

doubtlessly very beneficially affect the section of the community it can reach. Laval University should, we feel satisfied, organize and equip a thoroughly modern faculty of agriculture in her great educational sphere, thus rounding out her work of usefulness to meet the needs of French Canada.

Down by the sea, in the Maritime Provinces, things educational are not so promising. The divisions are so numerous, the theatre so small, the money so scarce, that one often despairs of great results. Then, the Government-supported institutions, like Nappan, in Nova Scotia, and the Government Farm, in Prince Edward Island, are more harm than good—have been so for a long time, if not always. Nappan nobody takes any stock in, be he an Islander, a New Brunswicker or a Nova Scotian. It is no good. It is worse than no good. It is a source of danger. Tuberculosis has broken out there, and the cattle, a costly herd, are now out of it. They are taking the open-air cure at Ottawa. They will never go back. And nobody in Maritime Canada will drop a single tear if they don't. In Prince Edward Island the authorities have been playing at choice-stock breeding, little as they could afford it, and only mixing and muddling things generally. Now comes a crisis: The cattle, like those of Nappan, have reacted to the test for tuberculosis. There is, therefore, general consternation. The people don't care a rap if there was never an animal at the Farm at all; they are not in need of it, and they will not use it as a stock

center, and make it second to none, even if there be weeping and wailing and gnashing of teeth. Maritime Canada is behind every way because of its divisions. We must be unified in many ways before we can hope to take our own out of the things about us; but the commencement in agricultural unification is now imperative. If the ends of great Ontario had clamored for a share of Guelph's grant, where would the Province be to-day, agriculturally? Truro, we are confident, will do the same grand work for us down here, if supported properly. We want to try it, anyway."

#### Improving the Quality of Potatoes.

That the west can and does grow bumper crops of potatoes is beyond dispute but it is unfortunately also true that in many cases the quality is not sufficiently high to place this crop in the No. 1. class. In every 100 pounds of potatoes there is about 75 pounds water, of the remaining 25 pounds about 20 pounds is carbohydrates (starch and sugar) and 2 pounds is protein. The protein content is therefore low and potatoes should be used with some article of food rich in protein such as lean meat, eggs etc.

From this it will be seen that the starch content of the potato is very important and the expression "a fine mealy potato" really means a "starchy" potato or one in which the percentage of carbohydrates is high. It is therefore important that we should study means to increase this starch content if we desire potatoes

good from the bad by the brine test and have good potatoes for your table all winter.

#### Our Competitors.

Comparisons of the wheat producing capacities of different countries are interesting. We in Canada are a great wheat producing people, so great in fact that the idea of forming a corner in the wheat market sometimes seizes some of the producers, but a comparison with other wheat growing countries like Russia, United States, Argentina, India, etc., shows how relatively insignificant our total production of 80,000,000 bushels is. Russia grows about 57,000,000 acres of wheat annually, but the yield is appallingly low, 9.05 bushels per acre. This is attributed to the wretched condition of the peasants, which leads to poor farming. The United States grows from forty five to fifty million acres of wheat, which yields between five hundred and fifty and six hundred million bushels or an average of 13.43 bushels per acre. Argentina statistics are very unreliable, but the reckonings for 1905-06 are 12,830,000 acres with a five years average of 10.96 bushels per acre. In 1905 the area of the wheat crop of India was officially returned at 28,231,585 acres. Added to this British India grows 70,000,000 acres of rice and over 80,000,000 acres of other food grains such as pulse and millets. The average yield of wheat extending over ten years is 10.63 bushels per acre. The wheat yields have averaged in Manitoba for the past ten years at 18.45 bushels per acre and in the Territories, that were, 19.13. This average is exceeded in Great Britain, 30.95; Holland, 29.83; New Zealand, 28.63; Denmark, 28.18; Germany, 28.25; Belgium, 27.43; Sweden, 24; and France, 19.57.

#### Alkali Spots.

A correspondent wants to know the cause of alkali spots in some portions of the country, and what plants, if any, are tolerant of alkali.

Alkali is usually found where the rainfall is insufficient to carry off the salts that have accumulated in the soil and in consequence these form in crusts on the top of the soil. Sometimes where irrigation is practiced alkali spots may be due to the seepage from the irrigated lands above. The salts consist of sodium sulphate, sodium chloride (common salt) and sodium carbonate. Sodium carbonate and bicarbonate are by far the most injurious to vegetation. All the cultivated grasses are extremely sensitive to alkali, while sugar beet, barley, rye and alfalfa will stand considerably more than wheat or oats. Shallow root plants suffer more than others.

An interesting experiment was conducted at Wyoming a few years ago to test the effect of alkali on germination. It was found that small amounts hastened germination, and stimulated growth, while large amounts prevented germination by interfering with the absorption of water.

