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The Kansas Farmer

GEORGE T. ANTHONY, Editor.

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WAKE UP!

Seed time is approaching, and it is high time that farmers were sounding the note of preparation. Now is the time to do all that is needful in preparation for active, undisturbed labor in the field. Not a moment should be lost in putting every tool and implement in perfect order. If a plow-handle is in the least doubtful, have another put in *now*; for it will cost you more than the price of a new plow to leave the field with it for repairs.

If new implements are required, do not wait until the ground is ready for them, and then spend a whole golden day of self and team in going to town after them. One day in seed time is the equivalent of a month in the repose of Winter. Not only get all things out of doors prepared, but put in a stock of groceries and provisions for the family, that will carry you, unperplexed with calls for sugar, flour and meal, through a time when man and horse muscle is too valuable to spend in running to grocery and mill.

Increase the feed of your working animals, giving them vigorous daily exercise, if possible, that they may go into the field with solid muscle and in good heart. Horses should not run down to skin and bone the first ten days of plowing time, and will not, if in good working trim at commencement. One horse, in tolerable flesh, that has been worked daily during the Winter, will kill two taken from the stable, fat from a Winter of idleness, if put to the same "evening" in the plow field.

Do not make your plans too large, but let them embrace just as much ground, and *no more*, as you can put in *well*, and *in season*. If we should name a motto more important to the Kansas farmer than any other, it would be, "*Plant early*." To those who are to try their luck on Kansas soil for the first time this year, we would say, Plant early. If seed does not germinate promptly, it will not rot in the ground, as in the East.

Once more we say, *Wake up!* The farmers of Kansas hold the post of honor in American Agriculture to-day. More eyes are upon them, more interest centered in their labors, and better results expected, than from any other State of the Union. Tens of thousands, confiding in our soil and climate, are coming into the State for homes. Hundreds of thousands more are looking to the results of the present year, to determine whether or not to follow. Wake up, and—

"Act well your part; there all the honor lies."

DAMAGE TO FRUIT TREES.

We were informed by some observing gentlemen of Manhattan, as early as January last, that the nursery stock of apple trees had been seriously injured by the freeze of October 20th and 21st, last.

We now see that G. C. BRACKETT, Esq., of Lawrence—good authority, so far as he has investigated—claims this damage to be general throughout the Western and Southwestern States. It is his opinion that most of the nursery stock is damaged, and much of it killed; and he cautions all against purchasing without stipulated conditions concerning this contingency. We have no room for Mr. BRACKETT's communication, but give its substance; hoping, however, that it will not prove so bad as claimed.

LEGISLATION FOR AGRICULTURAL COLLEGE.

It is generally known that the State Legislature has, from year to year, loaned to the Board of Agricultural College Regents the needed funds to meet Professors' salaries, the Endowment Fund not yet being in condition to realize from it.

The Legislature, just adjourned, appropriated the amount of this claim to the Regents, for enlargement of the College Farm, procurement of arms and accouterments for military class, and for the establishment of a College Boarding-house.

The aggregate sum of this appropriation must exceed \$30,000, and places it in the power of the Regents to *do something*—an opportunity not before given them. If this money is expended with wisdom, in the direction of the popular demand upon such an institution, it will place it in a position to *command* all the further aid required. But if it is frittered and squandered, from want of purpose or devotion on the part of its responsible managers, the State will think twice before paying another installment on this obligation. For the good of the Agricultural College, and the State, it is hoped the Board of Regents will recognize their responsibility, and prove equal to the laborious and important task before them.

LOCAL SOCIETIES.

We desire to make up a complete list of the Agricultural and Horticultural Societies of the State, and to that end request their respective Secretaries to inform us by letter of the name, date of organization, and principal officers of the Society represented by each.

THE KANSAS FARMER for 1870 will be sent *free* to each such Society, on receipt of such information, and with the understanding that it is for the use and benefit of the Association receiving it. This proposition is extended to all *organized* Farmers' Clubs, as well as to organizations for holding exhibitions.

DOUGLAS CO. FRUIT-GROWERS' ASSOCIATION.

This Society adopted the following, as a selection for a model orchard of one hundred trees:

Early Harvest, 2; Red June, 5; Red Astrachan, 2; American Summer Pearmain, 2; Maiden's Blush, 5; Lowell, 5; Fameuse, 5; Rambo, 2; Bailey's Sweet, 2; Rome Beauty, 5; Winesap, 15; Rawles' Genet, 10; Kansas Keeper, 10; Missouri Pippin, 5; Kirby's Red, 10; White Winter Pearmain, 3; Sweet Pearmain, 3; McAfee, 2.

This Society was organized in August last, and is steadily increasing in numbers. The members have organized a library, and are endeavoring to educate themselves so as to be eventually well posted in regard to fruit and its enemies.

WOOLEN MANUFACTURERS' ASSOCIATION.

The Second Annual Convention of this Association met in Chicago, last month; and after an address by the President, GEORGE S. BOWEN, of Chicago, and reading of the Secretary's report, the following officers were elected for the present year:

President—GEORGE S. BOWEN.
Secretary—JESSE McALLISTER.
Assistant-Secretary—WILLIAM HOLLY.
Vice-Presidents—J. G. Stolpe, Illinois; Mr. Blake, Wisconsin; H. R. Gardner, Michigan; George A. Crawford, Kansas; A. Pope, Ohio; J. Warden, Indiana; H. Gibson, Minnesota; K. Shields, Iowa; R. G. Ross, Missouri; Mr. Stein, Kentucky; Col. Fry, California; Georgia, Tennessee, Louisiana, North Carolina, Mississippi, South Carolina and Alabama, to be filled.

It was resolved to hold an Exposition of Woolen Goods, to commence on Tuesday, August 2d, 1870, in which all manufacturers of textile fabrics and producers of wool, are invited to participate.

The claims of St. Louis as the place of holding the Exposition, were strongly urged; but the matter of location was finally left to the Executive Committee, with instructions to receive proposals and determine the place, on or before April 5th.

The following resolution, in condemnation of the Free-Trade dogma, supposed by most men to have been exploded and defunct long ago, were offered by R. H. GARDNER, of Jonesville, Michigan, and adopted by the Association:

WHEREAS, Efforts are being made by the advocates of Free Trade to influence Congressional legislation to secure the repeal or serious modification of our Protective Tariff laws; and believing that the present depression in our manufacturing interest does not, as is alleged in the arguments of the opposition, arise from, or is the result of, our Protective Tariff, but that it is entirely dependent upon other causes, mainly arising from the war; Therefore,
Resolved, That this Association earnestly protests against any change in our present Tariff laws, and that we urge upon our members of Congress our earnest desire that they leave the present duties on wools and woolens in full force.

NOTICE TO DEALERS IN TEXAS CATTLE.

MINERAL POINT, ANDERSON COUNTY, KANSAS,
February 13th, 1870.

The citizens of Anderson and Coffey counties, Kansas, met at Tipton's school-house, near Mineral Point, for the purpose of instituting measures to prevent the driving of Texas or Southern cattle through this part of the State. The meeting was organized by electing S. S. TIPTON Chairman, and H. C. EARNEST Secretary. The object of the meeting being stated, JOHN MOLER was selected as a committee to draft resolutions. The committee reported as follows:

WHEREAS, The people of this part of the State have suffered in former years, by the almost entire loss of their cattle by Spanish fever; Therefore, be it
Resolved, That we will use means to prevent Texas cattle from passing through this part of the State, let the consequences be what they may.

The Society went into permanent organization, by electing as President, SAMUEL PATTON; Vice-Presidents, EDWARD DRUM, PAT. AGNOL, ED. BROWN, JOHN HILL, DAVID HOMES, JACKSON MEANS, JOHN TIPTON, and CHARLES SMITH; Secretary, H. C. EARNEST.

The Society requested that a copy of these proceedings be furnished the Burlington Patriot and Garnett Plaindealer, for publication.

The meeting then adjourned, to meet the first Saturday in May, at Hill's School-house, at 2 o'clock, P. M.
S. S. TIPTON, President.
H. C. EARNEST, Secretary.

The Kansas Farmer

GEORGE T. ANTHONY, Editor.

AGRICULTURAL COLLEGE INSTITUTE.

[CONCLUDED.]

WEDNESDAY, 2, P. M., January 19.

Miss EDMA HAINES read a sprightly Essay on the "Past, Present and Future of Agriculture."

Mr. ROSS made a few remarks on Fruit Culture. He again referred to his central-stem system of pruning, and endeavored to prove it necessary, to prevent breaking down. Also, he would not save any spurs on the stem of a tree for limbs that might be needed, but prune clean. A tree that is leaned to the north by the wind, will generally straighten up as it grows—partially, if not wholly. Favor high training; and in answer to a question, what he would call *low* training,—said three and a half feet would be low. Would prefer five to seven feet.

In training grapes, he uses principally the arm system; being careful to extend it each year not more than six or eight buds. If more are left, the lower buds will often refuse to break, and a naked stem is the result. Pinches the laterals to one leaf but allows the main cane to extend itself at will. A system of pruning in considerable use in California was explained. The pruning is extremely short—the first year to two eyes, the next to four, and so on, doubling each year, until a sufficient number of canes are obtained, and the main stock becomes very large and stout. The ends of the canes are fastened together at the top, forming a mass resembling in form a huge ruta baga, and so solid that it will sustain the weight of a man standing upon the top. No stake is used.

The speaker did not tell us how the yearly supply of new wood is obtained; and as the growth of the vine in the Pacific States is entirely different from our own, being less rank and shorter-jointed, the method is probably not practicable here.

Mr. MUIR said, the means he employed to get new wood from an old, naked stem, was to twist a wire around it, which would force it to throw out shoots from dormant eyes.

In digging holes for grape-vines, make a low mound in the center, and spread the roots over it, so that the ends shall run downward, which is their natural position.

Mr. FOSTER said there was a wide difference of opinion on training an orchard. His own was set twenty-four feet apart; but if planting again, he would put them twenty feet. Had never found any difficulty with trees splitting down, by cutting the leader. Likes an open head. Trains one and a half to three feet high. There is no danger of splitting down, if properly trained. The Winesap is a great favorite with him. They grow so much better in Kansas than at the East, that of half-a-dozen fruit-growers from there who were at his house, not one could tell what the apple was.

Prof. HOUGHAM gave an account of a Year's Experience on the College Farm.

THE FARM.

Six acres of wheat sown in September, 1868; matured well, and yielded a good harvest. The eight varieties of wheat, and the two varieties of rye, received from the Commissioner of Agriculture, at Washington City, came to hand late in the season, and were planted from the 10th to the 25th of October, as they arrived, and as the condition of the ground allowed. The grain thus late sowed came up promptly, and grew rapidly, while the weather continued warm, the blades attaining a length frequently seen in much earlier sowing. There was not, however, time for the roots to become deep set in the soil. The coldest weather of the Winter, which was in December, injured wheat and rye but little, as the ground was then covered with snow; but the freezing in February and March, 1869, entirely destroyed our late sowing of both these cereals. This experiment goes so far to corroborate the opinion frequently expressed, that late Fall sowing is apt to prove of little value.

The garden seeds, plants and shrubs put out last Fall, came through the Winter in good condition and generally met our expectations. Five acres of and were sown to Spring Wheat, on the 20th of March, 1869, and yielded at harvest twenty bushels per acre of first-class grain.

On the 26th of March, four acres of ground were sown to common oats (black and white, mixed), which yielded sixty bushels per acre; and on the 17th day of April, four varieties of oats, received from Hon. HORACE CAPRON—Excelsior, Surprise, Somerset and Schonen—were sown in smaller quantities. These gave a return of more than sixty bushels per acre, by *measurement*, and of seventy-five bushels per acre, by *weight*. A small sowing was made with the Black Swede oats, on the day last named, in the same manner and upon similar soil. These grew slowly in the first part of the season, but came forward rapidly in the latter part of stalk-growth. Before the grain matured they fell down, and yielded no valuable product whatever.

Two varieties of barley were sown on the 6th day of April, 1869. They grew very well, and yielded at the rate of fifty-two bushels per acre.

