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THE CHEAPEST HARVESTER.

If we understood Mr. Dan Clark correctly, in his late communication on the subject of harvesting machinery, he asserted that the cheapest of all harvesters were the cradles that cut down the grain twenty or more years ago. At that time we were neighbors to Mr. Clark and there were no other harvesters known. We sweated and toiled, cutting and binding the grain, and when we were done the cradles were hung up for future use, and with good usage one lasted many seasons. It is very probable that he is correct in asserting that no machinery has reduced the cost of harvesting wheat, since the time when the cradle was supreme, but machinery has enabled us to make the most of labor power, and clear away the harvest in shorter time, even if not at less cost. Within twenty-five years' time the operations of the farmer have changed wonderfully. He has learned the tricks of machinery, and every farm has to have mowers, reapers, horse-rakes, threshers and every patent thing imaginable. All have to be replaced every few years, for very few preserve farm machinery by sufficient care, and constantly something new and better appears and progressive farmers must have the best.

Perhaps we speak in qualified terms for we know it must hurt some tender people's ears to read heavy; perhaps our farmers spend occasionally more than they can afford for farm machinery. They need to economize in the light of present farming prospects, and should make old machines last their full time, and make as few machines as possible do the work of a neighborhood.

The idea we intend to present is, that Mr. Clark is correct in intimating that farm machinery has not lessened the cost of harvesting, and to ask if any person could count up the cost of his harvesters, including interest and repairs, and so estimate the actual average cost per acre of reaping grain. This would be an interesting inquiry, and can be arrived at by taking the cost of a machine, adding interest and repairs for the time it lasts, and the expense for all harvest work of men and horses in connection with it, oil, fixtures, etc., so as to give a total of expenses for so many years, to be divided by the number of acres harvested. Such an inquiry, well answered would be a matter of general interest, and might possibly result in showing that sufficient economy is not practiced in respect to the use of farm machines.

GRAIN PROSPECTS IN THE UNITED KINGDOM.

As will be seen by the facts gathered by a prominent Chicago journal, and published in the dispatches this week, the grain crops of the West promise well, and the wheat surplus will be immense in comparison with former years, through the United States, and this must have its effect upon the European markets to keep down the price. Of course we do not know what may happen to affect the harvest of the world within the next three months, but the present outlook is for an immense yield and an increased surplus. Our own continent forbids all fear of famine in the world, and the over-production that is apparent here insures that prices will rule low, another year, if present appearances are realized. We cannot expect such low freights for the Columbia river for the year to come as we have had for the year past.

In the dispatches published May 10, in the S. F. Bulletin, we find this:

CHICAGO, May 17th.—A Times' London special says: The Times' correspondent to-day publishes an interview with several Norfolk, Lincolnshire and Yorkshire land-owners, who say that farmers are failing right and left, which failures are only known locally. Many landlords, after reducing rents, cannot get tenants. Several large owners are about to take their farms and work them themselves. Several great Scotch landlords have reduced rents 20 to 30 per cent. To-day the Prince of Wales's agent in the Duchy of Cornwall gave notice to his tenants that in consideration of the present depressed state of agriculture, a remission of 20 per cent. from the rents for a period of 3 years would be made. This is owing in part to bad harvests, but chiefly to the vast food importations from America.

This explains the situation of things abroad caused by great food importations from the United States. How will it be, another year, when the United States will have, in all reasonable prospect, a much greater surplus to send abroad? We don't wish to croak, but we do wish to put every farmer on his guard, so as to avoid all expense possible, for economy is just now as needed as industry, to make the farmer's career a success.

A correspondent writes that the cause of the continuous rain is "because the planets are in perihelion." That's so; and it has nothing to do with it. Couldn't we have it to "perihelion."

Read Dr. Keck's ad. in this week's paper. He makes some wonderful cures.

APPLE TREE LICE.

Mr. H. C. Shattuck, who lives on the Powell Valley road, eleven miles from Portland, shows us a branch of apple tree crowded thickly with lice. These resemble the cabbage lice that infested Oregon a few years ago and seemed to be very destructive, for he informs us that young apple trees set out three years ago this spring have been killed by them. They appear to suck the sap out of the leaves and buds and the foliage crumples and looks withered and then dies. The lice appear to be dying and he fears that whole orchards will be destroyed. Orchards on the east side of the river, many of them, appear to be affected the same way. We shall be glad to hear from experienced fruit growers what their opinion is of this louse, and what means can be taken to destroy them or prevent their ravages.

