

FARMER'S ADVOCATE.

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How should an orchard be plowed? Our idea would be to plow the spaces allotted to crops, both ways, and not cross the reserved places at all. In this way there would be no danger of tearing the roots, or barking the trunks of the trees. To be sure half of cropping-ground would be plowed twice, but that would not hurt it, and the time consumed in the extra plowing would be scarcely more than that wasted in crossing the tree spaces, and dodging the trees.

A correspondent of the Prairie Farmer says:—In the latter part of May last, I took some cuttings of the Arbor Vitae and stuck them in a small box filled with common garden soil, then set the box in the shade of some shrubbery. We had the driest and hottest summer I ever knew, and the plants were insufficiently watered, yet about half of them grew. I enclose a sample of them. I am satisfied that any one can, with very little trouble, raise all the Arbor Vitae he wants, without a hot bed or anything of the kind.

Dairy Department.

SELLING CHEESE FOR CASH.

During the present season a friendly rivalry has existed between Utica and Little Falls, the principal dairy markets in the State of New York, in relation to the sale of cheese. For many weeks the quotations of the Little Falls market were slightly higher than those of Utica. This difference of a fraction of a cent a pound is accounted for by the fact that only strictly cash sales were made at the latter place, while to some extent time sales were made at the former. The wisdom of factory-men in refusing to sell for anything but cash on delivery, even if they sold for a slightly less price, has become apparent. One of the largest firms that have been doing business at Little Falls, Ernst & Christ, has failed, and it is reported that another firm, that of S. T. & J. H. Edwards, also of New York, has gone into bankruptcy. The liabilities of the first firm are \$34,497.25, while their assets are only \$4,821.51. They offer to pay in this proportion, between eight and nine cents on the dollar, but their creditors are debating whether it is best to accept it. They have appointed a committee to examine the books of the firm and have given them authority to employ counsel.

Fifty thousand dollars is a large sum for a small number of dairymen to lose at a time when they want to make a final settlement with their patrons. The past season has been a trying one to most who have been in the dairy business. The price of cheese, at no time high, was very low during a considerable portion of the year. Those who contracted for milk at prices estimated on the profits of former years, have in many cases lost their labor and the interest on their investment. To have to pay for the milk they manufactured for nothing, will be an additional hardship. Many will not be able in all probability to do this, and will thus be classed among those who are not in a condition to make good their liabilities. If factories were conducted on the mutual plan, the loss would be divided among a large number, but the aggregate loss will be no less. Farmers who have had to contend with flood and drought, and see the prospect good for buying food for their stock, and for selling their whey-fed pork on an exceedingly low price, are in no condition to lose the product of their cows.

The truth of the matter is there are too many risks incident to cheese making for the manufacturer to furnish capital to cheese dealers to do business with; and selling cheese to dealers on time amounts to this. The selling of cheese is attended with more risk than almost any commodity. It is a perishable production, not only subject to all the accidents that other things are, but liable to spoil on account of the weather. Much is ruined or greatly injured by being sent across the ocean, whether so large a part of American cheese goes. Besides these risks, the price of cheese is more likely to fluctuate than the price of most things, because it is dependent on the amount produced in other countries than our own, and which are at so great a distance off that we cannot easily obtain market quotations. A person who does business on other men's capital is very likely to be venturesome, since what is gained goes into his pockets, and what is lost comes out of the pockets of those who trusted him.

We trust this loss, on the part of our Eastern friends, will prove a warning to western factory-men to sell cheese for cash only. All will be the best satisfied in the end if cheese is tested, weighed and delivered at the factory, and the cash, or its equivalent, paid at the time. This cause will save all the troubles that grow out of subsequent claims for short weight or for cheese discovered to be in bad condition several weeks after it has been taken from the factory and sent to a country grocery. The difference of a quarter of a cent a pound, or even a cent a pound, will not make up for the

vexations and loss that attend selling cheese on credit. Let Western factory-men remember this loss of \$50,000 when they are importuned to sell their cheese next season on time.—*Prairie Farmer.*

A REMARKABLE COW.

At the October meeting of the Western New York Dairymen's Association, Mr. E. W. Stewart read to the Association the following record handed to him of a remarkable cow, owned by Mr. J. H. McMillan, of Gowanda, Erie county. She is a grade Ayrshire, that gave, when four years old (1893) during the year, 9,241 pounds of milk. The next year she gave 9,650 pounds of milk; and during 1894 days of this present year, she has given 7,014 pounds of milk, or an average of forty-three pounds per day, from which has been made 14 pounds of butter per week, or 322 pounds in 23 weeks.

The cow has been fed this season upon four quarts of wheat bran mixed in her own milk, each day, and has run in a good pasture on the creek bottom. Previous to this year she has only had abundance of good pasture and drank her own milk after skimming. This is a remarkable record, but is endorsed by Mr. Isaac Hae, of Collins. At the same rate, her milk (9,650 pounds) in 1870 would make 433 pounds of butter, or 965 pounds of cheese.