Large white corn was planted upon eight acres of land, on the 22d day of April. This came up promptly, but grew slowly the first four weeks. It matured well, and yielded fifty-five bushels per acre. Four acres were planted to a kind of corn known in some localities as King Philip—seed from Indiana. This was planted on the 15th of May, came up and grew rapidly, and matured by the 20th of August, and yielded fifty bushels an acre. Our experiments with corn do not favor very early planting upon upland.

On the 8th of May, one thousand sweet potato plants, of two varieties, were set out in ridges. They grew very slowly at first, and were much damaged by cut-worms. It is believed that, as our seasons average, it will be better to plant at least two weeks later. Of this setting, the potatoes that survived grew to great size, and were very excellent in flavor.

Six varieties of Irish potatoes were planted, at intervals, from the 1st of April to the 1st of June. These all produced very well, yielding superior tubers, in great abundance. The cold weather in October injured that portion which was not yet dug, and which lay near the surface of the ground.

On the 28d day of June, four acres were sown to buckwheat. It is believed the sowing was too early, because the first bloom was entirely killed, perhaps by the heat of the sun. A second blooming occurred later in the season, but the grain was only partially filled and matured when the frost killed it. Seven bushels per acre of good buckwheat were harvested.

In the Spring of the current year, about one thousand additional forest trees were planted, for shade and wind-break. Only one of this entire number died; all the rest lived, and made a very large growth. Besides these, the students of the College obtained a considerable number of evergreens from the forests, and planted them on the farm. Only a few of these lived.

Half-a-bushel of the seeds of the hard or sugar maple was planted; also, a few pounds of the seeds of the beech. These came up, and many thousands of them grew to the height of two or three inches; but as they were young and very tender during the period of our strongest and most frequent winds, in April and May, by far the largest proportion of them perished. A few hundred still remain, and have grown to the height of from four to six inches.

It was our intention to plant three acres with the seeds of the soft maple, but the seeds could not be obtained. The severe freezing in March killed the blooms of this tree in much, if not the whole, of the country west of the Mississippi river.

The trees which died in our orchard during the year 1868, have been replaced by Mr. SAMUEL CUTLER, according to his agreement. An additional orchard of twenty-five apple trees was planted near the dwelling-house, on the farm; also, an orchard

of seventy-five peach trees—part one and part two years old. Every fruit tree planted in 1869 lived, and made a vigorous growth. A small planting of seedling plums and cherries was made, with reasonable success.

Many of the students in the College rendered valuable assistance, without compensation, in planting seeds and trees; and to about one-half those in attendance during the Spring and Summer term, small tracts of land were assigned for cultivation. Each was allowed to consult his own taste and pleasure in the planting he would make. Nearly all the branches of farming and gardening were thus represented. The fact that the collegiate year closes in June, is not favorable to this mode of experimenting by the students. Several, however, were very successful in the departments chosen by themselves; and they have made their reports to the Professor of Agriculture, showing valuable results.

It is much to be regretted that the finances of the State of Kansas were in a condition which seemed to make it proper for the Legislature to restrict the appropriation to this department to *two hundred dollars*; and it is earnestly hoped that for next year an appropriation will be made for the development of the College Farm, which shall be in a degree commensurate with the position this new Commonwealth occupies among her sister States.

The Institution is under obligations to Rev. E. GALE, for a donation of one hundred and fifty maple trees, from his nursery, and of seventeen peach trees; besides having sold us both fruit and forest trees at reduced rates.

Mr. THOMAS HOOKEY, of Junction City, presented us with sixteen varieties of seeds, from Australia. These seeds are of the Acacia, and from their rapid growth are believed to promise much for forest and shade in our State, if they can withstand the cold of our climate. A few only were planted, as they were late, and it is feared they were killed by early frosts.

The members of the Wabaunsee Agricultural Society made valuable donations, in seeds, for next year's planting.

One gardener in Indiana will give us all the seeds we need next year, in addition to what we now have.

A question being asked about pruning roots, the opinion was general that the cut should be upward, so that the bark might protect the wood and prevent decay; and as roots are generally emitted from the callus at the end, they more readily pass downward. If a tree is taken up in the Fall, and heeled in, the roots should be first pruned, removing all bruised or decayed portions; and if well heeled in, the ends will all be callused by Spring. But if a tree has been heeled in without pruning, the roots should not be pruned in Spring. The ends having healed or callused, it would be a loss to cut them off. Decayed portions, however, it is always in order to remove.

Adjourned.

WEDNESDAY, 7, P. M., January 19.

The regular speakers not being on hand, Major JENKINS was called up on the wheat question.

He has never raised Fall wheat himself, but has threshed most of the wheat in that township, and watched very carefully its culture on the farm of his neighbor, Mr. BENTON. In the first place, nearly all the Fall wheat in that section has just been thrown at the ground. Many don't plow it at all. But he has noticed that those who plow deep—put it in to the beam—get one-third more than those who plow five inches—from twenty-seven to forty-four bushels to the acre. Some think this is an exceptional year; but he does not think so, except for those who sowed on corn ground, and brushed it in. It was wet enough to produce a good crop, even with such treatment. He had threshed one lot that was drilled in—two and three-quarters bushels being sown as thin as possible, as seed was scarce. The ground was well prepared; he did not know the exact amount of land, but it was thin seeding. He threshed from it one hundred and two and a half bushels of the finest wheat he ever saw. The

straw was very stiff and strong. Has himself sown seventy-five acres this Fall, and it now looks very fine. Some of it came up after Christmas. Spring wheat is a success, but not so great a success as Winter.

Next in order was an Essay on the Osage Orange, by Rev. Mr. COX, of Manhattan.

He commenced by saying, that the prevailing opinion has been that the Osage will not succeed. But, has it had a fair trial? Some have said it was time thrown away; but in many cases the hedges of these same men, coming into other hands, in three years' time neither hogs nor small animals could pass through them. His opinion is, that this state of things arises from negligence, united to a want of knowledge. There are many hedges that are certainly doing well. A gardener was pruning his hedge in August, with shears, and a farmer passing by was greatly astonished, both at the time of pruning and at the shears; he never had seen a pair before. That farmer's hedge was one of the failures. It appeared never to have been hoed. It should be well hoed, and the soil frequently loosened. This cannot be too strongly insisted upon. It must be trimmed, not once, but twice or three times, if necessary, according to the weather. Many don't know when to trim, so they don't trim at all. It will not injure the plant to trim at any time of year.

He thinks a great mistake is made in planting in single rows. Many experiments made in other States show that the double hedge is much better. It grows so rapidly in this climate, that it will not branch sufficiently in a single row. It is also a mistake to plant on ridges, as the rains and frosts will expose the roots; it also affords a better chance for the gophers to work. In this State, it should be planted a little below the general level. Hedges so planted, and closely trimmed, stand the Winter best. He favors close trimming—the first year close to the ground, and each year a few inches higher, until a close, compact hedge is formed.

Some one inquired how to dispose of Gophers. A number of modes of getting rid of the troublesome rascals were mentioned. One used steel-traps, sunk in the main run. The opening must then be carefully covered with a board or sod, and an opening made beyond the trap. Mr. Gopher at once proceeds to stop the hole, and, passing over the trap, is caught. This peculiar habit of the animal, of proceeding without delay to fill up a hole that lets daylight into his run, is the basis of all the devices for catching him. Some make an opening in the run, and stand back of it with a spear or pitchfork, ready to pin him the moment he appears. Another almost certain method is, to stand a rod or two distant from the hole, with a gun loaded with buck-shot pointed at the opening, and the instant the dirt is seen to move (which will be within a few minutes generally) pull the trigger. There must be no delay, for his Gophership makes short calls.

Several gentlemen spoke of the great destructiveness caused by these animals. One had seen every plant cut off for fifty feet.

Mr. BLATCHLEY would like to know about plashing hedges. Thinks a plashed hedge will make a better fence than a trimmed one. Understands the practice of trimming has been abandoned in Ohio.

Mr. PIERCE stated that he saw a hedge in Ohio, set by a first-rate farmer, and well tended and trimmed for six years; but it was a perfect failure. There were so many gaps, caused by plants dying out, that it would turn nothing. Becoming disgusted with it, he went into it one Winter and slashed it down, and threw falls upon it; whereupon, it thickened it up, and is to-day the best fence he ever saw. There are up, and is to-day the best fence he ever saw. There are up, and is to-day the best fence he ever saw. There are up, and is to-day the best fence he ever saw. There are up, and is to-day the best fence he ever saw.

Mr. WELLS had tried the steel trap for the gopher, and succeeded; but there is an easier way. Take a piece of sweet potato or parsnip, and rub a little strichnine on it, and deposit it in the run; and you are almost certain to kill him. Prof. TURNER and other large hedgers have abandoned trimming, and now invariably plash. Prof. TURNER advises to let them grow five years.

Inquiries were made if there was any implement suitable for plashing.

Mr. ROSS gave an illustration on the blackboard of one. It resembled a long, narrow spade, or wide chisel, with a projection on the side of the handle like a scythe nib, by which it may be guided, and a strong cut given.

Rev. Mr. REYNOLDS next gave an Address on the "Aims and Benefits of Agricultural Institutes"—a very able production, of which we can only give a very brief abstract:

Progress in all directions is the reward of labor. Labor is the great primary law of man's nature; hence, labor is no curse, but one of the divinest blessings. Every effort to get rid of labor is an infraction of law. All effort, of mind or body, is labor. WASHINGTON, KANE, HERSCHELL, STEVENSON, are all laborers. It is labor that dignifies and ennobles. When the Duke of GRAFTON reproached Lord THURLOW with his plebeian origin, he hurled back the taunt, with the reply that, "The peerage sought him, and not he the peerage." Make labor honorable. These Institutes are one of the most powerful agencies in doing this.

Hope and ambition are the main-springs of progress. With despair, every life is a battle lost; with hope, every life is a battle won. No man should be satisfied with his attainments. The means of education should be accessible to all. The trained hand should be united with the cultivated brain. The idea that labor need not be intelligent, is a relic of barbarism; it forms no part of modern philosophy. All great improvements in modern science, commerce or agriculture, have been achieved by having the intelligent mind to employ the willing hand. A great object of such Institutes is, to teach the farmer that he is not only a working but a thinking being. Book-farming has been sneered at; but we understand that science is the reason of things. Should not the farmer have a reason for his methods? The constitution of soils, the laws of meteorology, the habits of birds and insects, the laws of physiology and stock-breeding, all open themselves to every farmer who would be successful in his business.

He looked upon these Institutes as, in the highest sense, Agricultural Schools, in which all are teachers and all are scholars. The best Professor of Agriculture is the embrowned farmer, who comes from his compost-heap with his hundred bushels of corn to the acre. He is a learned professor, who contributes to the treasury of agricultural knowledge. There are many here to-night. He would not undervalue Agricultural Colleges proper; but there is no royal road to learning, there is no excellence without labor, and the toiler shall bring with him, not only his golden corn but a rich store of knowledge.

Then comes in the immense power of example. He could show places where the efforts of a good farmer have operated like a contagion on all around him. His well cultivated fields, his well laden orchards, his thrifty cattle, his small-boned hogs, his well-ordered buildings—all lie like an open book before his neighbors. His farm is a treatise on agriculture, which all can understand, whose pages they cannot avoid studying.

Another, and most important, aim of these Institutes, is to teach the farmer his most valuable servants. It is not the plodding Swede, the sprightly Celt, or the laughing Negro; but the elements and influences of nature. The skillful hand may break them to harness, and employ their wonderful power to fill his barns and his purse; but for the heedless and unthinking they may work only mischief, thwarting his plans and blasting his hopes.

Again, these Institutes shall bring together the accumulated experience of the farmers, the horticulturists and the stock-raisers of the State. From KELSEY we will learn of "all manner of trees" of the forest; from BARNES, how to make a thin soil, or a high prairie soil, yield its fruits and its dollars; from BRACKETT and CUSHING, how to plant and mature the Kittatiny and Lawton, and how to make Hovey's Seedling and Wilson's Albany produce beyond precedent both bushels and greenbacks; from the venerable ROSS, who might long since have "laid down the shovel and the hoe," we will learn the true meaning of that Roman, who exclaimed, *Multum ex parvo*; from WAKEFIELD and COLMAN, we will learn not only how to "bleed and

die for one's country," but how to lessen the core and enrich the flavor of all the delectable apples of the land; from COL. LINES we will learn how to combine *taste* with *flavor*; from CUTLER, how to prune; from WILSON, how to cross the "pure bloods" with common stock, and make it pay; from BARBER, how to *shave* the butchers, when the thriftless farmer has no stalled ox to sell; and from HUDSON and GRAY we will learn the true mixture of Chester White and Chinese Black, and how to procure an allopathic mess of pork, with but a homeopathic dose of bone.

