

ever, excepting to get their tasks done? Can we wonder that they get discontented? Fathers, sit down some of these long winter evenings and think it over. How would you like it yourselves? Give your boy an interest in something, and see what a new life it will infuse in him. Let him have a piece of ground to plant, say potatoes. Let him try some new variety. The experience gained will be something that will help him in after years. Let him market the crop. Teach him the business routine necessary to put the few dollars in his pockets. Merchants and mechanics know the value of having business habits early inculcated in their boys, but many farmers seem to think that it will be soon enough to teach their boys business when they come of age, but when that time comes: "Well, I had to look out for myself, now you must do the same thing." This system followed by so many is frequently the cause of disaster to the parent as well as the son, who from want of the business knowledge that he might have gained, makes a mistake, and father has to step in to save the family credit. The result, if continued as it too often is, leads first to the loss of credit and then the home. Boys are restless beings, full of energy that must have vent in some direction. Where wisely directed it can be made a power for good in their education. Teach them the laws of nature so far as you can; help them to experiment in such a way that the knowledge gained will help them in their business. Place good agricultural papers (there is none better than the *ADVOCATE*) and books in their hand; in short, make their home life interesting, not one unceasing round of toil, and they will think twice before leaving you in your old age to try the uncertainties of a city life. The time will soon come, in fact now is, when the farmer must know many things that a few years ago were not so absolutely necessary as they are now, and no doubt the next generation will be still further in advance of this one. We say, then, begin early, the earlier the better, to instill those business principles into our boys by giving them an interest in our work and keeping them on the farm, for intelligent farmers are working their way to the front, and will do so more and more as the old time prejudices wear away, and they are found capable of worthily bearing the honors that are in the gift of their fellow-men.—SANDIE, Vittoria, Ont.

Notes from British Columbia.—I promised you on coming to British Columbia last year to write to you. I have waited till now, so that I could write what I know instead of what I heard about the country. You will please remember I know nothing of farming on the mainland, but of Vancouver and islands I can speak from experience. The land that is really good is alder bottom. The alder is a good deal like the bass-wood in Ontario. It does not grow so large, and the stumps will rot out in four years. Where the large timber like the Douglas Fir grows it is not of much account. It grows, as a rule, on the hills and mountain side. The bottom lands are a rich clay loam, very productive; but the trouble is to fence say 20 or 25 acres in a place. The most farms have 5 or 6 pieces of alder land, separated from each other by large timber. Saanich, on Vancouver Island, has some as fine farms as you could wish. It is the richest agricultural district on the island, and distant from Victoria 18 miles. Last spring was dry and the crops were got in early, but no rain of any account fell from the 1st March until 7th of September. The consequence was that all crops were light. Hay was about the best, averaging about 1 1/2 tons to the acre; peas about 15 bushels; oats, 40; wheat, 25; and potatoes in some localities did not give more than the seed back. Of course there were some farms that did better, but I speak of the average. Old residents say it was the driest season they ever saw. Peas, oats, fall and spring wheat and potatoes, as a rule do well here, so does hay. But the farmer here does not pay enough attention to putting his land in shape to seed down. Most of the men that own farms know nothing about farming, only what they pick up by experience, as they are men that made money in the mines and invested it in farming lands. A field is seeded down to grass that an Ontario farmer would never dream of doing; full of foul weeds, not half harrowed and never rolled, it is left for eight or ten years till the moss and weeds run it out before being broken up again. Land that is seeded in the fall can't miss catching, it is so damp and wet all fall and winter. As to climate, it is beautiful. Last winter we had it cold and some snow from the 14th Dec. to the 20th Jan. Then spring came in, and although the summer was so dry it was not too warm, the thermometer about 80. It is always cold at nights; I can see no difference, summer or winter. As I said before, the fall rain set in on the 7th Sept., and it rained on and off till the 15th of this month, when about a foot of snow fell; the thermometer tonight marks 40 above zero; the snow will soon go and then spring will set in. This will be a fine dairy country, as there is fine pasture, except July and August, when green peas or other green feed is given to the cows. The water is the very best, coming as it does from the mountains. Most all the farms I have seen have a stream of running water on them. There are no flies or mosquitoes to bother stock, and three months at the outside is all the time you need to stable them. The price of butter is downwards, owing to the competition of eastern Canada tub butter. It is 40c. a pound at present, and as a good deal of the Canada tub butter is bad, it is fast going out of favor. As to prices, markets, and price of land, etc., I must leave them till the next letter.—R. J. A., Salt Spring Island, B. C., Jan. 26, 1886.

