Of potatoes the yield has been much lower than we expected. Only in three counties did the average yield exceed 200 bushels.—In Niagara and South Renfrew there was an average of 300, and in South Ontario of 250 bushels. One return has been as low as 50 bushels.

In concluding our review of the results of our agriculture in 1873, let us profit by the experience of our past labors, whether successful or otherwise. Good farming is profitable; bad farming entails a heavy loss.—Good, deep culture and fertility of soil form the best grounds for our expecting a fair remuneration for our labors. Let the seed bed be well prepared, rich and mellow. Wage incessant war with weeds. The report before us says: "A better supply of labor and the general introduction of improved implements and machines would in a short time enable farmers to eradicate weeds which unhappily, in some sections, have so increased of late as to affect most injuriously all cultivated crops." Do not wait for the supply and introduction here spoken of. You can, without those additional aids, subdue and keep under these pests. To do this you must no longer pursue the scourging system of taking from your fields successive crops of grain. Let drilled root crops have their proper place in the rotation of crops, and the plough and cultivator, with a little assistance from the hoe, will accomplish this most necessary part of the farm work.

—S.

## Eggs for Prizes.

Many a little boy or girl would be pleased to have a few pure-bred birds of one or other of the following varieties.—We have made arrangements with Mr. JOHN WELD to supply us from his choice stock with eggs from any of the following varieties, viz., Buff Cochins, Dark Brahmas, Leghorns, Grey Dorkings, Black Polands, Silver-Spangled Hamburghs, Houdans or game fowls, and Aylesbury or Rouen ducks. We will send six eggs of either variety to your post office, without cost to you, if you send us six new subscribers.

## Short Horn Sales.

During the past month the public sales of Short Horn cattle have been more numerous than usual at this season. The prices realized have been very good, in fact, much higher than usual.

J. R. STANTON, THORNHILL (BIRCH GROVE).

| | |
|---|---|
| Highest price paid | $ 600.00 |
| Sixteen females sold for | 4240.00 |
| Being an average for each of | 265.00 |
| Three bulls sold for | 1075.00 |
| Being an average of | 358.33 |

JOHN SNELL, EDMONTON (WILLOW LODGE).

| | |
|---|---|
| Highest price paid | $ 1225.00 |
| Forty-five females sold for | 16005.00 |
| Being an average for each of | 355.66 |
| Four bulls | 1672.00 |
| Being an average for each of | 418.00 |

HUGH THOMSON, ST. MARY'S (KINELLAR FARM).

| | |
|---|---|
| Highest price paid | $ 1015.00 |
| Twenty-two females sold for | 10790.00 |
| Being an average for each of | 490.45 |
| Three bulls | 1090.00 |
| Being an average for each of | 363.33 |

Other sales have come off, but we have not yet received particulars.

The highest prices paid at the above sales were by the Americans. Mr. R. Gibson, of London Township, paid the highest price of any Canadian, viz., $1005 for "Golden Drop 2nd," at Mr. Thomson's sale. Mr. J. R. Craig bought heavily and paid good prices. We also notice that Professor McCandless has been buying for the Agricultural College.

THE leading breeders and most eminent stock raisers in the Province of Quebec, will hold a union sale of thorough-bred horned cattle and valuable horses at Montreal, on Wednesday and Thursday, 13th and 14th May next; the advertisement appears elsewhere. We bespeak a large attendance; the names of the contributors and committee are a guarantee that this, the first combined sale, will be as represented. Catalogues will be ready in one week, and will be forwarded on application to John J. Arnton, the Autioneer, Montreal.

## Prize Essay

ON MANAGEMENT OF FARM-YARD AND STABLE MANURE.

In the management of farm-yard and stable manure profitably it is necessary

1st—That the greater part, if not all the stock, should be housed.

2nd—That they should all be housed near together, so that the manure may all be put in one heap conveniently.

3rd—That the manure from the horses and cattle be put in the heap in alternate layers, being spread evenly over the surface. This is of great importance, because the manure from cattle, sheep and hogs is of so cold a nature that if piled by itself, it will not heat sufficiently to kill the seed of weeds, or to be in fit condition for the land in spring. If used in this state for root crops, the expense of keeping down the weeds will be so great as to nearly, if not quite, eat up the value of the manure. If the horse manure is piled by itself, it heats too rapid, and usually fire fangs and becomes almost worthless.

4th—The pile should be made, if possible, on the south side of the buildings, so as to be in as warm a location as possible, to facilitate fermentation. The pile should be kept clear of the building, and care be taken that the water from the roof does not fall on it or run under it.