At the close of the Address, the sound sense and happy hits of which drew close attention and frequent applause, the discussion of wheat was resumed:

Maj. JENKINS was in favor of sowing Winter wheat early. If it grows too much, and begins to joint, turn on stock. Some sow oats with the wheat, to protect it; but he does not think it necessary, if sown early. Winter wheat is readily sold, especially when prices are low. Then you must go on the market with the very best.

Dr. REYNOLDS thought the Spring wheat this year was not a fair test of what it usually is. It is unusually fine, and comes nearer to Winter wheat than he ever saw before. The other day he heard a German dispute with a miller, who had ground some Spring wheat for him, claiming that the miller had made a mistake and given him too much flour! The difficulty was adjusted without bloodshed; but such plump, handsome Spring wheat he never saw in his life, and he had a good many bushels of it in his granary for distribution in 1861.

One gentleman stated that the Spring wheat in his section did not fill well this year. Supposed it was caused by an excess of rain. Thought deep plowing might obviate it. Last year it weighed sixty-two and a half pounds to the bushel.

Another did not like to hear Spring wheat cried down here. Has never raised Spring wheat that made less than forty pounds of flour to the bushel.

Mr. WHITE thinks the uplands will raise better wheat than the bottom lands.

Mr. JENKINS said the Germans in his neighborhood succeeded with wheat all the time, and oats, too. He believes in deep plowing. Would like to loan his team to the gentleman who can't raise wheat.

Prof. PLATT asked his opinion about rolling wheat. Mr. JENKINS—Mr. BENTON rolled his wheat in the Fall, rolled it in the Winter, and kept on rolling, till it rolled him out forty-five bushels to the acre.

President DENISON remarked that a roller-drill had been donated to the College by a firm in Michigan, and inquired of Col. CAMPBELL how it worked.

Col. CAMPBELL said it works well on clean land, but he is afraid that on lumpy or weedy land it would ride.

Mr. JENKINS—The great advantage claimed for this drill is, that it will not clog. He was told by a man in Atchison, that he used the roller just as the frost was coming out of the ground, and raised an immense crop.

A gentleman is opposed to rolling in the Fall. It would not press the ground hard enough to prevent the wind blowing the dust away. He would leave the ground as rough as possible, so that the dust will fall in around the roots. Then roll in the Spring. He thinks the Early May wheat the best variety for Kansas.

The Institute then adjourned until Thursday morning.

THURSDAY, January 20—10, A. M.

Mr. WILLES, of Skiddy, made some remarks on the future benefits of these Institutes. He saw grand results opening before us, in that time when the farmer would carry on his business as a merchant or a manufacturer does his, by careful rules, founded on exact science, and not hap-hazard, as is too often the case. The ladies, too, will be brought in, and fully prepared here for their duties in life.

Mr. LONG, of Fort Harker, was next called upon, to give his experience in cheese-making. He said that cheese-making, and not speech-making, was his business; but he would answer any questions that might be asked in regard to the art. In making cheese, the first thing to be looked after is the proper material. The milk must be clean and pure. Great care should be used in milking. Then, the vessels to contain it must be clean. Everything about it must be clean.

The greatest difficulty he has experienced is in the use of rennet. He has lost a great deal, on account of the rennets not being properly prepared. At first he depended upon the butchers, and paid a high price for them; but they were worthless. He found it safest to send East, and get them properly prepared. The stomach of a grown calf will not do. They should be young. The older the rennet, or the longer it is kept, the stronger and better. To preserve rennet, take out the stomach carefully, not removing the contents; fill it with salt, and hang up to dry. That is all. Most of the failures in cheese-making he attributes to the rennet.

He commenced the business in 1868, with forty cows, and made \$1,435 worth of cheese in a year; besides raising fifteen calves and fifteen hogs. Had found it a paying investment, and only wondered

there are not more in the same business. The grain-raisers failed entirely in that section.

He believes the grass west of the Solomon is best for milk. The buffalo grass produces very rich milk. There is no more difficulty in making cheese here than in any other section of the same latitude.

To make one cheese a day, milk at the proper time at night, and strain the milk into a vat, set into a water-tight box. Then pour cold water into the box, around the vat. If he had a spring, he would permit the water to run through it; but as he uses well water, he changes it once a day in Summer. Uses ice to cool the water. If the milk keeps sweet till morning, strains the morning's milk in. Then, by means of steam from a steam boiler attached, he heats it up to 90 degrees, and puts in a sufficient amount of the liquor of rennet—about a pint to a hundred gallons of milk. This should bring it to a curd in fifteen or twenty minutes. Let it stand till, putting in the finger and withdrawing it, none will adhere to it. Then cut it each way, into cubes, and let it stand fifteen or twenty minutes, for the whey to rise. If it has a greenish color, the curd is in a proper condition. Raise the curd, and work it carefully with the hands, but do not cause the white whey to rise, or you will lose the cream. Again, let it stand fifteen or twenty minutes, till the whey rises again. Next, raise the temperature to 100 or 105 degrees, and cook it two or three hours. Draw off the whey through a strainer faucet. After the whey is all off, add salt at the rate of a teacupful to fifteen pounds of curd. Afterwards, cool off, by pouring water around the vat, to sixty degrees, and put into the press. Press for about twelve hours; then take it out, and put into a coarse cotton cloth, and press again twelve hours, when the cheese is ready to go on the shelf.

The milk here will produce about ten per cent. more cheese than in Ohio. Out of one hundred gallons of milk, he can make one hundred and ten pounds of cheese. His cheese weigh fifty or sixty pounds each.

In reply to an inquiry, he said the amount of rennet would have to be learned by practice. If there is too much, the cheese will be strong; if too little, it will take longer to turn. He prepares the rennet by cutting it up and putting it in a stone jar with brine, and keeps it at about ninety degrees for twenty-four hours. There is an apparatus for testing the strength of rennet, which he intends to get.

He sees no difficulty in establishing a cheese factory here, if the milk is properly cared for.

Dr. REYNOLDS said doctors don't often take their own medicine, and inquired if Mr. LONG ate his own cheese.

Mr. LONG answered that they generally ate about one a week!

His stock was obtained in Kansas, and he found some difficulty in getting the cows to give down their milk, as they had been accustomed to have their calves run with them, being used only for raising stock. That can be remedied after a time, by raising cows expressly for dairy purposes.

If the curd is allowed to sour, it will crack, and then it is very difficult to keep the fly out.

He draws a muslin cap over his cheese, as, if there is the least crack in it, the little cheese-fly will find it, and it will become full of skippers. Never greased his cheese; if they are properly made, there is no necessity for it. He uses a flour paste, however, with a little yellow ochre to color it.

The President inquired if he had ever had a cheese melt down. He had not; but he guarded against it, by keeping the cheese-room cool. The cheese-room should be separate from the factory. There is so much slush about the latter, that it draws flies. He ventilates his cheese-room, but does not allow cold currents of air to strike the cheese. The room should be as tight as possible, with due regard to ventilation, as the air should be kept moist. Turns his cheese every day, and rubs them over with his hand when they are turned. At the East they use boxes, which keeps them in better shape.

In answer to an inquiry, he said that running water was not essential to the manufacture of cheese, though it is a great advantage.

An inquiry was made, if one gallon of poor milk would not spoil a cheese, and would not that be the difficulty in running a cheese factory and buying the milk? He answered, It is done East: why not here? The same difficulty must be met everywhere.

Is it any more difficult to cure cheese in this climate than in a cooler one? He thinks not. He does find it difficult, however, to keep the night's milk from souring before morning.

An inquiry was made, if the flies do not get into the curd? They do not. The cheese-fly is entirely distinct from the common house fly, which does no damage. The cheese-fly is very small, with green wings. It attacks the cheese, but never touches the curd.

Mr. LONG considers cheese-making more profitable than general farming. Range costs nothing, and feed in Winter but little. Out at Ellsworth they have green grass now, and keep up their milk and condition very well. He has fed his cows only three times this Winter. Last year, his cows ran out all Winter, and many of them were fit for beef in the Spring. He does not think it would pay to feed them grain, unless it was very cheap. He has no shelter for his cows; but, in a storm they make for the deep ravines, and stay there until it is over. Is of the opinion that it is better not to fodder cattle there in the Winter, except when the ground is covered with snow. They have grass there, that keeps green all Winter, and cattle do well.

Maj. JENKINS believed the gentleman was right in not feeding. If fed occasionally, they get lazy and hang around the stack, and will not graze well; but if allowed to take care of themselves, they can be made beef of in the Spring.

Mr. COX did not believe any but the common native breed would stand such treatment.

Speaking about cows giving down their milk, Mr. ROSS said he had heard that laying a bag of grain across the back would cause a cow to give down her milk. Tried it once, and found it worked; for he instantly found himself flat upon his back, pall and all.

BUTTER MAKING.

Dr. STERNBERG, of Fort Harker, next proceeded to give his experience in a butter dairy, out on the "Great American Desert."

His son commenced raising stock three years ago, with about one hundred and thirty head of cattle, including fifty cows. About twenty-five of these were used for butter, and the rest for raising stock. As regards the profit of butter and cheese making, there is, perhaps, no material difference; but while it takes only one gallon of milk to make a pound of cheese, and three to make a pound of butter, the cheese seems most profitable. Still, the skim milk being more valuable than whey, for fattening hogs, the result is about the same. Made about two thousand pounds, which sold at an average of about fifty cents. While it was low, in the Summer, he packed most of it, and in the Fall any amount could be sold at sixty cents.

The grasses in that region are peculiar. They depend principally upon the buffalo grass; but there are others that come very early. In the timber and ravines, they are green now. Fires have damaged the grass considerably; but still, the cattle are doing well—many of them would make good beef. Those grasses are very nutritious; he never saw milk so rich. The cream is sweet; there is nothing to give it an unpleasant flavor, except a while in the Fall. There is one weed that is intensely bitter, and affects the taste of the butter. They have fed their cows four times this Winter.

He is satisfied that it is more difficult to make good butter here than at the East; or rather, to keep it. At the East, they pack in firkins; but he cannot get suitable firkins here. Close-grained white oak is the only wood that will not allow brine to pass through, and that cannot be had. Packed in such firkins as he could obtain, it would not keep

as first-class butter; had to be sold as second-class. He has since adopted another plan, which has succeeded admirably. Take a cask—say a molar cask—sound, and of good material; cleanse it thoroughly, and partly fill it with brine. Then, make the butter into rolls, and wrap each roll with thin muslin, and put into the brine, with a weight on top to keep all under. So far as he has tested this method, the butter has kept perfectly.

To make butter that will keep, it must be made right. The cream needs attention. It is liable to become moldy, or to have white specks on the surface, which injures the butter. It should be skimmed and churned at the proper time. He prefers the old-fashioned dasher churn. Other churns will bring the butter in five minutes; but it ought to be churned longer—say, half-an-hour. He considers it bad to work butter with the hands. Uses a butter-worker, consisting of a table and a roller on the top hung by a loose joint at one end. With this the butter must be pressed carefully. It must never be scraped or crushed on the board, as that destroys the grain and makes it salvy. He only uses the worker in cold weather. Working the butter warms it; and as soon as it begins to get soft, he puts it away, and works again and again when it is cool, until all the buttermilk is out. Does not use water. Salts it before working.

He uses a tin churn, for the reason that it is more easily cooled. Sets it in a tub, with ice around it, and leaves until sufficiently cool—he thinks about sixty-two degrees. Keeps it in the ice while churning. There is a great difference in cows about the time of bringing butter. If a cow is found to be bad in that respect, discard her.

