ground, if a crop is to fully mature and stay on the tree until picking time. Another lesson we have fully learned is to plant thick; twenty feet apart each way will produce double the fruit in fifteen years that thirty by thirty or any wider distance. The roots soon interlock or touch and force the trees in bearing early, afford each other protection against winds and hail storms. Of course this thick planting will require heavy feeding, and judicious pruning out and back. Land will soon be too valuable in Kansas for the luxury of apple parks. While forty and fifty feet distance may be necessary in cold Northern climates to allow the fruit to mature in the short seasons, it is not necessary here, the very reverse being the case. While on this subject of orchards we would suggest to every orchardist that has wind-breaks of cotton wood or other quick-growing trees, to keep them cut down to the height of their orchard trees every other year, or their apple trees will run up like a Lombardy poplar. Their evil effects are visible on the rich valley lands of the Arkansas valley on every hand.

JACOB NIXON.

Kellogg, Cowley Co., Kas.

Strawberry Lands.

From advance sheets of B. F. Smith's 1889 Small Fruit Manual, Lawrence, Kansas.

Let no one who loves the strawberry and who lives on a town lot, or who is the owner of a forty-acre farm, think that he has not a plot of land fit for strawberries. To one who may be in doubt of the fact let him go abroad on the prairies or along the hedge fences and he will discover the wild strawberry growing where the seeds were dropped by the sweet-singing birds of the forest.

Here all among the grass the seedling strawberry grows and bears its tiny fruit every season. Here, too, the birds get their supply of berries when there are no neighboring berry-growers who raise larger or sweeter berries. For birds are like children, they will always pick the largest ones they can find.

The strawberry vines seen on the highways are standing witnesses to the certainty that berry lands are present, and the farmer who desires to raise a supply for his own use or for market can do so.

The best soils may be found in the timbered lands bordering on the creeks or the slopes near the foot of hills. But berries may be planted on any soil that

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For Rheumatism, Neuralgia, and Gout. Stephen Lansing, of Yonkers, N. Y., says: "Recommended as a cure for chronic Costiveness, Ayer's Pills have relieved me from that trouble and also from Gout. If every victim of this disease would heed only three words of mine, I could banish Gout from the land. These words would be—'Try Ayer's Pills.'"

"By the use of Ayer's Pills alone, I cured myself permanently of rheumatism which had troubled me several months. These Pills are at once harmless and effectual, and, I believe, would prove a specific in all cases of incipient

Rheumatism.

No medicine could have served me in better stead."—C. C. Rock, Corner, Avoyelles Parish, La.

C. F. Hopkins, Nevada City, writes: "I have used Ayer's Pills for sixteen years, and I think they are the best Pills in the world. We keep a box of them in the house all the time. They have cured me of sick headache and neuralgia. Since taking Ayer's Pills, I have been free from these complaints."

"I have derived great benefit from Ayer's Pills. Five years ago I was taken so ill with rheumatism that I was unable to do any work. I took three boxes of Ayer's Pills and was entirely cured. Since that time I am never without a box of these pills."—Peter Christensen, Sherwood, Wis.

Ayer's Cathartic Pills,

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Dr. J. C. Ayer & Co., Lowell, Mass.
Sold by all Dealers in Medicine.

will produce good wheat or corn. The year previous to planting, the ground should be broken and well pulverized, and harrowed several times during the season. Land where sweet potatoes or cabbage grew the year previous to planting will work nicely for any kind of berries.

If such grounds are not convenient to be had, and if it is desired to plant this year, then seek a location in a corn field where the ground is clean. Break it in February or early in March, and harrow and cross-harrow till thoroughly pulverized. It is the custom in the East on their poor worn-out lands to plow under thirty or forty wagon loads of manure per acre, but in the fertile prairies and timber belts of the West the manure expense can be saved. Again, when white grubs are numerous there is great danger of making a grub worm nursery instead of a strawberry field. If the land selected for the berry field is inclined to be low or nearly level, then it should be plowed up in beds, say fifteen feet in width, thus allowing room for four rows to the bed; or, if it suits the lay of the land better, it can be plowed in beds thirty feet apart which will allow eight rows to the bed, and a wide middle furrow to carry away surface water.



