

raise over the
assumption is sold
who mix it with
from other coun-
paid. By this
e increased con-

as good as that
out when mixed
the consumers,
or purchasing of
the profits made,
h a temptation
gislature might,
the prohibitory
used might be
ne, and much of
owers might be

18.

o, Jan.) gives a
ure bred stock,
as of this "most
es of this year
there were sold
\$337, while, in
at an average of
near aggregating
1874, being \$1.
ease," the jour-
prices, is note-
greater number
neral business."

peculation, there
n some of these
ut this does not
of the question,
e interest evinc-
of decreasing
rthorn of an es-
all sides on the

What stronger
act that, though
considered large,
of the following
h. "The short-
is at its height,
e other fevers."
of "the fever

side the families
are as valuable
dairy as for the
ding, be some
nd, with prices
ng distinct from
or dairy keeper.
ence are able to
ts of excellence
stock breeders
ated. By breed-
in, unmixed for
ng properties so
crossbreds the
atus of the an-

of pure horn
dvantageous to
stock is greatly
ows of common
timate that has
the blood of a
of common cat-
years old, and
ot high, and at
rofit to farmers
mal for their
e sum in a few

The prices paid for short horns of approved strains with long pedigrees may be high. This is a question for those who purchase and sell such stock. For the farmer the safest and most profitable stock is the good cross bred, and it is his interest to keep none but those of the very best quality. A cross breed is fattened in less time and at less cost than any of the old common breed. If bred from a dam of good milking quality, there is no better cow for the dairy. They attain maturity at an early age, are easy fed and fattened, and they will bring much higher prices when the owner thinks it his interest to dispose of them.

Jottings on February.

The Ontario Parliament deserves the approbation of the country for attempting to check the excessive use of intoxicating liquors. It is difficult for them to enact a law that would be satisfactory to all.

The expenditure of the public money for some railroads in some parts of the country where they are not needed, deserves the condemnation of the country. Justice cannot sanction a taxation for a railway to oppose a line that has done a vast amount of good, and that has not yet reaped a moderate return. We believe one or more of the lines subsidized by our money will never pay one cent, except to fatten contractors or serve the ends of some political supporter. As we are a little acquainted with the localities and requirements, we cannot condemn in too strong terms this expenditure.

The granting of more pay to members of the Legislature will not, we believe, be approved of by the majority of farmers, particularly at such a time as this, when the financial state of the country is so much depressed. In the speech from the Throne, of the Dominion Parliament, Lord Dufferin expresses a desire to reduce the public expenditure in some ways. This may be done with advantage.

The representation of Canada at the Centennial Exhibition may be of advantage to the country, if we can get justice done to us and we do not pay too dear for our whistle.

The Dairyman's Association had a most interesting and useful meeting in Ingersoll. We believe it to have been the best meeting connected with the Association ever held in Canada. Great good must result from these meetings.

The Beneficial Effects of Snow.

Snow is no mean fertilizer of the soil, conveying to it ammonia from that well-supplied store-house, the atmosphere. The great advantage of it to the fall crops is known to all. In some parts of North America, where little or no snow lies on the plains, they are wholly unable to raise fall wheat. But there is a service performed by it not so generally known; it tends to destroy numbers of those insects that are productive of so much evil to agriculturists.

While we are lamenting that this, our winter friend, has not visited us as much as in other years, they are rejoicing at the general fall of snow in Europe. In France, while the southern and eastern provinces and the Rhone valley have been most favored in this respect, the northern and western districts, although more tardily visited, have equally participated in the welcome snow cover. Reports from all parts of the country express unanimous satisfaction in reference to the first as well as the last sown wheat plant. The rye plant, too, under the shelter of its snow covering and arrested in its growth by the frosty weather, will have more chance of escaping frosts if they occur later in the season. Moreover, they rejoice that the snow will tend to the destruction of injurious insects.

Draining—The Advantages it Confers—Its Cost.

We have had several enquiries as to the cost of draining, the best and cheapest method of draining, and if draining would so improve the land as to repay the expenses. We now reply to these queries as briefly as we can. The subject is one of so much importance, and involves so many details that it would, to treat it fully, take up a space that we could not give to it.

The first step in the improvement of heavy, wet soil is draining. As long as water remains stagnant in the soil, every attempt to improve it by more thorough cultivation, heavy manuring, or rotation of cropping, will result in disappointment. The cause of failure is in the soil, and it must be removed from it to make real improvement practicable. The first great aim of the physician is to remove the disease; when he has accomplished this, he then turns hopefully to build up the strength and vigor that could not be attained while the disease remained in the system. So is it with other matters. The first step in improvement is the removal of those causes that have been the cause of the evil; and this is what draining does: it affords a free passage and sufficient outlet for all superfluous water, so that none shall remain in it so long as to injure or retard the germination and healthy growth of plants.