Prof. MUDGE gave a very interesting account of a trip up the Republican Valley, of which we can only give a few facts. He said that all the indications of vegetation, rain-fall, &c., show that it is a superior valley for farming purposes. The bluffs rise very gradually—so much so, that you cannot tell where the valley ends, and a plow can be run the whole distance. The grasses are the same as those last spoken of; and in addition to their nutritive qualities, the subsoil being slightly sandy, sufficient to afford good drainage, they come forward two weeks earlier in the Spring. The buffalo grasses are running out, and other kinds coming in, for fifty miles west; and it will be so farther on. He went up three hundred and twelve miles—just beyond Fort Kearney—and the trees, shrubs, and everything, gave indications of more rain than we have. He found some limestone that would do for building, but most of it is soft—genuine chalk. This limestone crumbles up very fine. He had crushed some, and examined it with a microscope magnifying forty thousand times, expecting to find minute fossils; but they were still undistinguishable particles. This shows that it is in the finest possible condition to be taken up by plants, as food. On the tops of the highest hills the soil is deep. In one instance, he dug two or three feet into the loam, intending to measure its thickness, but did not get through it. He thinks these valleys will be the small grain producers of the State.

He found many fossil shells—one of which measured over two feet across; also, considerable portions of a large saurian, including eight feet of the vertebrae. The geological history of the country is very interesting.

On the main streams, the timber is cottonwood, elm and ash; and farther west, white oak—sometimes twenty to twenty-five inches through. The cross streams appeared to be well supplied with timber, as far as he could see.

The question being asked, if he found any coal, he said, Yes; but it was an inferior quality of lignite. It is in the cretaceous formation, and not the true coal measures. The same coal is found beyond Fort Harker; and there it is a good workable vein.

In regard to a supply of coal for this country, Dr. REYNOLDS inquired if good coal was not found on the Southern Branch Railroad, and nearer than the coal beds near Denver.

The Professor said the Southern Branch Railroad would run through a very fine coal bed, which would be only about two hundred miles distant; while the northern coal vein is four hundred miles; but it was a great advantage to have both railroads run through coal.

Adjourned till afternoon.

THURSDAY, January 20—2, P. M.

Prof. HOUGHAM explained the manner in which chestnuts are grown. The chestnuts were obtained in the Fall, rather dry, placed in boxes with moist earth, small end down, and left in the cellar all Winter. Most of them sprouted, and grew two or three inches in the boxes. In the Spring they were planted out; and out of one hundred and fifty, one hundred and ten grew and made very good trees, ten to eighteen inches high.

Prof. SNOW, of the State University, next gave an Address on the Study of Botany. He said the subjects of natural history were attracting more and more attention every day. Our Western Institutions are more advanced in this respect than the Eastern. We have Chairs especially devoted to these subjects; while at the East, and in England, they are crowded into a corner by the dead languages. Here, it is taken for granted that the natural sciences are of at least equal importance.

Botany should be one of the first sciences to be attended to. The observing faculties are the first to develop in the child; and these are called into active exercise by the study of botany. Botany consists mostly of facts, gained by observation, which indicates that it should come in early in the child's education. The child has a natural avidity for facts, but by the usual system this is crushed out. It is really wonderful how little a graduate of a university may know. If he talks with the coachman, he finds he knows nothing of horses; if with the gardener, that he knows nothing of plants; in the country he is a cockney, in the city a greenhorn.

Children are delighted with flowers, and eagerly learn their forms and habits. The science even furnishes exercise for their reasoning powers, as they gradually develop. Having become acquainted with certain plants, we observe that some of them agree in certain characteristics; and thus we begin to group them, and the inductive faculties are cultivated.

In teaching children botany, something more than text-books is required. Prof. AGASSIZ said the best text-book in geology was the rocks. So in botany, even the statements of the books must be accompanied by illustrations—the plant itself. The proposition to teach the natural sciences in our common schools is not visionary. It has been tried, and proved successful.

The Professor illustrated his idea of how botany should be taught, by taking a leaf, and calling attention to its form, its serrated edge, the arrangement of its veins, &c., all showing that it belonged to one of the two great families of plants; the exogenous, or outside growers, and not the endogenous, or inside growers, of which corn is a familiar example. Many interesting lessons may be given on the arrangement of leaves on the twig. Each class of plants has an order peculiar to itself, and the arrangement is a strictly mathematical one; and these classes of plants not only have their buds arranged by fixed laws, but the different families have all a curious and wonderful mathematical relation to each other. (This was clearly illustrated on the black-board.) And what is more remarkable still, it has been found that this same law by which the leaves of a minute plant are arranged, extends to the planets themselves. The order of position is the same, and the proportion of their distance to each other corresponds with the order of buds on the stems of different plants.

Now, a man who understands the habits of different plants, is better prepared to vary his crops to suit the soil and climate, and take advantage of the markets. There is a great danger impending over this State, in the deterioration of the soil. Why,

the wheat crop of Illinois has already decreased one-half per acre; and although to-day Kansas stands first, not only in fruit, but in wheat, this advantage will ultimately be lost, unless the materials be renewed. He wished to impress it upon the farmer, that he should be familiar with his crops. The engineer knows every joint in his engine; why should not the farmer have the same knowledge of his? Botany and chemistry go together, as the twin sciences which shall make Agriculture successful.

Dr. STERNBERG was opposed to introducing botany into common schools. They have more than enough to do in the primary branches; why introduce the higher branches?

Prof. SNOW believed botany to be a primary study; it should be the first of all studies.

Prof. MUDGE said it need not interfere at all with other studies. Let the children bring in plants, leaves, and even fossils.

Dr. REYNOLDS believes with Dr. STERNBERG, in not crowding too many studies in; but he would follow the order of Nature. On her schedule, botany comes first in order. It cultivates the observing faculties quite as well as arithmetic.

Mrs. GOODNOW believed that the study of botany should begin even earlier than the school. The first things the child asks about are flowers and stones; and if father and mother are able to teach them, they are already well instructed when they go to school.

A MODEL ORCHARD.

Mr. WELCOME WELLS was called upon, to give some account of his orchard, over the Blue, which is known to be the finest in this section of country.

He said he had been raising trees for about ten years. The first planted, were planted in 1860, of which he only saved about half-a-dozen. He does not think it advisable to set out trees on raw prairie; would have it cultivated two or three years first. It is desirable, but not necessary, to have a wind-break. He plows his land in the Fall, making the dead-furrow where the row of trees will stand, and leaves it till Spring. Digs no holes. In the Spring he plows again, and throws the furrows back; then sets his trees on the surface, and plows again, throwing the furrows toward the row, and leaving a dead-furrow between each row. Plows in the same way every year, until the ground around the tree is eighteen inches higher than the dead-furrow. Some leveling will have to be done around the trees with a shovel. His land is second bottom, stiff soil. Does not mulch, although he formerly did. If mulch is used, it must be kept on all the time, as it draws the roots to the surface, and if it is removed, the roots are apt to be injured; besides, if it becomes dry under the mulch, the roots being near the surface, the tree is gone up. He cultivates corn, or any hoed crop, between his trees. Never would grow small grain among them.

Mr. LONG inquired if it would do to plant an orchard among Winter wheat.

Mr. WELLS would not like to do it.

Mr. ROSS once planted an orchard in that way, and they did well. Keep a space of several feet clear around the tree.

In answer to an inquiry about injury from rabbits, Mr. WELLS said he had not lost a tree in five years by them. Take a piece of liver, or anything bloody, and rub the body and lower limbs, and they will not touch them. Don't use bacon, or anything that won't wash off. If mice are troublesome, keep the weeds away from the trees, and mound the earth up around them; also, scatter a little bread and strychnine about. He thinks he can get along with anything but grasshoppers; tried soot and sulphur for them, but they seemed to like it.

He cultivates pears about the same way. Would not have dwarf trees—that is, to remain so; would make standards of all of them. Peel up a sliver of bark on one side, above the junction, and put in a stone or piece of glass, and it will throw out roots. Next year, do the same on the opposite side. He believes they will be short-lived, unless they do

throw out pear-roots. He is satisfied we can raise pears here, as well as anywhere in the Union.

He has had some sun-blight in the apple; but just let them alone, and they have outgrown it, and come out all right. As to varieties, he would take all in the State Horticultural Society's list, with some additions. Would add the Primate and Sops of Wine. Grandmere Pearmain he likes well; it bore the year after setting out. The Swaar has also done well; it has fruited three years, and been very prolific. Dominie is a large, fine apple, thrifty and good grower; but as he has lost two trees, thinks it may be a little tender. The Jonathan has fruited two years. Never saw a black speck on it.

Prof. HOUGHAM announced that a project was on foot for forming a vigorous Agricultural Society, embracing several counties, and hoped it would be taken hold of in earnest.

Adjourned till evening, at 7 o'clock.

THURSDAY, January 20—7, P. M.

At this closing session of the Institute, the room was filled to overflowing, which afforded the best evidence that the exercises throughout had been both profitable and interesting.

Mr. GEO. T. ANTHONY had been announced to speak on the Philadelphia Exhibition, and give an account of the field on which Kansas won so great a victory. This he proceeded to do, evidently much to the satisfaction of the audience. The facts in regard to the great gold medal have been given in these columns; and it is, therefore, unnecessary to repeat them.

He added one caution, which may not be out of place in this report. He feared that, on the strength of this great triumph, every farmer would rush pell-mell into fruit growing. He was not so much afraid of the business being overdone, as that it would be only half done. It is the greatest folly to plant trees without the requisite knowledge, and without a fixed purpose to give every tree so planted the very best of care. He foresaw a harvest of disappointment in store for those who supposed the only thing necessary to secure premium fruit in Kansas, was to put out trees.

Mr. MUIR made some remarks, highly complimentary to our State, and to this Institution. He said (alluding to the calisthenic exercises), that he perceived the Professors were treating their scholars like animals. When he saw the sturdy movements of those arms, the flush rising to their cheeks, and the resounding blows on the chests, he feared these Professors were spoiling the paint and plaster trade of the world! These girls, that go out from here with clear heads, strong arms, and full chests, will have no small influence in bringing Agriculture up to its proper position. He did not know why it was, but it was a fact, that there were more ladies in attendance upon these Institutes, than he ever saw at such meetings all together, from New York to Kansas.

Dr. REYNOLDS remarked, that Mr. MUIR was the only gentleman from another State who had taken part in these meetings, and, therefore, moved a vote of thanks to him; which was done unanimously.

On motion of Mr. WILLES, a resolution of thanks was adopted, to the people of that vicinity for their cordial entertainment of strangers attending the Institute.

President DENYSON said the large attendance at these meetings, and the deep and growing interest manifested in the discussions, was evidence of progress since last year. He hoped that all the facts brought out here, including the great gold medal, would be used in a wise manner, and that we should go steadily on in the path of development.

SOMEBODY announces that he has a new composition, whereof to make table-knives; something that is better than steel, for this reason, among others:

"6th. It is also intended to make obsolete, or unnecessary, the rule of etiquette which precludes the knife from being placed to the mouth, thus putting the eater often to inconvenience, and depriving the appetite of choice aliment."

What can it be made of? Who knows?

exists—Nebraska, for instance. The climate is similar to that of Kansas; but farmers find they cannot profitably raise stock; hence the small emigration to that State.

In conclusion, I will observe that though the Legislature may hear but very little from the farmers, they are, as a class, opposed to a law which would take away their principal means of support. Junction City, Davis Co., Kansas, March, 1870.

ORCHARD PLANTING.

Horticulture and Pomology—Assertion versus Proof—Propagation from Suckers—Summer Pruning—The "Downward Flow" of Sap—A Nut for The Farmer to Crack—State Horticultural Society.

BY E. SNYDER.

EDITOR FARMER: Being somewhat interested in Horticulture and Pomology, and for the benefit of all others interested, I would very much like to have the following questions and inquiries answered, in THE FARMER. It is desirable that the answers be plain, practical, and explicit. We want to know why plants propagated by layering are better, or in any way superior to, those propagated by cuttings; or whether there is any economy in propagating by layers. It is very desirable that those who so positively and persistently assert the superiority of layers, should give the reasons why they are superior.

It is also desirable to know what people realize from fruit trees propagated from suckers, or water-sprouts; and also the necessity of using that kind of stock in propagation at all.