Since writing the above we have conversed with Mr. P. F. Bradford, who, though only a few years in the orchard business, has planted very extensively and has been a very careful observer. He says that he saw where some person writing from Oswego, Oregon, to the New York Times, described the louse and asked information, but the answer was that the description was not sufficiently accurate to enable them to form an opinion. Bradford says that he found that 130 apple trees on his place, were affected by the same lice, which made their appearance last year, without proving destructive, but left the trees literally covered with small nits. He was satisfied that they would destroy the trees, so he procured lye, made soft soap, and used a strong solution to wash every tree, bodies and limbs, and the consequence is they are free of lice. The same remedy is open to all, and if orchards are worth saving the trees can be saved in this way. There is some danger of doing harm to buds if strong lye is used, and yet it is necessary to have the soap strong enough to destroy the nits. Where trees are large the way will be to use the solution with a hand-pump and thoroughly syringe the trees. We are told that trees sold by our nurserymen have in some instances been troubled with these lice. In case they have hatched it might be possible to kill them with strong soap suds, or by some sort of fumigation.

We repeat the request for information on this subject. It will be worth the attention of the Horticultural Society at its meeting next week.

Homestead Act.

We have received from Mr. J. A. Williamson, Commissioner of the General Land Office, the following in regard to the provisions of the act of Congress entitled, An Act to grant additional rights to homestead settlers on public lands within railroad limits, approved March 2d, 1879: First: That act provides that from and after its passage the even sections within the limits of any grant of any public lands to any railroad company, or to any military road company, or to any State in aid of any railroad or military road, shall be opened to settlers under the homestead laws to the extent of 160 acres to each settler, thus doing away in this class of entries with the distinction between ordinary minimum and double minimum lands, or lands held at \$1.26 per acre and lands held at \$2.50 per acre, which had existed under section 2,289 of the revised Statutes of the United States, so far as the double minimum lands may be found in even sections within the limits of land grants for railroads or military roads.

Second: The act further provides that any person who has under existing laws taken a homestead on any even section within the limits of any railroad or military road grant, and who by existing laws shall have been restricted to eighty acres, may enter under the homestead laws an additional eighty acres adjoining the land embraced in his original entry, if such additional be subject to entry, without payment of fees and commissions, and that the residence and cultivation of such person upon and of the land embraced in his original entry shall be considered residence and cultivation for the same length of time upon and of the land embraced in his additional entry and shall be deducted from the five years residence required by law, with the proviso, however, that in no case shall patent issue until the person has actually, and in conformity with the homestead laws, occupied, resided upon, and cultivated the land embraced in his additional entry at least one year.

Third: The Act further provides that should the person so elect he may, instead of making an additional entry, surrender his existing entry to the United States for cancellation, and thereupon be entitled to enter lands under the homestead laws the same as if the surrendered entry had not been made.

From Turner.

TERSE, Or., May 25, 1879. Editor Willamette Farmer: "If 'the clouds drop fatness' this spring, pure grease ought to run in the furrows, and the pigs get fat by simple contact with the soil. Here it is, the 25th day of May, and the low-landers with but half their crops in yet; while a screw is loose, or a belt run off somewhere in the weather's machinery; and another thunder storm passed over to-day. Surely this is an unusual season. If it don't stop raining before long, somebody will begin to swear sore."

The Bleakney Bros. have the frame of their shop raised and are even yet hopeful of seeing fine weather enough to get their roof on during the summer. Some little other building is awaiting fair weather; and business generally lags for the same cause. The weatherwise say that the "planets are in perihelion," (whatever that may be) which is the cause of the general cussedness of the weather. If so, why can't they get out of "perihelion," and give us a rest. The citizens here are "taking steps," (windy) to build a new school house—God knows we need one bad enough.

The usual meeting and disagreeing is being gone through with in customary form. The "site" is the bone of contention. An eligible site of two blocks is offered them gratuitously, but the usual pow-wow has not yet been expended, and the offer is therefore not accepted. After the captions one have exhausted themselves in the proper amount of jangle, we may expect to have a suitable school house.

Under-Draining Low Land.