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The Poultry Yard.

REARING TURKEYS ON THE FARM.

A great deal has been said and written on this subject. It is one of the things that is so easy to do after we learn how, that we wonder we ever had to learn at all. Still, to the uninitiated, rearing turkeys is a great mystery—so very difficult, in fact, that after one or two futile attempts, many give up in despair. The scientific poultry-raisers of course know exactly how it should be done. They make a business of it, and can afford the expense necessary to provide houses built after the most approved models, grass-runs, close yards for the little ones, shrubberies for the mating birds, and a variety of foods suitable to their different ages, and to all seasons. But the wife or daughter of the farmer in moderate circumstances can afford few of the conveniences which tend to lessen the labor, and which are considered absolute necessities by the professional poultry-raiser. We cannot even procure the foods which we know would be best, but are compelled to take the odds and ends of refuse grain which nothing else will eat. The average farmer would think his wife or his daughter had taken leave of her five senses were she to request him to sow an acre of buckwheat for the chickens, or a small patch of rye near the house, in order to afford them tender grazing in the late fall and early spring, when every other green thing has become frosted.

There is nothing more healthful for young fowls in the spring than corn broken into coarse hominy, but to suggest that a bag of corn should be carried to the mill for this purpose, would be thought entirely unnecessary.

Most men think that domestic fowls should be like the birds of the air—provided. So we poultry-raisers on the farm have to make the best of what we can pick up, and this, after all, is not such a bad outlook, for, with the exercise of some ingenuity and forethought, we can generally provide something of one kind or another to feed a few chickens all the year round, while the turkeys can be raised in the summer, when insects are plentiful, and sold in the fall before they require very much grain.

To be sure, it requires a considerable amount of exercise to keep up with a large flock of turkeys when they have the whole surface of the broad earth to range over, for mine pay no more attention to fences, whether they are of rail, plank or barbed wire, than if they were not there.

But, then, it is healthful exercise; it takes us out of doors into the wholesome fresh air, and sends us back to the house with glowing cheeks and a hearty appetite. Country girls stay indoors entirely too much, poring over novels, crochet and fancy needlework, and anything that will compel them to take regular exercise in the fresh air is a good thing. The aim of this article is to prove to them that turkeys can be raised without expensive preparation or excessive labor, and to encourage more of them to embark in the business, and to persevere until they make it a success.

The following is a short account of last year's experience, and may, perhaps, afford suggestions to a beginner. Our conveniences consisted of a square rail pen, with cracks barely small enough to keep the turkeys from slip-

ping through, covered with a slanting roof of loose boards, and called by courtesy the "turkey-house;" four rough board coops, light enough to be easily moved every day to a clean spot on the grass, and made tight near the ground so as to prevent the little turkeys from running out in the dew, and well ventilated under the eaves so as to allow the air to circulate freely, and to permit the old hen to peep out and see what was going on in the world around her.

The stock consisted of ten pure bronze turkeys—nine hens and a handsome gobbler; the latter was only one year old, while the ages of the hens varied from one to six years. Early in March the hens began to lay, and were confined for several hours every day to their house where nests had been prepared for them. The first two hens which showed a disposition to set were given about fifteen eggs apiece, and the rest of the eggs placed under two chicken hens. About the middle of May forty-two little turkeys were hatched, and the number divided between the two turkey hens, leaving the two Plymouth Rocks, who had sat so patiently for four weeks, buoyed up with the fond hope of hatching some fine chicks from the big speckled eggs they so carefully covered, to go about over the yard loudly clucking out their disappointment. The little turkeys were healthy and grew rapidly. I took good care of them, and only two of them died.