How much is gained by a constant checking and weakening of the growth of fruit trees and vines, by pulling, pinching and cutting (commonly called Summer pruning), during the growing season?

Let us have the authority for a "downward flow" of sap, in trees, vines or plants. A mere assertion to that effect does not gratify the inquiring mind. The "chain-pump" system of Mr. MUIR will need practical illustration to make it plain.

Then, we want to know why the Editor of THE FARMER recommends fifteen Ben. Davis apple trees in a select farm or family orchard of one hundred trees, and in the same article say it is "one of the poorest apologies for an apple that a prolific nature has ever produced." The Editor's opinion of the quality of the apple is undoubtedly a correct one; and what is to be done with such fruit, when the market is well supplied, and the taste of the masses of buyers becomes educated to quality instead of appearance, is something to be learned.

Why is it that the operations of the State Horticultural Society are confined almost exclusively to Leavenworth and the Kansas Valley? Highland, Kansas, March, 1870.

THE RED CEDAR.

What is Thought of The Farmer in Illinois—The Red Cedar—How to Remove and Cultivate the Plants—Growing from Seed, &c., &c.

BY MICHAEL TAIT.

EDITOR FARMER: I congratulate you upon the evident success of your noble, intelligent and spicy paper, THE KANSAS FARMER, which I received and read with great pleasure last year, and have this morning received the February number for this year. My son MAGNUS sent it last year, and I presume has done so again. Please send me the January number.

Now, Sir, I admire your talent, good taste, and good judgment, for fruit and trees of every description, both for ornament, shade and shelter; and I think I already see the results—the good results—of your persevering counsel and advice, in the multiplied groves springing up all through your beautiful State. I now see that splendid gold medal, an ornament to your State; and I think your pen and personal activity contributed principally, through THE FARMER, to that pleasing result. But I must stop on this point.

I observed on page 24 of the February number of THE FARMER, an essay by the Rev. Mr. GALE, on a

year's experience with trees, deciduous and evergreen; and some anxiety exhibited about removing red cedars. Now, I will give you a few hints on that subject, with the experience of twenty-two years. I used to select a cloudy day in April, go off two miles to the banks of a small stream, take a large basket and a considerable piece of old bagging cloth, and a grub hoe very much like a carpenter's foot-adsze. Carefully cut the soil around the red cedar plants (averaging from six inches to two feet high), endeavoring to keep a ball of earth with each plant, resembling a large carrot, and immediately roll them up in the old cloth, and place in the basket, until I dug up as many as I wanted at that time; and then take them home and set them out in a nursery row, fifteen inches apart, using no manure, and mulching with old hay or straw, always having the row run east and west, and a row of white pine trees on the south side of them, so as to shade considerably. These plants would stand there one, two or three years, when they were removed as early in Spring as the frost would permit, to their permanent resting-places. I scarcely ever lost a plant; and I measured one this morning, which has stood in my ground fourteen years, which is nineteen feet high, and thirteen feet in diameter. I consider the red cedar the very best for shade and ornament, as you may clip them with the scissors into any fantastic shape you please. I prune off the straggling limbs when I transplant them from the forest.

They may be grown extensively from the seed. Pick the seed carefully off in September, and stir up deeply and well a seed bed in a dry place, well shaded from the southern sun, and also from animal dung, and washings from the kitchen or stable. Mix in a little fine sand; throw on your seed, and cover lightly; roll or pack with back of a spade; and during the next Summer, be particular to let no weeds grow on the bed. Pick the young ones always away with the hand, and the second Spring they will come up with a rush. Hand weed and tend until they are one, two and three years old; then transplant in a shadowy place, with a garden trowel, and soon they will be fit for hedges or shade-trees.

If you think the above hints worth publishing, you are at liberty to do so. Forest Hill, Joliet, Illinois, March, 1870.

FROM FRANKLIN COUNTY.

Progress of Improvements—Prospect of Winter Wheat—Drilling and Broadcast Sowing—Fencing—Extensive Coal Fields—Railroad—Projected Improvements—The French Colony—New Nursery—Churches and Schools—Society—A Mammoth Egg.

BY WM. H. SCHOFIELD.

EDITOR FARMER: We are making great improvements in this section of our State. Two years ago there was no improvement, no settlement, for many miles east, north, west and south; now there are fifty farms opened, and many good buildings erected, and some extensive orchards set out, and a large breadth of wheat was sown last Fall, all of which looks well, and from present appearances may yield a full average crop. I have two hundred and eighty acres of wheat growing, which I drilled in on the sod, and it looks very fine. I have a little that was sown broadcast on the sod, but it does not look well. A very large amount of land will be enclosed by fencing this Winter. We are making on our farm over seven miles of post and wire, rail and stone fence, and within five miles of our town there will be from fifteen to twenty miles more built.

We have an abundance of good coal, which underlies at least fifty thousand acres, of which Williamsburgh is the center. It is being mined from the surface in twenty or more different places, and the vein is from eighteen to thirty inches thick. It must ultimately prove a source of great wealth.

We are hoping for a railroad from Ottawa to Burlington, via Williamsburgh, which would pass through these coal fields and one of the best wheat and fruit-growing belts of land in the State.

Williamsburgh is improving, by the erection of substantial buildings and the establishment of business. We are now preparing to build a steam flouring mill, which will be one of the best merchant mills in the State.

Our French neighbors, under the general management of M. De Bousart, are doing well. They have a large amount of land enclosed and in cultivation, and considerable stock. They are also actually manufacturing silk velvet ribbons—a small sample of which I herewith enclose to you. One machine makes fifty-six pieces of this ribbon at the same time. They have machinery for making wide velvets, silk thread, twist, &c., now on the way from France, and the operatives and their families with them; and Kansas has the proud distinction of having secured the establishment of the manufacture of these fine fabrics, which are made only at but a few other places in the world.

A nursery is to be started here in the Spring, and already a part of the stock is in hand. Society is very good. We have a Methodist church organization of over forty members, and services every Sabbath, which have, as yet, to be held in our houses. We expect to erect a good, comfortable school-house, as soon as the Spring opens.

We cordially invite you, Mr. FARMER, to make us a visit, and see for yourself the rich agricultural and mineral resources of this part of Kansas.

P.S.—Touching the fruitfulness of this country, I would state that just as I write, one of my neighbors, Mr. ROBERT HICKOK, comes in, and places on my desk an egg laid to-day by one of his chickens, which weighs four ounces, measures around the length eight and one-half inches, and around the width six and one-half inches. Did you ever see the like of it? Williamsburgh, Franklin Co., Kans., March, 1870.

MISSOURI VALLEY HORTICULTURAL SOCIETY.

Fruit-Growing in Western Missouri—Horticultural Society Organized—Efficient Officers—Liberal Provisions—Monthly and Annual Meetings.

BY J. W. ALLEN, SECRETARY.

EDITOR FARMER: Your readers will doubtless be interested in every step taken for the promotion of horticultural interests. We are happy to report the organization of the "Missouri Valley Horticultural Society," at this point on Saturday, February 19th, by the adoption of a Constitution and By-Laws, and the election of the proper officers. Hon. GEORGE S. PARK, of Platte county, Mo., was unanimously chosen President. This gentleman is very widely known as an enthusiastic horticulturist, who has already accomplished much for this important interest; and the Society has honored itself as well as him in his election. CHAS. M. FERRIS, of Kansas City, was chosen Recording Secretary; J. W. ALLEN, of the same place, Corresponding Secretary, and S. W. SALISBURY, Treasurer.

The regular meetings will be held on the third Saturday of each month. This Society is intended to be more than a mere County Association. All similar Societies in Missouri and Kansas are cordially and earnestly requested to be represented by the appointment of one of their number to act as Vice-President; and our By-Laws provide for as many Vice-Presidents as there are Societies represented in our Association.

The Vice-Presidents selected form our Ad Interim Committee, who elect one of their number Chairman, to whom every member shall report the progress of Horticulture in the jurisdiction of his Society; and at each annual meeting (which is to be held on the third Friday of December in each year), said Chairman shall report in writing all such information.

Horticultural knowledge is yet in its infancy in this important fruit-growing section of the West; and it is hoped that its friends will rally around this organization, whose object is to disseminate practical information. Kansas City, Jackson Co., Mo., March, 1870.

The Kansas Farmer

GEORGE T. ANTHONY, Editor.

STATE FAIR FOR 1870.

The Executive Committee of our State Agricultural Society met on the first Wednesday of this month, to receive bids from competing cities for its coming Fair, and to determine its location.

The sharp competition and liberal bids made by Fort Scott, Topeka, Atchison, and Lawrence, are an expression of confidence in the present management of the Society, very complimentary, indeed.

Fort Scott was the successful place, having guaranteed the sum of \$8,500, and free transportation of stock and articles to and from the Fair, upon connecting railroads; together with half-passenger fare to visitors. These inducements, in addition to Fair Grounds fitted with complete and ample accommodations for the Exhibition.

We congratulate the enterprising men of Fort Scott, and the Society as well, upon this result. Under the circumstances, it is by all means the place for it. The town is an energetic, live one, with good accommodations, which will be made ample by the open-handed liberality of the men who rule the destinies of the city, and give it so much stability and promise in all its enterprises of development.

We like the decision, because it is high time the Society got out of the Kansas Valley, and served portions of the State which have been taxed for its support, and received very indirect aid in return. It carries it into a locality rapidly opening up under the impulses of a large immigration, and which will be immensely benefited by the opportunity offered by the Exhibition, for new men to see, hear, and profit by, the experience of older residents.

It is fortunate, too, that the plan of locating the Fair for a term of years, so urgently pressed by some, was defeated. It is a fallacy so fatal to the best good of the Society and State, that we hope it will not again rise to the dignity of a consideration. Our State Society must itinerate its Fairs, or become dwarfed into a local Society, receiving no broader, and a less earnest support, than if local in fact.

All things being equal, Emporia should be the next place. It is in the midst of splendid Agricultural surroundings, upon an important line of railroad, which will by that time traverse the entire State, from Northwest to Southeast. It will, also, be connected with the East by rail from Topeka, and be by far the most ready point whereat the old and the new, the experienced and inexperienced culturists of Kansas soil may be assembled.

But we will not distract the reader with speculations as to future Fairs. It is enough for this time, that our Annual State Fair for this year is to be held at Fort Scott in the last week of September. Let us all put shoulder to the wheel, and make it such a success that a sharper competition will spring up for it next year, than was realized this.

"A GOOD SEND-OFF."

When a boy, we had a play-mate who was always the last in on any contest, whether of study or play, and who always met his defeat with the apology, that he failed to get "a good send-off." This incident fixed the impression upon us, that to succeed in anything, we must start with "a good send-off."

In January the first number of the *Western Pomologist* was issued, from Des Moines, Iowa, by MARK MILLER—who, by the way, is a No. 1 man, and fully entitled to a liberal support in this new undertaking. It was neatly printed, well filled, and altogether acceptable.

Since then, an arrangement has been made by which Dr. J. STAYMAN, of this city, becomes an Assistant Editor, and the paper is dated "Des Moines, Iowa; Leavenworth, Kansas." We felt delighted with this arrangement, for the very good reason that another horn was to be blown for Kansas—friend MILLER, of Iowa, kindly volunteering to "pay the piper."

With a feeling of satisfaction we sat down to see if the Kansas end of the craft had got as "good a send-off" this month, as the Iowa end did last. We found Kansas handsomely introduced, and its Pomological representative, Dr. STAYMAN, very graceful and happy in his bow editorial. But, judge of our amazement, on finding the very next article to our Kansas "Salutatory"—and with it filling the page—not a Kansas editorial; not a Kansas communication; setting forth some new idea or strong fact, in relation to its Pomology; but a *pummel*-ological production, from the pen of GEO. S. PARK, of Parkville, Platte county, Missouri, in which he *pummels* poor Kansas with the old "Desert" cudgel, in the most positive, pious and poetical manner imaginable.