Improving Soil by Means of Ashes—Hen Manure.—Enclosed I send a few questions to be answered in the *ADVOCATE*. I have a flat sandy loam, seeded to grain; the hay was very light last year. I want to improve it next year if I can. I was thinking about ashes to put on it. I have also a field of high land which is run out; would not raise buckwheat last season. I sowed clover on it, but it did not take. I want to get it down to grass for pasture. I was thinking of sowing oats on it and seeding it down to timothy and clover. Would ashes be the best dressing to secure a crop of oats and make the grass seed take well? Questions: 1. What crops are ashes best adapted for? 2. How and when to apply dry ashes, and the quantity per acre? 3. Does the liberal use of ashes for one or two years leave the soil exhausted? 4. What is the difference in value for fertilizing purposes between leached and unleached ashes? 5. Would it pay to borrow money at 12% to buy ashes at 10c. per bushel? 6. How can I best use hen manure for onions, and what surface would a barrel cover?—SUBSCRIBER, Perth Centre, Ont.

[It is difficult to say what your land needs, as we don't know what your system of rotation has been; you should make tests to find out for yourself. Read our articles on "Experiments with Potatoes," and you will understand what we mean. Your hay having been a light crop, it is probable that the land is pretty well worn out, or is greatly deficient in one or two of the constituents of plant food. Unleached ashes, if applied alone, would probably contain much more potash than your land needs, and you should therefore add some superphosphate and some nitrogenous fertilizer, such as nitrate of soda, or sulphate of ammonia. If you use ashes alone, leached ashes would probably be better than unleached. If you cannot get commercial fertilizers convenient, your best plan is to apply a good dressing of fermented barnyard manure with the addition of leached ashes. As you have given no description of your "high land," we cannot advise you about it. 1. Leached ashes are best adapted to soils which are deficient in lime and phosphoric acid, and these soils, when thus treated, will be well adapted to any crop. 2. Ashes may be applied at any time, as their constituents are not apt to go to waste in the soil. However, you should apply them when you have the best opportunity of mixing them thoroughly with the soil. Apply at the rate of 40 to 80 bushels per acre for unleached, and double this quantity for leached ashes. 3. Yes, usually, if you use them without the addition of any other fertilizer, especially the immoderate use of unleached ashes. 4. Unleached ashes have 3 to 9 percent of potash; leached has only 1 to 2 percent. In commercial value the unleached stands highest, but in agricultural value, the one or the other may be the more profitable according to the soil on which they are applied. 5. It would pay to borrow money at 100 percent to purchase ashes at 10c. a bushel, if you know how to apply them to the best advantage. 6. Mix with say an equal bulk of dry earth, and then incorporate thoroughly with the surface soil by harrow or cultivator, or both. Hen manure having about three times more fertilizing value than barnyard manure, one-third of the quantity will produce the same effect.]

Stable Floor for Cattle.—Of the four different kinds of floors for cattle stables, viz., s'one paving, plank, cedar block, or asphalt, which do you consider the best? Also give relative cost.—C. D.

[The floor which absorbs the least moisture or urine, and makes the smoothest surface, enabling the liquid to flow readily into the gutter, is the best. All planks and blocks absorb more or less urine, and a portion of the liquid is sure to get into the joints. It is difficult to get a smooth surface from stones, and they are apt to be too hard on the feet for cattle that remain much in the stable, unless plenty of bedding is used. Asphalt or cement make the best floors for cattle, especially for cow stables, where it is desirable that there should be no odors from the urine to taint the milk. The cost depends upon the facilities for getting the material.]

Cleveland Bay Horses.—Will you kindly give me some information about the horses known as "Cleveland Bays."—L. C. D., Windsor, N. S.