ALBANY, May 20, 1879. Editor Willamette Farmer: With your permission I send you a few lines, as everything is blocked or closed up with the rain. This is one of the most wonderful seasons that has ever transpired in the State of Oregon. This is the 26th day of May, and the ground is thoroughly immersed and still raining, with little or no prospect of clearing. This makes twenty-one wet days out of twenty-six.

Last Friday I took a drive over the prairie fourteen miles, and I discovered many large fields plowed and ready for the seed, and the furrows standing full of water. After this week I think it will not be worth while to sow any more this season, but summerfallow and prepare the ground for the fall seeding.

One thing the farmers of Oregon need above all others, is I think of the greatest importance to us; that is, under-draining. When I say under-draining, I don't mean David Newson's kind of under-draining, that is a deep furrow plowed with a plow. This is very good if we can't do any better. But, sir, what we want is under-drains at least thirty inches under the ground. If our lands were now under-drained, the very moment it stopped raining we could go to sowing or plowing; whereas, the ground being full of water, we have to wait two or three days for the water to disappear. It would actually at this present time mire a horse to walk over the plowed ground. Is there no hope for Oregon to get a tile factory that the farmers can get their lands drained at a reasonable expense? This is a subject of the very greatest importance to the State of Oregon. Farmers, what do you all think of it? Let us hear from you all on this subject, and let us inquire what can be done. You talk about railroads and rivers, but this would be of more benefit to us than any railroad. One dollar apiece from one thousand farmers would start a tile factory that would supply all the State of Oregon with tiles, and I know you will agree with me that this would be a well-spent dollar.

I forgot to tell you we had last evening quite a thunder storm, and it rained pretty sharp for awhile.

Dark and stormy was the night. The rain is pouring down. The wind blows soft from south to north. The clouds are driving on.

The thunder rattles loud and long. Along the mountain side; While underneath the torrent plow, And down the valley glides.

The flood, the storm, the thunder belt, Are all designed the same; To teach mankind there is a God, And nothing made in vain.

J. J. F.

Bad News from Mill Creek.

Mr. L. M. Herren, writing from Turner's Station, under date of May 24th, says: "Our crop prospects are looking fine on the up-land. Grass is splendid, but the low-land is gone up this season, for the waters are up like mid winter. But some will sow oats as late as the 15th of June, on the bottom above here."

HOOD RIVER NOTES.

Editor Willamette Farmer: Farming most done. Great plenty of rain so far. Base ball fever quite contagious and malignant since the fire. Rogers' new flour mill will be on the "lift" soon. High water is making it quite damp for hay-makers. The turbine wheel for Lyman Smith's new saw-mill came Saturday and lumber will be cheap for cash. Fruits, excepting peaches, quite abundant; mildew still clings to that crop. E. L. Smith is grubbing and plowing for wheat, calculates to seed 100 acres this fall. Match game base ball with east side club and grand tossback tournament for a crown and purse on Saturday, June 7. Every one eats his own hash.

Mrs. J. A. Odell commenced a school here on Monday last—she is fortunate in securing her services. Miss Nettie Cooke (sister of Clyde Cooke), is giving good satisfaction as teacher in Dr. Barrett's district.

Scotch Agriculture.

Editor Willamette Farmer: I notice a communication in your paper in reference to Scotch farmers, and as I know a little about the subject, I think your correspondent would have improved his letter greatly had he been more explicit in his figures and statements. In the first place he says that the landlord and tenant at the expiration of a lease, agree that said tenant will have the option of keeping the farm at his best bid after the farm has been advertised and competition raised. There is very little trickery of that sort perpetrated in letting of farms there. This is what a farm is to let, standing offers always know (if they read the papers), whether the present tenant is or is not to be an offerer.

Secondly, he talks about some 240 acres of land in the West Highlands, and takes that as a criterion for the whole of Scotland. Now, that will not pass muster, as any man knows who knows anything at all about the country.

He also omits to give us any or all expenses on such a farm. We do not see any mention made of manure, both heavy and light, that often cost more than the rent of a farm. He does not give us joiners' and blacksmiths' accounts, which often are \$500 a year on such a sized farm. He does not tell us about the prices of horse, cow, calf, bullock, hog nor hen. The only cry is the rent. Taking things as your correspondent attempts to show them, a Scottish farmer could not buy salt for his potatoes, much less manage an artificial farm so as to make it pay.