That no injustice may be done, we reproduce the full text of the article, so far as it relates to us, taking the liberty to italicise, for the benefit of Kansas readers:

This portion of the Missouri Valley is the home of the apple. The soil is a rich, light mold, with marly clay subsoil; and we have moisture sufficient to grow fruits of good size, and soft, dry breezes in August, September and October, that perfect the flavor of our fruits. The Missouri river is a long ribbon of water, winding through vast grassy plains, bordering on what was formerly called the American Desert, which is now covered with nutritious grasses, which become very dry in the Fall; and the winds blow almost continually from the Southwest in the latter part of Summer and Fall. This mellifluous influence, in conjunction with our excellent fruit soil, enables us to produce apples unsurpassed in weight, beauty, and flavor. This section seems to be favorable to the production of new varieties, which the Report of the Missouri State Horticultural Society, at their last meeting, fully shows. We have some that far eclipse the Baldwin and Newtown Pippin in their palmest days. *The most delicious fruits of the Old World are grown in the Barbary States, over which the tempered winds of the desert blow; and our Lord planted the first garden of fruits upon the Assyrian hills, watered by the Euphrates, over which "spicy breezes blow from Araby the Blest. So the Valley of the Missouri, bordering the dry and airy [arid?] Plains of the West, will yet produce the most delicious fruits of America.*

Comment is hardly in order, nor will "swearing do justice to the subject." It beats "dry mountain winds" and brackish water"—in pious infamy, at least. What do you think, orchardists of Kansas, about this "Desert" of ours being "now covered with nutritious grasses?" How do you like that beautiful comparison, when the names are changed so that [instead of reading, "The most delicious fruits of the Old World are grown in the Barbary States, over which the tempered winds of the desert blow," it reads, "The most delicious fruits of the New World are grown in the State of Missouri, over which the tempered winds of the Kansas Desert blow?"

The sentence, as written and as changed, is identical in meaning, and was so intended by the writer, as shown by the closing sentence of the paragraph: "So the Valley of the Missouri, bordering the dry and airy [arid?] Plains of the West will yet produce the most delicious fruits of America."

As the Barbary States, over which the tempered winds of the Great Sahara Desert blow, produce the most delicious fruits of the Old World; so Missouri, over which the tempered winds of the Desert of Kansas blow, will produce the most delicious fruits of the New World! So saith GEO. S. PARK, of Parkville, Platte county, Missouri, in our (?) new organ! This is, indeed, a strange, if not "a good send-off" for a Kansas Pomological paper!

Recognizing the modesty of the Kansas Editor of the *Pomologist*, which allowed this venom of jealousy and hate to go out coupled with his name, without antidote or protest, we respectfully ask the Editor-in-Chief to tell his readers, that "the American Desert, now covered with nutritious grasses," reserved unto itself enough "tempered winds" and "mellifluous influences, in conjunction with our excellent fruit soil," to produce apples "unsurpassed for beauty and excellence" by any produced in the United States in the year 1869; this fact being established by a National Contest, at Philadelphia, September 15th, last.

We beg him to say, further, that the same "Desert," "mellifluous influences," "tempered winds," and happy "conjunction with our soil," enabled Kansas to present fruit at the Platte County (Mo.) Fair, in September, 1869, that took the *First Premium*, over the "weight, beauty and color," of those produced in the modern "Araby the Blest!"—even

over the fruit garden, not "Lord-planted," at Parkville, Missouri.

In a word of sober earnest, we can inform the conductors of the *Western Pomologist*, that the time for such mischievous, wicked twaddle as this to go unrebuked, is past. No man better than GEO. S. PARK knows that farms, orchards and vineyards, in Kansas, put to blush the slipshod, neglected culture of Missouri. He knows well that his own county does not produce, and will not in 1870 produce, one-tenth what it did in 1850. He knows that the new variety of apples, of which he speaks, was taken from a Kansas orchard to Missouri. He knows that the present ratio of progress upon the respective sides of this "long ribbon of water," will put the historic "American Desert" east of the Missouri river, instead of west; and the sooner the *Pomologist* learns the same facts, the more pleasant and profitable it will be for it.

KANSAS IN THE LIGHT OF COMPARISON.

The January Report of the Department of Agriculture contains a table, showing the yield per acre of the principal crops raised in the several States, in the year 1869. This table is an interesting study, as it presents each State in comparison with every other one, and affords the most conclusive evidence of producing merit in each of the leading crops.

We cannot give an opinion of the approximate accuracy of these statistics. We all know they can not be absolutely correct; but they are, no doubt, reliable as any that can be secured through volunteer agencies, and if not correct in fact, are so as a means of comparison; inasmuch as they all come through channels of the same character throughout the country.

Now, let us see how Kansas stands the test of comparison, by Commissioner CAPRON'S carefully collated statistics, as an Agricultural State.

WHEAT.

This embraces Winter and Spring varieties, and refers to the aggregate product of both. Kansas, 18.5 bushels per acre. California alone exceeds this, and yielded 20.7 bushels. The average yield of thirty-two States was 13.5 bushels per acre, or about thirty per cent. less than the yield of Kansas.

WINTER WHEAT.

This is given in a separate item, in twenty-seven States, Kansas leading the list with 15.1 bushels per acre, her highest competitors being West Virginia and Kentucky, each of which produced 11.5 bushels. The average yield of twenty-seven States was 10.2 bushels to the acre—only two-thirds that of Kansas.

RYE.

Kansas produced 25.5 bushels to the acre. The yield of California was 31.5, and it is the only State surpassing Kansas. Nebraska is next—19.4 bushels. The average of thirty-two States was 14.6 bushels per acre—showing the yield of Kansas to be forty-six per cent. above the average.

WINTER RYE.

Kansas yielded 12.9 bushels per acre of this grain, and was only beaten by Nebraska, which gave 14 bushels. Thirty States are represented, with an average yield of 10.1 bushels; or twenty-two per cent. less than the yield of Kansas.

BARLEY.

This embraces the entire product of Winter and Spring varieties. The product of Kansas was 30.6 bushels to the acre. California produced 35.3, and is the only State ahead of Kansas. Nebraska, however, is close upon her heels, having yielded 30.2—only four-tenths of a bushel less than Kansas. The average yield of twenty-five States was 23.2 bushels per acre, leaving the yield of Kansas twenty-seven per cent. above the average.

WINTER BARLEY.

Yield of Kansas, 11 bushels per acre; Georgia being the only State above this, it yielding 11.7 bushels. Only sixteen States are represented in the product of this grain, the yield being very uniform, with an average of 9.9 bushels per acre, or ten per cent. less than the crop of Kansas.

OATS.

In this important grain Kansas heads the column of thirty-four States, with a yield of 42.1 bushels per acre; the lowest being 13 bushels, and the average of the whole number of States 27.6, or *thirty-four per cent.* less than the yield of Kansas.

CORN.

Here, again, Kansas asserts her supremacy, and stands at the head of thirty-four States, showing a yield of 48.4 bushels to the acre. The next highest is Nebraska, with 42.2 bushels per acre, and California, 41.4. No other State touches 40 bushels. The average yield of the thirty-four States combined was 26 bushels per acre, or *thirty-eight per cent.* less than the yield of Kansas.

BUCKWHEAT.

Few would anticipate a report of this crop flattering to Kansas. It is, at best, very capricious, and of uncertain maturity. Hot weather at the period of bloom will blast it, and the slightest frost kill it. It must, therefore, be sown at a period most likely to carry it safely through the gauntlet of heat and cold. Our impression has always been adverse to it as a crop for Kansas, on account of the hot weather incident to midsummer—a time when buckwheat would have to be maturing, if early sown, or put in for early Autumn maturity. It is little cultivated South, ten States being unrepresented in this report, and Tennessee only giving 6.2 bushels to the acre; yet, strange to say, North Carolina gives one-third larger yield than any other State, viz: 30.2 bushels per acre, against 22.5 in New Hampshire. The yield of Kansas was 18.5 bushels, against an average yield in the twenty-three States of 16.0, and with six States above her.

IRISH POTATOES.

Kansas stands fourth in the yield of potatoes, at 149 bushels to the acre; California yielding 165, Vermont 160, and New Hampshire 150. Virginia and Tennessee are the lowest, each standing at 50 bushels; the average of thirty-three States being 103.5, or *thirty per cent.* less than that of Kansas.

SWEET POTATOES.

In this crop we are only excelled by California and Texas, which yielded 153 and 130 bushels to the acre respectively, against 110 bushels in Kansas. The lowest in the list of twenty-two States is South Carolina, 33 bushels, and the average of the combined States 84 bushels—nearly twenty-five per cent. less than that of Kansas.

HAY.

Thirty-two States are embraced in the Commissioner's report—Iowa at the head, 1.86 tons per acre; Missouri next, 1.77; and then Kansas, 1.75; Maine and Massachusetts being the least, and yielding 0.91 and 0.99 tons to the acre, respectively. The average yield of the thirty-two States was 1.41 tons per acre, or twenty per cent. less than Kansas.

Perhaps in no other product does comparison do Kansas so great injustice, as in the yield per acre of hay. To put prairie against cultivated grasses, is like comparing a savage with a civilized being. When Kansas meadows are covered with clover and other tame grasses, the yield will be immensely increased in weight per acre, and place her pre-eminently ahead of all other grass-growing States. At least, this we believe.

We have not exhausted this interesting subject, but have tried to condense and present it in a manner to convey a just impression of the capabilities of our soil, without prejudice to less favored localities. It embraces a class of facts that are sought with avidity beyond the borders of our State, and will, no doubt, be read with satisfaction at home.

FARM NOTES—NO. XIV.

An Apology—Spring Preparations for Work—What should be done with the Corn-Stalks—Sowing Spring Wheat—Varieties of Wheat—Broom Corn—Plan for a Kitchen Garden, and what to Plant in it—Drouth-Creakers—Deep Plowing, and the Reasons for it—Corn Planting and Cultivating—How Horses and Cattle should be Fed and Treated in Spring, &c.

“BY CARLOS.”

Perhaps we owe friend NORMAN an apology, for appropriating his ideas in advance of publication; but, really, it was unintentional, and we trust that

the “genius” who directs our pen will prevent a like mishap in the future.

With the coming of March commences the busy season on the farm. If the fences are in repair, and a good pile of wood hauled for Summer use, the farmer has got an even start; otherwise, he is apt to be crowded. If the stalks left standing last Fall are not cut, it should be done at once. Just here arises a difficult question: What shall be done with the stalks after they are cut? If you plow them under, in ground you intend to plant to corn, they are very much in the way in cultivating the corn; if you burn them, which is, perhaps, the most general custom, there is a great waste. I would suggest, if the farmer has the time, the better plan would be to haul them near the barnyard, and pile them, layer about, with barnyard manure. I am satisfied that in this way they would pay a handsome profit.

Ere this paper reaches the farmers, the Spring wheat should be in the ground. There will be some, though, no doubt, who have not sown their crop. My own observation has been in favor of the “Canada Club.” Through the courtesy of Commissioner CAPRON, I received a package of the Arnautka Spring wheat. When we gathered it, we found four distinct varieties. I am not prepared to condemn the Arnautka, but hardly think it will be an acquisition to be sought after. In fact, I might express the same opinion of all Spring wheat, where the yield of Fall wheat can be obtained that we see here every year. I don't believe that Spring wheat manufactures “chinch bugs,” but I do believe that if there are any in the country you are sure to find them on the Spring wheat.

I am not conversant with the culture of broom corn, but every Agricultural journal I have picked up lately contains from one to a dozen advertisements of the seed to sell. I am afraid the dealers are tempting our cupidity, with the fact that the past season brush commanded in the St. Louis market the large sum of two hundred and fifty dollars a ton. At that price, if we all understood its culture, it would do to cultivate it; but as that price will hardly be reached again in a life-time, I doubt if it would pay for those of us who do not understand its culture, to attempt it. It is well enough to try a small patch; but I would fear to make it the leading crop. It is a very good plan to scatter a few seed through your corn, as it makes excellent “binders” for shock corn.

A correspondent asks me to name a “supply” for the kitchen garden; said garden being one hundred and thirty feet east and west, by two hundred and seventy feet north and south. From his description I judge that the house stands south of the garden. If I knew the tastes of the family to be supplied, I could answer better; but taking it for granted that they like everything that is good, I will give what my choice of assortment and quantity would be, for a garden of that size. It falls short of one acre, but is large enough to raise a bountiful supply for a family of six or eight.