FOUL WATER AND MILK.—Out of 140 families supplied with milk from a dairy in Islington, England, 70 suffered from typhoid fever; 158 cases occurred within ten weeks, and 30 persons died. An investigation showed that the cows drank water from an old underground tank, built of wood and much decayed. The milk cans were washed in the same water, and in all probability the water was also mixed with the milk. As the fever attacked only such parties in that district as used the milk, the water in the rotten tank must have been the cause. This is only one more evidence of the danger of using foul water, and giving it to animals. It has been shown that stagnant water acts as a slow poison to animals, as well as to men, and it is a matter of the first importance to all dairy-men and stock-raisers, as well as families, to use only pure, fresh water.—*Prairie Farmer.*

The Field.

ECONOMY OF LONG FURROWS IN PLOWING.

A German agricultural journal observes that farmers usually pay very little attention to the length of the furrows to be plowed in a field, and yet great waste of time and labor is the necessary consequence of unsuitable arrangements in this respect.

The turning of the plow and the commencing of a new furrow requires more exertion in the plowman and the team than continued work on a straight line, and how great may really be the loss of time from frequent interruptions in short turns may be shown by the following calculation: In a field 225 feet long, five and a half hours out of ten are used in re-directing the plow; with a length of 575 feet, four hours are sufficient for the purpose, and when the plow can proceed without interruption for 800 feet, only one and a half hours of the daily working time are consumed. Hence the rule to make the furrows as long as circumstances will admit.

COST OF A BUSHEL OF POTATOES.

No farm talk has more interest and value than that which tells us how much our crops cost. If we know the cost we can easily figure the profit, and we can see where the weak points of our system are, and judge what changes to make or remedies to apply to render our farming more profitable. If a farmer kept a record of his crops, and would study, compare and draw conclusions from the results that record would show him, he would be able to reduce his expenses to the lowest range, and at the same time increase his receipts, thus largely adding to his profits. At the last meeting of the Farmer's Club in this city—scarcely attended by the way, on account of the tremendous storm prevailing—records of two crops of potatoes were given, which we judge will interest our readers, as they did us, by showing how much is the cost of producing a bushel of potatoes, with skill and culture, and the difference in the cost of a bushel with average and a large yield.

The first statement, from a Monroe county farmer was as follows:

Potato lot, six acres.	Dr.
To plow, drag, and land fit, for man and team, at \$3.50 per day, 6 days.	\$21 00
To seed, 20 bush, small cut and 1 piece to hill.	10 00

To 3 men to plant 14 days, at \$1.50 per day.	6 75
To horse and plow for same, \$1 per day.	1 50
To team to cover with cover.	1 00
To team and man to roll after planting, at \$3.50 per day—1 day.	1 75
To team and man to drag with 40-tooth harrow, 1 day.	1 75
To harrow 21 times.	1 75
To light drag, 1 horse and boy, 1 day.	1 00
To shovel plow, 54 days, man & horse, at \$2.50 per day.	13 75
To 1 man 1 day, to pull weeds and thistles.	1 50
To dig 6 acres, at \$8 per acre.	48 00
To carting to market, four miles.	42 00
To interest on land at \$100 per acre.	42 00

Cost to raise 6 acres.	\$ 193 75
Potatoes to.	Cr.
To 750 bushels potatoes, at 50c per bushel.	\$ 375 00
Cost to raise.	193 75

Profit.....\$ 181 25
Cost per bushel.....25 5-6 cts.
This farmer further stated that the buyers measured in baskets which were so large that a load of thirty-eight bushels by his measure at home, and of forty bushels by weight, held out only 32 bushels at the warehouse. The bushels, however, were no larger than those of all potato diggers in this region. He estimated that one-fifth of his crop was lost by unfair measurement, which, had it been realized to him, would have made the total profit \$256.25 or \$42.71 per acre, and the yield of one hundred and fifty bushels per acre instead of one hundred and twenty-five.

The other crop reported was that of Mr. Hayward, of Brighton, near this city. His crop of four acres of early Rose potatoes yielded 1,180 bushels, or about 300 bushels per acre. The potatoes were planted three feet apart in the row, and one eye in a place, the sets about three feet apart. The ground was marked three or four inches deep, and the potatoes covered so as to be about even with the surface. Sixteen bushels were planted on the four acres; but in some places two eyes were planted in a hill, and there the potatoes were not so good and the number of small potatoes was greater. The yield would have been larger if one eye had been planted in a place. The potatoes were hand-hoeed twice and cultivated all that they needed. The first hoeing required fifteen days' labour on the four acres. The entire expense, including team, labor and the cost of marketing, was \$105, or a little over \$26 per acre. The potatoes were delivered on the railroad track twenty rods from Mr. Hayward's farm, and four hundred bushels filling a car were marketed in a half day. The cost as delivered was 11 cents per bushel. They were sold for 50 cents per bushel. Mr. Hayward claims that with good crops at 50 cents per bushel he can grow potatoes with profit on land worth \$1,000 per acre.