5th—The sides of the pile should be protected and kept square by placing planks inside of posts, allowing about a yard and a half square to each animal that is to be wintered—more or less according to the size of animals, or the amount of straw or litter to be made into manure through the season.

6th—Care should be taken to have plenty of straw and all the litter possible to bed the stock with. The cattle stalls should not be cleaned out oftener than every third day, the horse stalls every fourth or fifth day.—Every night level down the surface of the manure in the stalls, and cover well with fresh litter. When cleaning do not throw out any litter that is not well saturated with the dung and urine. By this method almost double the quantity of manure can be made, the urine will be saved and will add nearly one-third to the richness of the manure. It will heat and rot more even, and will also be much finer in quality. I am fully aware that there are many that will laugh at the idea of not cleaning the stables oftener, and call it slovenly, &c., but no man who values manure, after giving the plan a fair trial, will think of giving it up.

7th—No stock should be allowed to tramp on the heap. If the heap is trodden the air will be excluded and fermentation will be arrested.

8th—If manure is made in the yard it should be kept as compact together as possible. The yard should not be larger than would barely answer the stock to be kept in it. The buildings should all have eave-troughs, so that no water from the buildings can fall on the manure or flow through the yard. As soon as the manure thaws in spring, it should be all gathered up and put immediately on the top of the heap made from the stables. If there is not room enough without, pull out the plank and level down the heap one-half or more, according to the room required, being careful that all the manure from the yard is placed directly over the heating manure from the stables, so that as the heat raises it will pass evenly through the yard manure. In about ten days or two weeks the whole will be in a fine heat. It should now be turned regularly over, being careful to put the finest and hottest to the outside of the heap, and keeping the cold, coarse part in the centre. If the above directions are fully carried out, the manure will be in excellent condition to put on the land in time for root crops, potatoes, corn &c.

9th.—Unless the manure is wanted for pasture or meadow, the land where it is to be put should be plowed deep the previous fall. The manure should be carted out in dry weather, or otherwise the land will be injured by going on it. Leave the manure in small heaps, and do not spread it until ready to plow; then plow in with a light furrow not more than two or two and a half inches deep. Do not make the common mistake of putting it on too heavy in the commencement, and when the heap is three-fourths out, observe, when too late, that it will not cover half the land you intended. The result will be that one part of the land is so rich that it grows too much tops or straw, while the other part is so poor that the crop is a complete failure, and you see to your sorrow that half your manure is wasted.

10th—The advantages of the above system are:

First—The manure is ready for use early in the season.

Second—There are no weed seeds but what are destroyed.

Third—The urine is saved, and double the quantity of litter and straw can be used.

Fourth—There is no necessity for expensive sheds or cellars to be built, to keep the manure from the weather, as the compact heap heating rapidly, throws off the moisture so rapidly that there is seldom any more rain than what is required to keep the heap properly rotting.

Fifth—The manure is fine, so that it can be plowed in shallow, so that the young plants feed upon the manure as soon as they commence to grow, and the rich juices of the manure are absorbed by the surface soil.

Sixth—The land does not dry up rapidly and prevent small seeds from growing, as it does when coarse manure is used.

S. H. MITCHELL,
St. Mary's, Ont.

## Butter or Cheese?

*Written for the Farmer's Advocate.*

BY L. B. ARNOLD, ROCHESTER, N. Y.

We are asked whether it is more profitable to make butter or cheese? The answer to this question must depend on several conditions. The prices of butter and cheese do not always sustain the same relations to each other. One may be high and the other low, and this circumstance may decide the question of profit at any particular time. But a reversal of prices may take place, and that which was high will be low, and the one which was low may become high, and then the other product may yield the best return. The prices of butter and cheese are all the time going up or down. They seldom retain any fixed relation long.

The best we can do in answer to the above question is to give the comparative rates of product from a given quantity of milk, and the cost of manufacturing in each case. But then there is no definite amount of milk that can be named as the precise quantity required for a pound either of butter or cheese. We must therefore base calculations on general averages; and as the milk of different breeds do not yield the same relative quantities of butter and cheese, we will take the milk of the common or native cows as the standard of quality, as they are by far the most numerous both in the States and in Canada.