Commencing at the north side, I would plant six rows of Breese's Prolific, four rows of the Climax, and two rows of Peachblow Potatoes. Next, a row of Lima beans; next, five rows of Early Rose potatoes; next, a ridge, broken in the middle for a walk or passway, one end planted to parsnips, the other to beets. Next, I would plant six rows of sweet corn, with one bean to every hill; next, three rows of bunch beans; next, four rows of late cabbage, two of which should be the Marblehead Mammoth, one Stone Mason, and one Winnigstadt; next, one row of Jersey Wakefield, and one of Early Schweinefurth; next one row of cauliflower; next, a row of watermelons and muskmelons; next, three rows of sweet potatoes. Here I would have a walk east and west, and one also dividing the remaining part of the garden, north and south. We have now disposed of about one hundred and twenty-five feet of the length. In the remaining part I would have a bed of potato onions, six feet wide by thirty feet long; a bed of onion sets, or buttons, same width

and twenty feet long. This east of the walk. From the east and west walk, and next to the east fence, I would have a bed of sage, with a little parsley at one end. Next to my onions, I would have a bed of celery across the east part of this south half of the garden. Using some of the dwarf varieties, next to this, a row of New York purple egg-plant; next, a row of “mountain sweet, squash peppers” (for mangoes). Next, I would have two rows each of Sim's Cluster and Keys' Prolific tomatoes. The remainder of the east half I would lay off in beds for lettuce, radishes and spinach.

Commencing again at the north side of the west half of the south half, I would have one row each of Summer Crookneck and Hubbard squash. Next, I would have two rows each of Tilden and Fegue Island tomatoes; next, two rows of salsify; next, a row of butter beans; then two rows each of Dan O'Rourke, McLane's, “Premier,” and Champion of England. The remainder of this part appropriate to asparagus, rhubarb, horse radish, and specialties, such as caterpillars, vegetable worms, &c.

With the exception of the one row of Lima beans, and the ridge, all of the north half can be plowed both ways, and the beans could be moved to the north side of the garden. Some may prefer different varieties of certain vegetables; but, all things considered, it is about as good an assortment as we could recommend.

Everybody is predicting dry weather this Summer. It may or may not be true; but it will be safe to sink the plow two or three inches deeper than common. If you have plowed six inches heretofore, go nine this Spring; if you have broken nine inches before, make it the even foot this year. This, of course, applies only to fallow ground. It will take a little more time to break twelve inches than it does to break six inches; but I would rather have five acres of corn broke a foot, than ten acres only six inches; provided it should be a dry season, or, for that matter, a wet one either. But deep breaking is not the only thing required. The plow must be kept running. “Never let up until your corn is nearly in “roasting ears,” with this exception. During the extremely dry weather that we sometimes have, it is not prudent to plow between the hours of ten and four, when the corn becomes well advanced; that is, about the time it shoots, from the fact that a little disturbance about the roots, when the air is hot and dry, is apt to check the growth, and even destroy the plant.

Don't count the number of times you plow the corn, and consider it “tended,” when you have “gone over” it four times, as is too much the case. Try, rather, to see how many times you can plow it, without material injury to your horses. Too many persons seem to think that the prime object of plowing corn is to kill weeds. Never was greater mistake committed. The prime object of plowing is, that the soil may breathe. In other words, because the fresh soil appropriates and conveys to the mouths of the plant the ammoniacal and other gases which pervade the atmosphere, and without which no plant can grow, no grain be perfected. Consequently, the more fresh ground we keep exposed to the atmosphere, the more of these gases do we convey to the plants, and the more moisture do we secure. We plow to kill weeds, not because they are weeds, but because they take up too much of these precious manures. Then, in the words of “Poor Richard”—

“Plow deep, whilst sluggards sleep,
And you shall have grain to sell and to keep.”

Cows expected to come in this Spring, need especial care and attention. If possible, give one feed a day of potatoes, carrots, turnips or cabbage leaves. Feed raw, for the relaxing effect upon the bowels. For farrow cows, giving milk, it is preferable, perhaps, to cook them; also, for hogs and brood sows. Sheep, more than any other animal, seem to appreciate vegetables. Feed liberally to all animals. Give horses plenty of exercise and pure water, and a mess of cut carrots twice or thrice a week tells well on their coats.

Complete all your plans for Spring and Summer work. See that the wife has sufficient help in doors. And, finally, during the busy season don't forget that the boys, and girls too, for that matter, need a breathing spell occasionally.

LIGHT IN A DARK PLACE.

Nurserymen may be innocently in error as to the true names of fruit. They may propagate and sell a fruit under a synonym, or even give it a local name, believing it a new variety. So long as this is done unintentionally, and after thorough effort to secure the correct and original name, if there is one, no one can call it a crime; but when the true name of a fruit is known, and dealers in the stock persist in representing it something else, for the purpose of honor or gain, it is a crime—a downright deception and fraud.

This confusion of nomenclature has been a prolific source of gain to dealers, and loss to purchasers. Old, well known varieties have, by accident or design, emigrated to remote localities, and there appeared under fraudulent aliases, to be sold at fabulous prices, as rare, new varieties. Not unfrequently the spice of romance has been artfully woven into the history of such fruits. They were found by some stump in a remote corner of SMITH'S farm, or came from an old Indian orchard. The more crooked the story, the plainer the road to success.

A remarkable instance of this kind is to be found in *McAfee's Nonsuch*, or *Large Striped Pearmain*. It is a large, fair apple, of good keeping qualities, and altogether desirable in the West. Just how it got from Kentucky to the Missouri Valley, is not clear; but that it retains all its distinctive features of make and merit, so marked as to place its identity beyond a question, is well settled.

This apple is found in the Indian orchards of Wyandotte county, and we believe also in Johnson county. From these it has been disseminated, subject to the christening of caprice or interest, until its names are as numerous as a Mormon's wives.

It is a notorious fact, that farmers in this State have bought this same apple tree under two, three, or more names, each time paying double price, because of the variety being new and superior,—and all from the same nursery. This is all wrong, and involves a responsibility not consistent with business honor, *somewhere*.

At the last meeting of our State Horticultural Society, great pains were taken to bring together conclusive evidence as to the identity of the apple known by the various names, "*McAfee's Nonsuch*," "*Large Striped Pearmain*," "*Missouri Superior*," "*Park's Keeper*," "*Park Apple*," "*Storrs' Wine*," "*Gray's Keeper*," "*New Missouri*," "*Nonsuch*," "*Vallandigham*," "*McAfee's Red*," "*Zeke*," &c. To this end, fruit of the various names was gathered from various orchards in this State and Missouri, including the "*Park Apple*," from Mr. PARK'S own orchard, at Parkville, Mo.

At the request of Dr. HOWSLEY, of this place, who had given untiring effort to the subject of nomenclature, a committee was raised, with Dr. JOHN A. WARDER as its chairman, and instructed to examine and report upon these various named specimens of apparently the same apple.

That committee, after a most careful examination, reported them all one and the same variety, identical beyond a question or doubt; thus confirming what was long before the fixed belief of all who had given the subject the least thought.

It was agreed that the apple was no more nor less than the *Large Striped Pearmain* of WARDER'S American Pomology, or *McAfee's Nonsuch*, as Dr. HOWSLEY claims, with much force of argument, that it should be called. But, as before stated, the apples were all shown to be one and the same variety, and that, too, so clearly as to awaken no controversy in the committee or Society. Nor has the report, the substance of which has had a wide circulation, ever elicited the shadow of an objection, so far as we have read or heard.

Up to that time, the claim of GEO. S. PARK, Esq., that the "*Park*" apple was a distinct and separate variety from the "*McAfee's Nonsuch*," might be heard without any known dishonor to him; but we do insist upon it, that his adhering to the fragments of this exploded humbug still, and still selling the

trees at double price, under the claim that they are what the best Pomological authority in the United States says they are not, is hard to reconcile with the plain rules of business honor, which forbid false pretenses.

That Mr. PARK does so cling to his broken idol, will be seen from the following, which he writes to the *St. Louis Journal of Agriculture*, in answer to the inquiry of "C. S." if the Missouri Keeper and Park's Keeper were the same as the *Missouri Pippin*. He says:

I would say that, in my opinion, Park's Keeper and Missouri Pippin are distinct apples. Park's Keeper, now called "*Park*," I discovered in this way: I was anxious to get an apple that would ship to Fort Benton in the Spring and early Summer, in good order. A gentleman informed me that he knew of a tree in Clay county just the thing, as they had, in early days, shipped some by keel-boat to Yellowstone, and they arrived late in Summer, sound. I sent for some of the fruit and scions. I kept them till July, and found they retained their flavor. I propagated them without name, knowing I had just the apple I wanted. Some thought it the *Large Striped Pearmain*; but Dr. WARDER says it keeps till February—I have heard of some being kept till March, with great care. Now, our apple resembles it some in appearance, but differs in wood growth, and keeps till July. It seems to me if the *Large Striped Pearmain* had been such a keeper, they would have been dull not to have found it out.

A little local nursery in Clay propagated some, and the Wyandotte Indians got some in Kansas; and Mr. GRAY says he ate some on the 4th of July, at Vicksburg, having taken them down with him. We sell them at double price. People inquire for Park's Keeper—hence the name.

In the February *Western Pomologist*, Mr. PARK reproduces from the Report of the Missouri State Horticultural Society, with full approval, the following:

The following new varieties of long-keeping apples were exhibited before the Missouri Horticultural Society, by GEO. S. PARK, of Parkville, Platte county, Missouri:
Park's Keeper—An excellent variety; retains its flavor till June or July. A fine large red apple, resembles the *Large Striped Pearmain*, the *Missouri Superior*, and *McAfee's Nonsuch*, but is found to keep longer. Is valuable for commercial orchards. Sells for fifty cents a bushel more than the Genetin.

It is due to the Society from which this comes, to say that its meeting occurred at same time as ours, and consequently it was not then in possession of the facts therein brought out.

We much fear that the milk in this cocoanut is in the italicized sentence, "*We sell them at double price*," and beg to assure our readers that they need not pay any more for the "*Park's Keeper*," than for the *Large Striped Pearmain*, *McAfee's Nonsuch*, "*Missouri Superior*," "*Park's*," "*Storrs' Wine*," "*New Missouri*," "*Nonsuch*," "*Vallandigham*," "*McAfee's Red*," or "*Zeke*," can be bought for, as either one of them will bring the same result in fruit.

CORRESPONDENCE.

EXPLOSIVE COAL OILS.

Cause of Explosions—The Different Qualities of Oil—How to Test Burning Fluids—Poor Oil will Generate an Explosive Gas—How to Produce and how to Prevent Explosions—Lamps should be Filled Every Day.

BY PROF. E. F. NUDGE.

EDITOR FARMER: Articles frequently appear in the papers relating to the explosive character of our coal oils. Numerous accidents prove the importance of the subject; yet, most of our readers do not believe that it is *not the oils, but gases formed from them, which explode*. This fact, however, renders the use of poor oils none the less dangerous. We have never yet found an oil which would explode. Let any one try it, by taking any of the oils sold for use in lamps, and pour a little into a saucer, and apply a burning match. If it is good oil, such as we should advise our friends to buy, it will extinguish the match, even when heated to 105 or 110 degrees. If it is poor oil, it will take fire at that temperature, but will not explode, even if many degrees hotter; and the worse its character for the lamp, the more freely will it burn.

If the poorer oils—those that take fire from a burning match at a temperature below 110 degrees—are allowed to stand in a partly filled can, the whole upper portion will gradually become occupied, at ordinary temperatures, with a gaseous vapor, which will explode. Herein is the danger. When a flame approaches this gas, it will explode with such violence that it frequently shatters the vessel, fires the oil, and scatters it in all directions.

Even the best oils, when heated above 100 degrees, will, more or less rapidly, change to gas; and

this gas, mixed with air, is always explosive, like that from the poor oils. The upper portions of all our lamps, after burning a short time, become filled with this explosive mixture; and should the tube be unscrewed while the lamp is lighted, an explosion will take place. If there is much oil, and, consequently, little space for gas, the explosion may be harmless; but if there is but little oil, there must be more gas, and the lamp will be shattered and the result disastrous. It will be seen, therefore, that the more oil there is in our lamps, the less space there must be for gas; and if we burn them only when nearly full, there is least danger. We have known many people to take the opposite course, and burn their lamps with as little oil as possible. This is highly dangerous.