I also see stated in that letter that a man has to keep so much stock on his farm. That may be so sometimes, but not the rule. That is optional with the renter at time of making the bargain. I know of rented farms that do not have even a solitary cat around the whole buildings. A man can sell any or all of his stock at one time, so long as he works his place according to lease and pays his rent. I never heard of a farmer in Scotland paying rent two or three years in advance, the first rent being paid 18 months after entry, then semi-annually.

Your correspondent may keep his mud easy if it has got unhinged on this subject, as Scotch farmers have in past years made, and are still making money, although not so fast as when trade is brisk and flourishing.

If you find room for this epistle, I may at some future time, with your permission, give you some hints about Scotch artificial farming.

VERITAS SOOTY.

McQUEEN'S CLYDESDALE STALLION.—Fruiters and horsemen interested in good draft horses, should see this fine stallion, owned by Mr. G. H. McQueen, of Farmington. Clydesdale is a beautiful dapple gray, six-year hands high, six years old and weighs fifteen-hundred pounds. He possesses a combination of good qualities rarely seen in so large a horse; is a free, graceful traveler, has a powerful bone and muscle, and is of a kind disposition. The colts sired by this horse which may be seen at Farmington and vicinity, are the best recommendation of his superior qualities.—Palouse Gazette.

MR. DAN CLARK is agent for one of the best Portable Steam Farm Engines ever made, which his own experience tells him is all it claims to be, and his advertisement will be found elsewhere. He has one of these engines to exhibit on his farm, four miles south of Salem, and another can be seen and tested at the Mount Hood Implement House in this city, by Messrs. Newberry, Chapman & Co.

Davidson Brothers new artist is turning out some fine specimens of cabinets. They only charge \$5 a dozen for cabinets.

FRUIT GROWERS' ASSOCIATION.

It is hoped that as many fruit-growers as can possibly do so will attend the meeting on Saturday of the present week, to be held in the Council Chamber of this city, over the National Bank. We need association and considerate action to secure our interests in that direction. The State has great capacity for fruit production, and there is every reason to believe that our interests as a farming community will be best advanced by diversified production. We raise grain, at great cost of labor and other expense, and it seriously damages the soil, while a small area of ground in orchard will, after a few years, produce great results and make us independent of one staple, in case of failure of crop or low price. If we raise orchards we need reliable information upon all points connected therewith. Our experience as a "state" is limited, at best, and what we can learn by comparing notes and "swapping facts" will be worth a great deal to the public. It is difficult to determine what is the best course to pursue, but it is necessary to take some steps for the purpose of obtaining reliable information concerning fruit, and there are now enough persons in the State who are so interested, to form a very strong Horticultural Association if they will take hold of it energetically.

Rust On Wheat.

McMILLSVILLE, Or., May 19, 1879.

Editor Willamette Farmer:

I will give you what I know to be a preventative for rust or mildew on wheat. It will stop the rust from coming, or accumulating after it has appeared. My father saved his crop from rust several years ago in California by it, and has saved it many times since by the same method.

Every morning before the sun rises let two men take a rope about twenty feet long, and go into the wheat field. Each man must take hold of one end of the rope, have the rope between them, then drag it over the wheat. Take a strip or convenient portion, and drag the rope over it two or three times, or until the dew or water has all fallen to the ground. Drag the rope over the whole field in the same manner, in the rust season, every morning before the sun rises (when it is pleasant weather), and there positively will not be any rust or mildew. If the rust and mildew has appeared, this method will remove it except where it is very heavy, and has stood for a long time. Then the rope will do but little good.

Rust accompanies a heavy growth of wheat on moist, rich land, where rain is followed by warm sunshine. It is plain, then, if the water is not allowed to remain on the wheat when the sun shines, no rust or mildew will appear.

If farmers will try the above, they will find it a sure preventative.

Respectfully,
NORMAN HAMILTON.

The Minto Pass Road.

The Statesman says: Mr. John Minto informs us that work will be commenced on Monday the 26th inst., on the Minto Pass Road. It is the intention to work two gangs of ten men, and the work will be pushed forward as fast as possible. They will begin at a point near Mr. Don Smith's place, about 14 miles above Mehama, to which point a good road is already constructed. This will be the means of settling up that country and also opening a shorter way of communication to Eastern Oregon and a route that can be traveled in winter as well as summer. Mr. Minto has great hopes that the road will be completed this summer, and with such men as him at the head it will be finished as fast as possible.