At first, each hen wanted every little one, and I would sometimes find one mother with forty, and the other with two. After several pitched battles the stronger one asserted her supremacy, after which they got on very harmoniously together, and seemed to take great pleasure in bringing up their family jointly. It is a good plan to put out two hens at once; they afford double protection to the young turkeys, as each is always on the lookout for hawks and other dangers, but at night care must be taken lest they all crowd into one coop, for the little fellows do not know or care which is their mother.

Some of my neighbors wanted eggs; so the next two sittings were sold to them at two dollars a sitting, a reduced price in consideration of their coming after them. Here is the good of keeping the stock pure—the eggs and birds can often be sold for breeding purposes, while those that remain are better for market than common fowls, because they have been bred for generations with a view to making them desirable.

The second hatch came out early in June. Four hens had been allowed to sit, and together had hatched fifty-three little turkeys. They were given to two hens—ought to have been given to three, but I had only two coops, and the first lot was not old enough to begin roosting. This little flock was very healthy until ten days old, when I concluded it was all nonsense preparing their food so carefully, and gave them some that was not properly cooked, and the next thing I knew they were all sick with something like cholera. Two doses of laudanum were administered to them, one drop apiece at each dose, and for several days their food consisted of nearly all hard-boiled eggs. Water was also substituted for buttermilk. Two or three died, and all the rest were raised.

There were only twenty-four of the third lot; they were very thrifty, but seemed particularly liable to accidents. The hawks caught several, and one little fellow got his leg broken, but I put a plaster cast on it, and kept him in a box for a few days, after which he hopped about the kitchen door for a week, and finally got with his mother, who persisted in dragging him through the thickest orchard-grass on the place, but still he lived. His leg was slightly crooked when I cut the cast off, but in a short while no one could distinguish him from the others. Young turkeys have a great deal of vitality, and though tender and easy wounded, show wonderful powers of recuperation when in a healthy condition.

Three settings of late eggs were given away during the summer, for one old hen that was so large she always



"Is this dear, old lady your grandmamma?"
Asked Smythe, as he turned the album o'er:
"She has your features and your eyes;
I've certainly seen the old lady before."

"Oh no!" stammered Ethel, while blushing quite red,
"It's a friend." What an awfully wicked deception;
She's afraid to confess the photo her own
Before using Pierce's Favorite Prescription.

But it was! All those disorders of females, accompanied by sallow complexion, expressionless eyes, pimply skin and haggard looks, Ethel once suffered. A friend, who was a friend indeed, told her of Dr. Pierce's Favorite Prescription, and since taking it not a few of her friends have failed to recognize in the blooming, rosy, sweet-lipped girl, the once sallow-cheeked, hollow-eyed Ethel.

"Favorite Prescription" is the only medicine for "Female Weakness" and kindred ailments, sold by druggists, under a positive guarantee of satisfaction, or money refunded. The certificate of guarantee, printed on every bottle-wrapper, has been faithfully carried out for many years.

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broke her eggs, was not allowed to sit. She indemnified herself, however, by laying a great many eggs, five or six dozen at least during the season.

We decided that there should be no late turkeys that year, but the two unoccupied hens made up their minds to the contrary, and went off in the weeds, made their nest, and together brought out twelve little turkeys the last of August. These were not a bit dismayed at finding themselves unwelcome, but lived, every one of them, and at Christmas weighed about twelve pounds.

I never saw such prolific hens; they have been laying this fall and furnished a good many eggs for Christmas cake. Seriously, I have been thinking of keeping bronze turkeys for the sale of their eggs. They are nearly twice as large as a chicken hen's eggs, and are rich and well flavored.

A turkey hen does not eat much more than a chicken, at least I do not give them much more, for they go all over the farm and forage for themselves, and when not allowed to go with little ones they lay almost as constantly as

chickens. Nearly 275 eggs were produced in all, and beside this, each of the eight hens raised a flock of little turkeys. Altogether 120 young turkeys were raised, and I think the year's work may fairly be called a success.—*A Farmer's Daughter, in Country Gentleman.*

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The Busy Bee.