To the observant practical farmers it is scarcely necessary to point out the unmistakable symptoms of land in need of draining. The difficulty of tilling the land in early spring, the feeble, slow vegetation, the hungry, sickly appearance of the stem and blade struggling for existence, the surface soaked with stagnant water after rain, and cracked in drought, are proofs positive that the land needs draining. The land is too compact.

In order to reap any benefit from the cultivation of such soil it must first be drained. The rootlets of the growing crop will then penetrate every particle of the soil which has been made mellow and pliable by the gentle filtration of the water, and the admission of the air, that the water had excluded. The decomposition of the roots in the soil will render available plant food that had, while the soil was filled with water, been of little or no use to sustain vegetable life. The more freely the air circulates in the soil, the more readily are its fertilizing elements made available for plant food, and by no other process can this circulation be induced so thoroughly as by thorough draining where necessary, followed by deep and thorough cultivation.

THE COST OF DRAINING.

The estimates for draining vary very much, and even the accounts kept by those who have had the work done under their own inspection differ as to the cost of draining. The amount of expense, depending much on the distance the drains are put apart, accounts for this seeming discrepancy. In the *Colonial Farmer* there appears a letter from Mr. R. Thompson, of St. John, N. B., giving an exact account paid by him for draining twelve acres of hard, stiff clay land. Having had three first-class drainers sent out to him from England, he gave them the job to do. The result was as follows:—

548 rods drains: 24 feet deep, 24 feet apart, at 60s. per yard.....	\$328.80
28 rods drains: 6½ feet deep, 25 feet apart, at \$1.20 per yard.....	33.60
Extra work: opening ditches and building outlets.....	9.00
Total paid for labor.....	\$371.40
Drain pipes, 800, ½ inch, at \$9.00 per m.; 6,300, 2 inch, at \$10.50; 1,529, 3 inch, at \$16.00, and 480, 4 inch, at \$20.00..	107.39
Total cost.....	\$478.79
The expenses to Mr. Thompson, already \$100 per acre, is what few farmers would be inclined to	

pay; but it might be reduced more than one-half. The workmen earned an average of \$2.50 per day, and the ground being hard, stiff clay, the drains were not put so far apart as they might be if the ground were less tenacious. "For thoroughly underdraining stiff clay," he says, "would, at 24 feet apart, take 100 rods, or 1,815 draining pipes. Should the ground be anything of an open bottom and springy, 36 feet would answer well. This would only be 73 rods, or 1,245 draining pipes per acre. The unusual depth to which it was found necessary to sink the drains added very much to the expense."

The above is an extreme case of expenses. We know from our own experience that a good workman can open the drains, at 24 feet apart, lay the draining tiles, and cover in the drains of an acre of ground in from 25 to 30 days, according to the tenacity of the clay through which they are made. We have seen a statement from a New York paper of the son of an English farmer draining on his own land (12 acres) at the cost of \$325, the work done by himself, and debiting for it in the account made by him; and using nearly 5,000 good tile underdrains. What he charged for labor is not stated—it must be very low.

Would the improvement of the land by draining pay the cost? This question is answered in the affirmation of those who have drained their farms. Mr. Johnson, near Geneva, N. Y., who has been pursuing the practice more than thirty years, says it pays for itself in two years, sometimes in one. Mr. Thompson, who paid so high for drainage, says it has paid good interest for the outlay. After draining he raised 355 bushels more turnips, 282 bushels carrots per acre, and 600 bushels marigolds more than he was able to raise before draining. One instance that came under our own observation we would mention, as corroborative of other testimony on the matter. A very wet field of stiff, hard clay was underdrained at the expense of \$35 per acre. Before being drained it would never give a good crop. The first crop after draining was potatoes, giving a yield not less than 500 bushels per acre. The year following it yielded a crop of oats fully twice as heavy as it had ever given before. The improvement from draining on the annual crops was estimated at ten dollars per acre.

Canadian Barley in the United States.

The New York Produce and Exchange Committee in Grain have ruled that barley, hitherto known as Canada No. 1, shall hereafter be classed as extra Canada. No. 1 Canada shall be plump, sound and well cleaned grain, weighing not less than 48 lbs. to the measured bushel, and in color not equal to the extra. No. 2 Canada shall be known as stained, instead of slightly stained.

It will be seen from this ruling that there is a class of Canadian barley admitted by the American Board to be superior to the American, taking the rank of No. 1 in their markets; and as No. 1 is the highest grade of American barley, their appreciation of the quality of that grown in Canada is noteworthy. Though the duties levied by the American Government on all Canadian products may be said to be in many cases prohibitory of our having access to their markets, the quantity of our barley sold there is very great. They find it necessary to purchase it at a higher price than any they can raise, and on the purchaser the duty payable is an extra charge to the high price. In the Detroit market on Feb. 1, American barley was sold at from \$1.80 to \$1.85 per cental; Canadian barley from \$2 to \$2.05. The total receipts of Canadian barley at United States ports for the seven years ending 1875 amounted to not less than 34,560,000 bushels.