We advise our friends, who wish to avoid risk, to fill their lamps daily, and not burn them, in any case, when more than half emptied. Above all, never bring an open lamp or can within three feet of a flame.

State Agricultural College, Manhattan, March, 1870.

WINE-MAKING.

What a Thinking Woman and a Mother Thinks of the Manufacture of Wine—Its Use Creates an Appetite for Alcoholic Liquors—It Makes Drunkards—It is only Evil, and that Continually.

BY "HARRIET."

EDITOR FARMER: I see THE KANSAS FARMER is still without an advocate for the flower-garden; but the last number contains an article from a warm and hearty advocate of a reform seriously needed, and of far greater importance than flowers or flower gardens.

It is cheering beyond expression, Mr. Editor, to see the courageous stand you have taken against the wine-making, so greatly on the increase all over this promising land; and the great wonder is, that there has been no public expression of fear as to the result so soon to follow. For, how can the question, "Will the Coming Man drink wine?" be answered except in the affirmative, when we count the hundreds of acres already planted to vines?

Time is hurrying our boys on to manhood, and the juice of the grape into the cellars of the wine-makers; and from all these temptations, so widely spread around, how are we to protect the "Coming Man?"

A great deal has been said and written to prove that drunkenness does not exist in the wine-making districts of Europe. Committees have been appointed, and sent over to make observations and report; individuals have made it a special object of their close attention; and some worthy divines, even, have reported no drunkenness where wine is plenty and cheap; while other close observers have discovered drunkenness in all its stages, except the delirium which the drugged whisky of this country produces. One wine-maker said to me, in reply to a remonstrance against wine-making, that, "If our boys want liquor, they will go to the saloons and get it." God forbid, and forever bar their entrance to those doors! But will not the youth of the land see the inside of saloons sooner, if allowed the free use of wine at home? Is there any one who really believes that wine of any kind, however pure, will not beget a taste for stronger drink? Is there a father or a mother to be found, who would be willing that their boy of fifteen or eighteen years old should commence drinking pure wine, to test this vexed question?

There are women who, in dust and ashes of repentance, have traced the drunkenness of their sons back to the time when, boys at home, they used freely simple currant wine.

A resident of Kelley's Island says wine-making has been the curse of the island; and it is a fact, slowly creeping out, that their yearly crop of grapes is also producing—what it does wherever manufactured—a crop of drunkards; for, where there is one who will but taste, there are ten who will drink to excess. It is useless to plead moderation. It is not true, that it will do no harm; and, as the physical body does not require it, why make it at all?

We do not utter these pleadings for the middle-aged man, whose habits are already formed; but for our boys, who are yet unconscious and ignorant, God help them, from the misery that may be theirs. If I should discover in my boy's fresh young face any one of the many unmistakable signs of dissipation, O! would the sun ever shine as brightly again, or the flowers ever be as gay or fragrant? Would not the light of life be put out, and my joy be gone altogether?

This life is a constant warfare, at best; the evil influences striving to overpower the good. And here is an enemy for which mothers must be ever on the alert, and by precept and example, help to steer our youth clear of and away from the breakers ahead.

The prospect is discouraging; but we will hope that Kansas will be the first State, as she has been in other important movements, to raise grapes to sell as grapes, and never as wine.

Wyandotte County, Kansas, March, 1870.

Our Corner.

We Will Tell You.—Mr. SNYDER, in a communication that appears elsewhere in this paper, calls loudly upon men who advance theories, or assert facts, for the practical evidence of actual experience upon which rest their claims. We hope his call will be heeded, and satisfactory answers given to his pertinent queries.

We will tell Mr. SNYDER why fifteen New York Pippin trees were put down in our list of varieties for an orchard of one hundred trees. It was simply because such an orchard will yield a surplus of apples over the wants of its owner, that must be marketed, and should not only pay for all used at home, but a good interest upon the labor and investment of the whole orchard. The New York Pippin comes into earlier bearing than almost any other apple; it is a prolific and persistent bearer; its fruit is handsome, and much sought for this reason; and, so long as men will determine the value of an apple by their eyes, in preference to their palates—and that will be longer than any of the present generation will live—it is both prudent and profitable to set fifteen per cent. of a one hundred tree orchard to New York Pippins.—*Ben. Davis.*

Not All There.—In calling attention to the very excellent article upon "Wine Drinking," from the pen of "HARRIET," it may not be improper to say that what she said is not all there. A private note accompanied the communication, in which we were criticised severely upon our position that an Agricultural Society has no business with the subject of temperance, and told that our sentiments upon that subject should be declared at all times; and that, under all circumstances we should be able to "give a reason for the faith that that is in us."

We can afford to differ with "HARRIET" upon this point, inasmuch as we are in perfect harmony of sentiment upon the vital question at issue. Every word of warning she utters against the monstrous theory of a universal alcoholic beverage, in wine so palatable to the undepraved appetite of women and children, and so popular in use as not to cause fear or offense to any, as a prevention of intemperance, has a hearty support from us.

It is our deliberate judgment, formed from careful, unprejudiced observation, that it would be far better for us to abolish all light, fashionable wines, and weak, tempting mixtures, that are drunk at the family table, fashionable entertainments and club rooms, and leave the beverage of the confirmed drinker untrammelled and free from any restrictions save its own repulsiveness, than to destroy the latter and leave the former.

Who would think of exterminating the race of men by beheading every old man, and leaving children to grow up unmolested? Yet, this would be just as sane as to attempt the extermination of the

race of drunkards, by taking away the distilled beverage of the confirmed old set, and leaving a wine-fed multitude of children to grow up like degraded. You can no more make a drunkard at once upon whisky sold at a bar, than you can create a full-grown man, without waiting the slow process of growth. As the child is the father of the man, so is wine the parent of stronger drink. The child and the wine united are the legitimate, if not necessary, source of drunkenness.

Believing all this as firmly, and feeling it as deeply, as any one can, in relation to the duties and responsibilities of life, we are still unable to see how any good can come of lugging it into an Agricultural organ or organization. Diversity of opinion upon moral or religious subjects need not, and should not, divide us in the pursuit of light and knowledge upon the methods of husbandry. We have, therefore, entered our protest against its consideration by the State or any other Agricultural Society; and shall not again refer to the subject in these columns, unless in pursuance of the purpose we have declared.

Concluded.—No apology is required for the large space given to the exercises of the Agricultural College Institute. We are satisfied that it will be read with interest and profit, and that Mr. CUSHING will be kindly thanked by all our readers for his faithful report.

Spring Fair and Stock Sale.—The Doniphan County Agricultural Society, whereof B. O. T. DRISCOLL is President, and a host of liberal, energetic men are members, has issued a bill for an "Easter Monday Fair and Stock Sale," to be held at Troy, April 18, proximo. Premiums of from five to fifteen dollars are offered upon stallions, bulls, boars, jacks and bucks. Farm implements may be put on exhibition. These Spring meetings may be made attractive, if properly managed; and not only attractive but valuable, and we look with interest upon this pioneer effort. We learn that some fine stock is to be brought from Kentucky to this Fair. If nothing unexpected intervenes, we shall report the result from personal observation.

What News!—The following news item, from the New York Ledger, will vindicate the reputation of that journal as the great embodiment of written fiction, and show it consistent in making its news items as fictitious as its love-twaddle stories:

While every other part of the country is rejoicing in the mildest weather known for a century in January and February, Kansas is having it colder than usual, the Kansas river being now frozen over for the first time in years.

If Dexter ever makes as good time in trotting, as the author of this item has made in lying, 2:17½ time will become slow traveling. The fact is well known, that Winter in Kansas this year has been Winter only in name, our streams, including the Kansas river, not closed enough to give us a half supply of ice.

The Society Not to Blame.—Among the *conundrums* of Mr. SNYDER is the question, why the State Horticultural Society has confined itself to Leavenworth and Douglas counties, &c. It is true, that the Society has been State only in name, and that nearly all its boring has been done with the same set of augers; but who, more than Mr. SNYDER himself, is to blame for it? The Society was organized three or four years ago, and opened its doors to all. For two years we have appealed most earnestly for attendance at its meetings and active interest in its proceedings, from the whole State. These appeals have had an unsatisfactory response, so far as we have seen, at their meetings. It was our judgment to change officers this year, and place the responsibility on new shoulders. The majority decided otherwise, and we are satisfied, and do not see what right those who did not attend have to complain. The next meeting will be at Manhattan, where we hope to see friend SNYDER, and a hundred others from remote parts of the State; enough to remove the objection implied in the question, by making the Society what its name imports.

A Meteorological Report for February, 1870.—Prof. B. F. MURPHY, of the State Agricultural College, Manhattan:

Average of the Thermometer for the month.....	34.00
Maximum height (Feb. 13th, 3 P. M.).....	69
Minimum height (20th, 7 A. M.).....	3
Average of the Barometer, inches.....	30.000
Maximum height of Barometer, inches.....	30.100
Minimum.....	29.100

One day entirely cloudy; none entirely cloudless. There were six days on which there were slight dashes of rain and snow; but, for the whole month, there has not been enough fallen to measure in the rain-gauge. Since the 10th, the farmers have been almost constantly plowing. Only three days on which farm work could not be performed.

BOOKS AND PAPERS.

Music.—Parents cannot too fully appreciate the value of music, vocal or instrumental, in the family. It strengthens the bonds of affection, elevates and refines the feelings, besides furnishing an endless amount of amusement, and rendering home the most attractive place. No household can afford to be without some good musical monthly. Below we give notice of some of the leading publications:

Howe's Musical Monthly contains in each number about \$6 worth of first class piano music and songs. No. 7, for Feb. has twelve instrumental waltzes, polkas, quadrilles &c., and eleven songs. Amongst the former the Cuckoo Polka is worth the price of the number. Published by ELIAS HOWE, 103 Court Street, Boston. \$3.00 per annum, or 36 cents per number.

PROGRESS OF IMPROVEMENT IN CHEROKEE CO

BY S. BROWN.

EDITOR FARMER: Our county is fast filling up with immigrants, and improvements are progressing in a very satisfactory manner. A railroad has been located to the center of the county, the grading is nearly completed, and the trains will be running by May or June next. This will place us in direct communication with all the Eastern cities, and give an impetus to trade and immigration. Government land is abundant, and claims can be obtained on favorable terms.

Crops were good in this county last year, considering how new the country is; and there is now sown a large quantity of Fall wheat, which looks well. Farmers are now plowing for Spring crops, which will be very large. The Winter has been dry, and the ground is in good condition for plowing. This county is good for stock-raising, as it borders on the Indian Territory, where a farmer can buy stock almost the whole year, graze them during the Summer in the Territory, bring them home in the Fall without trouble or long driving, feed through the Winter, and drive them north to a market in the Spring.

Fly Creek, Cherokee County, Kan., March, 1870.

WHO COMES NEXT?

Rapid Growth of Fruit Trees in Southern Kansas.

BY LEROY DODGE.

EDITOR FARMER: I noticed in the January FARMER, an account of some peach trees raised by G. T. LOWE, Secretary of the Salina County Agricultural Society, one of which he says, "measured one inch in diameter, at the ground; from the ground to the top, thirty-nine inches; from top of ground to the end of tap-root, twenty-nine inches; total growth in one year or season, five feet eight inches." He asks: "Can you beat that anywhere in Kansas, or any other State?" We think it can be beaten in the Neosho valley. We have five trees, one inch in diameter, that measure fifty-five inches from the ground to the top. I have over twenty-five that will measure fifty inches from the ground to the top, and over three hundred and fifty that will measure thirty-nine inches and over, from the ground to the top.

These trees were grown from the seed in the year 1869, and are still standing in the nursery rows, two miles north of Ottumwa.

Ottumwa, Coffey County, Kansas, February, 1870.

The wretch who can stand in a pair of slippers worked for him by his wife and scold her, is a brute who deserves to have the gout in both feet.