But in the common breed there is great variation in the quality of milk; and then some people make more out of the same milk than others. A well fed and well sheltered herd of natives, whose milk is skilfully cared for and manufactured, will yield a pound of butter the season through from twenty pounds of milk. An indifferent herd, not very highly fed, with inferior skill in making butter, will yield one pound of butter from twenty-eight to thirty pounds of milk. With an average quality of milk of native cows, and with average skill in managing milk, we may assume twenty-five pounds to make one pound of butter, and that the same quantity will make two and a half pounds of cheese. The owners of butter factories make and pack butter in tubs, furnishing everything for $4 per hundred, as the lowest price. The lowest price for making and furnishing everything for a hundred pounds of cheese is $1.62½, which makes the cost of manufacturing a hundred pounds of butter and two hundred and fifty pounds of cheese differ only 6¼ cents. The difference in the cost of manufacturing a given quantity of milk into butter or cheese is, therefore, so little, that it may be considered the same in each case. There is considerable difference in the value of the refuse of a butter or cheese dairy for feeding purposes. The whey from 1000 pounds of milk has for two or three years past netted about 50 cents. The sour milk and butter milk from the same amount of milk is estimated at from two and a half to three times that of whey. The difference in the value between the sour milk and whey from a given quantity of milk is equal to $1 per hundred on the cheese. If 2,500 pounds of milk will make 100 pounds of butter that sells for $30, the 250 pounds of cheese it would make ought to sell for $32.50 to make an equal return for the milk. This would make the cheese 13 cts. a pound when butter was 30 cts. The quality of milk in special cases may vary this proportion somewhat, but as a general rule it will be safe for dairymen to assume that 30 to 13 is the ratio of prices between butter and cheese, to make them equally profitable.

In a herd of Jerseys 16 lbs. of milk would very likely make one of butter, and but two pounds of cheese. In such a case the cheese would have to sell at 16 cts. to equal butter at 30 cts.

In a herd of Ayrshires that would require 26 lbs. of milk for one of butter, 2¾ lbs. of cheese might be made instead, when cheese at $11.90 per hundred would be as good as butter at $30 a hundred.

Last year there were fifteen butter factories in Franklin Co., N. Y. that, by using the Jewett pan, averaged 1 lb. of butter from 23 lbs. of milk, which, when converted into cheese, would have made but 2⅛ lbs.—When their butter was selling for 35 cts., cheese was selling at 13 cts. It should have been 16 cts. to have been as profitable as making butter.

## Prize Essay

ON THE PRUNING OF APPLE TREES.

*"Practice Before Theory."*

Written for the FARMERS' ADVOCATE by ABDIEL GEO. DEADMAN, DELAWARE.

I presume the general object of pruning the apple, as well as all other fruit trees, is to promote the growth, add to its form and symmetry, increase its productiveness, and to enlarge its fruit. To insure these requirements and conditions, I propose to offer a few suggestions:

1st—The proper time when it should be performed.

2nd—In what manner it should be done.

It is impossible to give an exact date that would apply to all parts of such an extensive country as the Dominion of Canada. But as a general rule, never before the first of April, up to the time the buds remain dormant, after the severity of the winter is passed. But I have found from a long experience, as a safe guide applicable to all parts of the country, is immediately after the season of sugar-making is over, or about when the sap is getting sour. Whether the season is early or late, this is the most convenient time for the farmer and fruit-grower. The surface of the cut then made cauterises and hardens sufficiently by the slight frosts that generally follow, without deadening back the sap wood at the edges of the cut too much, which would prevent a quick healing over of the wound, or an escape of sap which generally blackens the wound and seems very poisonous in its action.

We should especially avoid pruning at that period when the buds are swelling, and the sap is in full flow, as the bleeding or escape of sap is very injurious to most trees, and generally brings on a serious and incurable canker in the limb and surrounding parts.

Again, never prune in winter, as the succeeding frosts will kill back the alburnum or sap wood so far down from the edges of the cut that it causes a long time to elapse before it ever properly heals over, causing serious cracking over of the surface, admitting rain and moisture, in fact, in many cases where large limbs have been severed, causing a decay which frequently extends to the body of the tree, leaving it worse than dead. The old orchards throughout the country too plainly tell of its effects.

Again, I find from the 10th of June to the 1st of September the best season of all.—Wounds made at this segson heal over freely and rapidly; it is the most favorable time to judge of the shape and balance of the head, and to see at a glance which branches require removal, and all the organizable sap in the tree is directed to the branches that remain. But from the pressure of work at that time with most farmers, it is most inconvenient, and almost entirely prevents its general adoption, though to the amateur or man of means it is the most desirable time of all, and the earlier the work is done in the above named time, the more satisfactory will be the result.

2nd—How to prune.

This seems so simple a thing, that every school boy fancies that he can cut or saw a