When the relative facilities for growing these 2 crops was nearly the same. The crops were sold for the same prices. The profits were widely different. The yield of one crop per acre was more than double that of the other and the cost per bushel of the larger crop less than half that of the smaller. There was probably more capital invested in Mr. Hayward's crop than in the other, for Mr. H. devotes his farm mostly to seed growing, and keeps it highly manured. But the investment of capital was profitable, as we contend it always is, if judiciously employed in farming. Here is the statement of successful agriculture. We must raise large crops; and to do it we must use capital to make our soil fertile. The cost per acre of growing a small crop is a little less than that of growing a large one, but the cost per bushel of a farm product diminishes in the 14-20 that the yield per acre increases.—*Rural Home.*

LAYING DOWN LAND TO PERMANENT PASTURE.

We extract the following from a pamphlet published by H. Sutton, England. We give the whole of it, as it will pay for perusal. Of course we cannot adopt many of the English varieties of grasses, still we may profit by using an increased number of varieties.

Preparation of the Land.—If the land is not clean, it is well to take a crop of turnips or other roots previous to laying down grass, which will afford opportunity for more effectual cleaning than can be done in the winter months preceding the seed sowing.

The importance of getting the land into a good tilth, fine, firm, and level, cannot be overstated, as, if the land is rough or hollow, some seeds will be too deeply buried, and others not covered at all. If the field is full of weed seeds, they will germinate more quickly than the grasses, and take possession of the land.

Manure.—If a root-crop has been fed off in the previous autumn, it will generally be unnecessary to apply other manure; but if the land requires assistance, a top-dressing of 2 cwt. per acre of Peruvian guano, or the same quantity of nitrate of soda, should be applied when the grass is well established, say 2 inches high.

Sowing.—Choose a still day, as a rough wind would prevent the regular spreading of the seeds. Some men who are used to it will sow grass-seeds well by the hand; but it will generally be done better with the common seed-barrow. This will distribute the seeds very evenly, either in one mixture of clovers and grass seeds together, or (which is most usual) by going twice over the land, sowing the light grass seeds first, passing up or down the furrows, and subsequently crossing the lands with the mixture of clovers and other heavy seeds.

A bush-harrow, or the lightest iron harrow, should be applied immediately before and after sowing, thereby covering the seeds before birds or a change of weather can interfere with them, care being taken that as few seeds as possible are buried too deeply, or remain uncovered. After harrowing, the whole should be carefully rolled. As to the best season for sowing, though much has been written in favor of autumn-sowing, I have no hesitation in saying that the spring is preferable, if the land can be made ready. With very heavy land, however, in a wet spring, it is often late in the summer before it is sufficiently pulverized, and if later than the middle of June, it is well to defer the sowing until August or September; but in autumn-sowing there is great probability of losing the clovers, as, while in a young state, they are apt to be carried off by slug or frost. Therefore, if autumn-sowing is adopted, it is well to examine the young pasture early in the spring, and, if the clovers are found to be deficient, to sow more of the same kinds immediately, which will take very well if the grasses are not too strong.

By spring-sowing I mean sowing during the months of March, April, and May; and, generally, April will be the safest and most favorable month of the three. If, however, the land is quite ready by the middle of March, and the weather favorable, it would be good policy to sow without delay, rather than incur the risk of the seed-bed being spoiled by a change of weather. If it is desired to sow a crop of clover, the time for sowing the grass-seeds will be either immediately after the corn is sown, or else when it is two inches high—the former being most favorable for the grass. As to the question whether it is best to sow with or without a crop of spring corn, it is no doubt safest and best to sow the grass seeds alone, especially where the object is to obtain a fine park-like sward as soon as possible. One great advantage of this practice is, that if the land has not been thoroughly cleaned, and the annual weeds get ahead of the young grass, they may be destroyed by mowing as soon as the grass is six inches high; and another advantage is, that if, from irregular sowing, or from the roller not having past over every part of the field, some bare spots occur, they may be discovered and re-sown in good time. It is a common practice in some parts to sow 2 or 3 lbs. of rape per acre with the grass-seeds; this produces valuable sheep feed in the autumn.

If corn is sown with the grass-seeds, some of the finer kinds of grasses are almost sure to fail, especially if the corn crop is heavy and becomes lodged. Still much might be, and is, said, in favor of this practice; and seeing that a crop of oats or barley is an important matter with most farmers, I would by no means condemn the practice especially as the decision can, if duly informed of the intention of his customer, provide such sorts and proportions of grass and clover seeds as will, under ordinary circumstances, insure a full plant. The quantity of corn sown should not be more than 2 bushels per acre, and oats are generally less injurious to grass than barley.

Sowing Grass-Seed Upon Wheat.—It not infrequently happens that a field already sown with wheat is desired for adding to the grass-lands; and if it is pretty clean, there is no difficulty in effecting this, provided the seeds are sown sufficiently early, before the wheat is too high. Upon autumn-sown wheat the