Winter Care of Bees.
The practical apiarist does not manipulate or disturb his bees during winter, or, at least, as long as cold weather lasts. If his work is well done in the fall at the proper time, he has nothing to fear or disturb him through the winter. A few little details must be looked after, however, but not in a way to molest the bees. The work should be done in such a manner that the bees are not aware of your presence. There is nothing that will ruin a colony of bees more than by tearing them up and handling them in cold weather. Hence they must be let alone strictly, even if something necessitates attention. It only makes matters worse to undertake to remedy an evil that requires opening up a hive for the purpose of handling the bees. If bees are wintered out-doors, as most of them are, a free use of the entrance for them to pass out and in on fine days is about all that is to be looked after. Some become alarmed about the snow covering the hives or the entrances, but this does not need any attention whatever, as there is no danger of the bees perishing for want of air. Hence snow will do no harm at such times, and the only time we are to fear the snow is when the bees are likely to come out on the weather's warming up, to make an effort to fly while the snow is yet upon the ground. This will happen after a long cold spell that compels the bees to remain housed up for quite a length of time. When the weather breaks and the sun comes out, this has a tendency to bring out the bees.

It is never desirable to have bees fly while there is snow on the ground. In almost every instance a bee alighting on the snow will become chilled, except it is very warm, and critical moment with the beekeeper. He must choose between two methods; he must prevent them from coming out until the snow has disappeared, or he must endure heavy loss by allowing them their liberty. It is not an easy matter sometimes to control them, but it can be done if taken in time. They may be thus kept in their hives by shoveling the snow up around the entrances, keeping the same well covered. After the snow is well gone, open the hives up and give them their liberty. When bees are thus flying extensively, the hives can be examined in safety, and it is the only time they can be, during the winter. As said above, if they have had proper attention during the fall they need scarcely any attention in this line much before the middle of March. But if we do not have a suitable spell of weather about this time, we would take the chance at any time in March when a favorable time presents itself. Upon this examination look to see if the hive contains enough provisions to carry them through. Also, clear away all dead bees and, if possible, find if the queen is all right. If stores are lacking, give candy over the brood frames, and over where the bees cluster let the sun shine directly on the packing so that it may thoroughly dry out. Repack very carefully. If any damp chaff is found exchange it for dry.—Ohio Farmer.

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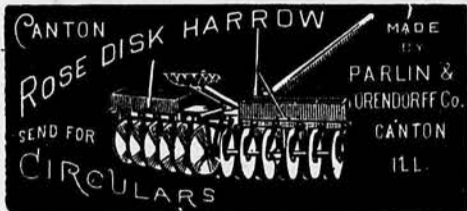
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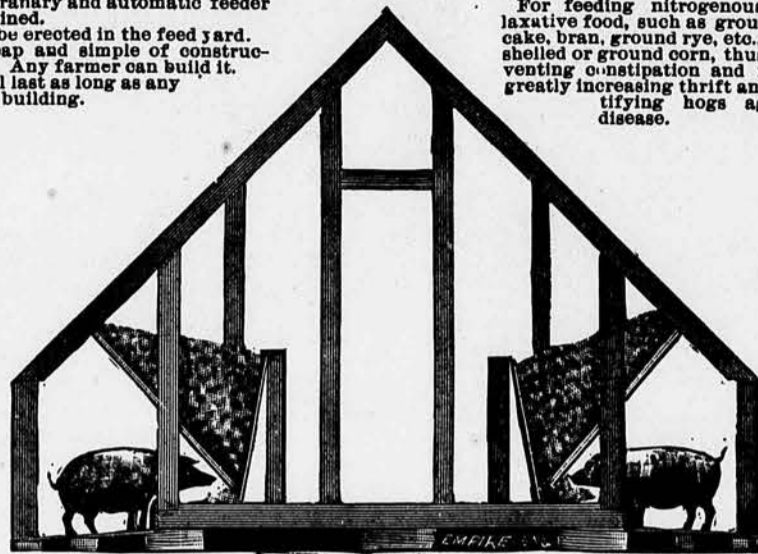
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