[The Cleveland bay is a large coach horse, and for many years was the recognized coach horse of England. It had its origin in the vale of Cleveland, on the banks of the Tees. He was the main coach horse of the period, and was also raised for saddle and driving purposes. The renowned hunters of England were produced by a cross between him and the thoroughbred. But since the introduction of

railroads, and the increasing demand for heavy drafts for mining and other purposes, the breeding of the Cleveland bays has been neglected. However, they are again becoming popular, and the demand for them is increasing. They are a dark bay, weighing 1,300 to 1,400 pounds; height, 16 hands or more. The head is fine, the eyes mild and intelligent, neck beautifully arched, shoulders sloping, and well clad with muscle, body round and well ribbed home, tail sweeping, legs flat and strong.]

Seeding with Alsike and Timothy.—Please tell me in the March number of the *ADVOCATE* if Alsike is good to seed down along with Timothy. The land is reclaimed swamp, burnt last summer. Will Alsike last as long as red clover, and will it give as good after-feed? Does it grow again as quick as the red, and is it as liable to be killed in hard frost? Does it yield as much feed to the acre when made into hay as the red?—R. W. H., East Simcoe.

[Alsike clover is just the thing to seed with Timothy, for it matures at the same time, and is quite suitable to your soil. It lasts in the soil much longer than red clover. It is more nutritious, but has not so early or so late a growth as red clover, and it stands the frost just as well. Acre for acre, Alsike will produce more nutriment than red clover.]

Farmers' Clubs in Manitoba—Late Frosts.—SIR,—Although it is difficult sometimes to spare the subscription, it would be far more so to spare the *ADVOCATE*. We have started a farmers' club here in Swan Lake this winter, and adopted the constitution published in the *ADVOCATE* for December, 1884. Our meetings are held fortnightly, and so far have been well attended. We have had a hard time of it for the last three years in consequence of the early frosts, but I am still as confident as ever in the future of this country. With regard to the damage of wheat by early frosts, it is my experience of fourteen seasons, exceptional, and will, I think, be entirely overcome by drainage eventually. In the meantime I would strongly urge the necessity of more mixed farming, not pinning our faith entirely to the wheat crop but mixing our crops, carrying more stock, utilizing our straw, thus keeping up the fertility of the soil, and providing against unexpected damage to grain crops by establishing a home market for damaged grain.—A. C., Swan Lake, Man.

Lime as a Fertilizer.—Please inform me if lime is a good fertilizer for an old worn-out clay farm, as I have bought one, and should like to know how to bring it up?—A. C., Kilbride.

[Fertility can never be restored by the use of lime. When used alone, lime is an exhauster, not a restorer. So far as we can judge by your meagre description of your soil, we should say that barn-yard manure, with the addition of 400 to 600 lbs. of superphosphate per acre, would be the best restorer. The manure and the superphosphate will supply all the lime you need. If the soil is stiff, you may also plow under a crop of clover, if your barn-yard manure is scarce.]

Corn Cobs for Stock.—Would you kindly let me know in the next issue of your valuable paper whether there is any injurious property in the cob of corn when ground up with the corn. I am using it for my stock, but am told by several neighbors that it will kill them if I continue it long.—A SUBSCRIBER, Ancaster.

[Corn cobs have exactly the same feeding constituents as other farm crops, and can consequently contain nothing injurious. They are dangerous, however, when fed alone or with corn, for they make a very badly-balanced ration. They are too bulky and carbonaceous, and lack in flesh-forming material. The ground corn and cobs should be fed in small quantities, with bran, oil cake, pease and other foods rich in albuminoids. A few years ago we saw stock in the Southern States which had been wintered on this ration, and they looked like scare crows.]

Grasses in Manitoba.—With reference to my experiments on grasses, I met with very little success, but as I don't know whether they have had a fair trial or not, I don't wish to say much about them. Timothy was quite extensively grown last year with satisfactory results; but there is doubt as to its suitability to the country. With me red clover was a complete failure, and my Alsike and Lucerne were nearly all killed. I would recommend for pasture the following mixture:—White Dutch clover, Timothy, Orchard grass, Kentucky blue grass and native blue joint. I am sure with this you would have fresh grass from early spring until the snow would cover it. The native blue grass is the best for pastures, and has this advantage, that it increases while the other grasses decrease. It will after the first year entirely cover the ground, thus keeping the moisture in the ground, or it will get hard and dry.—J. D. S., Brandon, Man.