Our readers will do well to patronize any one who advertises—generally speaking it is a sign of prosperity; and a prosperous business man gives a better article for the money. Call and get a dozen cabinet photographs of Frank Abel for \$6.

NEWBERRY CHAPMAN & Co., the well known agricultural implement house of this city, have their advertisement in this issue. They have a large business and invite attention to their stock, and all persons desiring to purchase farm machinery will do well to send to them for their full descriptive catalogue, which will be received by all who apply by mail or otherwise.

Our market list this week, is corrected by Mr. F. Selling, one of the leading merchants of this city, whose popularity with the country trade is based on selling good goods at low prices. This eminent merchant has a great and diversified stock of goods on hand, and can fill all orders sent him, or it will pay well to call and see him if you have business in this city.

Lewis River Valley.

This valley is beautifully located between the Columbia River bordering on the west, and Lewis River on the east. The valley is somewhat triangular in shape, its widest part being in the north, terminating to a point at the south. It covers an area of about ten and one-half square miles. About one-half of the valley is used for grazing and wild grass land. The annual June rise of the Columbia River, which covers about two-thirds of this portion, is proven to be a benefit to the grazing portion and also to the meadow land, as it enriches the soil and produces a better yield of grass. It is true, the water does sometimes make its appearance on the farming portion, but this only occurs once in about seven years. The overflowing would not be so destructive were it not for the tearing down and floating the fencing about, and in a great many instances rendering it impossible to be replaced. The soil of the valley is of a good quality, yielding on an average from fifty to sixty bushels of oats the acre, and forty of wheat. Frequently there have been 100 bushels of oats harvested from one acre; and in one instance there grew 128 bushels of oats on one acre of land. The soil is well adapted for grass, from which there is a great deal of hay exported annually. The hay is of that quality which demands the full benefit of the market price. There has been considerable timber exported for lumber, such as oak, ash, maple and fir; and a great deal of this timber is now being cut into cord wood, which demands a ready sale at two dollars on the bank.—Cor. of Vancouver Independent.

Minnesota Chief Threshers.

Mr. J. M. Gross, representative in this State from the manufacturers of Minnesota Chief Threshers, is now here, and makes his headquarters with Messrs. Newberry, Chapman & Co. He will remain in Oregon all Summer, and attend to the sale of the machines and putting them in successful operation. Last year 400 of these machines were sold in the State of Kansas alone, and we learn that 1,500 are being manufactured to supply the demand for 1879, throughout the United States.

FENCING.—One day last week we rode by the hedge fence which encloses one side of W. S. Gilliam's ranch on Dry Creek. The fence is half a mile long and six years old from the seed. It is hog and cattle proof and an ornament to the country. Mr. Gilliam, and Mr. Corawell, his neighbor, have, between them, about two miles of hedge fence, five years of age from the seed. One of these gentlemen informs us that hedge fence costs less originally than any other kind that they have built, that it costs about two weeks work each year to cultivate, trim and plait one mile of hedge. Of course it takes some time, from three to four years, to grow a hedge strong enough to turn stock, but when it is once well set and plaited, it will last for generations. An Eastern exchange says: "Fencing in Kansas—according to the report of the State Board—has cost \$22,058,544. There are 1,007,196 rods of stone fence, 1,684,134 rods of wire, 2,574,937 rods of board; 6,674,761 rods of rail, and 11,619,914 rods of hedge. Making a total of 20,560,942 rods of fence, nearly one-half of which is a living, permanent hedge. This, with proper care, skillful training and an occasional gap, caused by early neglect, will insure not only protection to growing crops, but a constantly increasing value to all such enclosed lands. Stone, wire, board and rail cost never less than a dollar per rod, while the hedge costs but half that sum." The experience of Kansas should teach our people a valuable lesson. With a no fence law in force, for a few years, it would be possible to hedge all the prairie farms at a much less cost than it can now be done, as it is now necessary to protect the hedge by other fencing until it is old enough to protect itself.—Walla Walla Statesman.

HARNESS AND SADDLERY.—J. H. ... has just received the largest and most single and double buggy and team harness ever brought to this city from the celebrated manufacturer, C. Hill & Co., Concord, N. H. Also a fine lot of C. ... New York city; two ... that line in the ... can be found of ... street ferry ... recently ... is thorough ... to ... Since the ... has been ... of ...