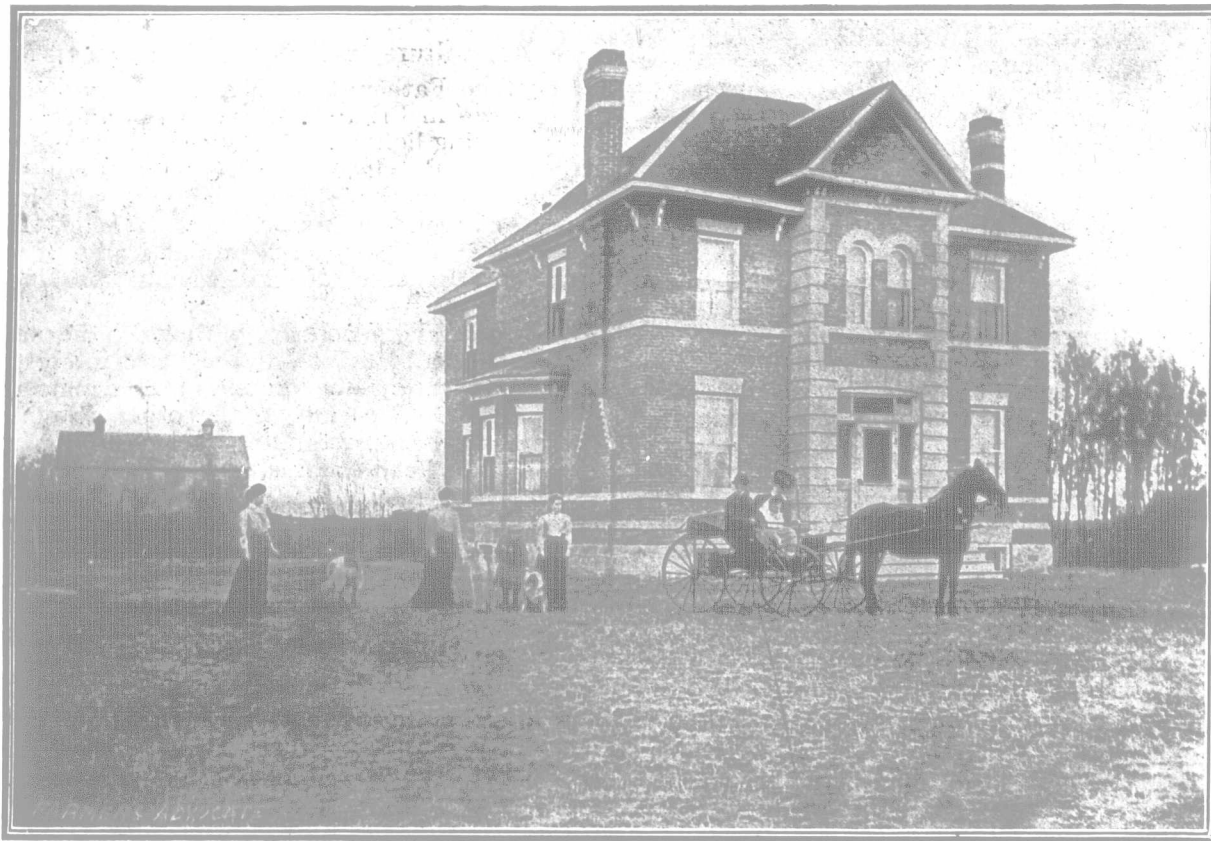
As to the remedy, the only thing is drainage, where possible, accompanied by cultivation, to prevent evaporation and by growing the plants mentioned which are measurably tolerable of alkali.

#### Some Transplanting Worthy of Note.

An Old Country contemporary refers to the death of a breeder of Yorkshire, whose main business was landscape gardener and nurseryman, and whose father, so 'tis said was the greatest living authority on coniferous plants and the removal of large trees. The father and son (Wm. and John Barron, Derbyshire, Eng.) successfully moved the Buckland yew, near Dover, a tree 1100 years old and mentioned in the Domesday Book; and also the John Knox yew at Longbank, Scotland, a tree under which the great Scottish divine administered one of his first sacraments.

#### An Encouragement to Farm Home Adorners.

Those having attractive farmsteadings, in the shape of comfortable houses enflanked by trees and shrubs and grass lawns, together with convenient barns and spacious paddocks and yards should take note of the prizes offered by the Industrial for plans of such. Drop Dr. A. W. Bell a postcard for a prize list and look up class



BEAUTIFUL FARM HOME OF R. MARSHAL, MONTROSE, MAN.

source, anyway. It will have to go. If the Federal Government would use it as an Experiment Station for grains, roots and fruits, all well and good. We need experimentation—proper, accurate, scientific experimentation along these lines badly, not otherwise. As it is, money, hard to raise, is wasted, and actual harm done to our husbandry.

What we would like to see down here is one good, well-equipped and competent educational school for agriculture, and experimental stations enough to meet all the needs of the profession everywhere. There is the Truro Agricultural College, with its substantial buildings, its competent teachers, its broad acres for general experimentation. It is to be a center of educational agriculture. The Nova Scotia Government is now bearing the whole burden of cost, and that uncomplainingly. The other Provinces contributing, and the Nappan grant transferred to it, as it should be for the general good, what could it not promise Maritime Canada? Certainly, everything Guelph does for Ontario. There cannot be several centers of this sort here. There is barely room for one, and there is no good on earth of trying to prevent the Truro institution from assuming the work and efficiently discharging it, as is most desirable. Because Nappan was once opened, that is no excuse that it cannot be shut, when its usefulness is gravely questioned. Because a lot of petty interests clash, is no reason, either, why the large-minded friends of agriculture do not agree to establish one good, creditable

of first class quality. How is it to be done?

We all recognize the importance of seed selection in any movement for plant improvement. We have heard of increasing the protein content of corn by selection and of the increase in the saccharine matter in the beet by similar means. Can the same not be done with the potato? Let us see. How are we to select the "starchy" potato for seed. Potatoes are mainly starch and water. Starch is heavier than water, therefore if you take a solution of brine of a definite strength the "watery" potatoes will float and the starchy ones will sink to the bottom. In this way you can separate the good from the bad and as like produces like, if given a fair show, you should produce potatoes of superior quality from the selected seed.

Another point to consider is that the smooth, even potatoes have a larger percentage of starch than the rough pronged ones. The deeper growing potatoes show a higher starch content than those near the surface, and level cultivation gives better results than hills. This is probably due to the difference in the soil temper and suggests the possibility of further improvement by mulching in the hot days of summer. It has also been found that closeplanting gives better quality. This is due to the influence of shading on the temperature.

These little schemes for the improvement of quality are all very simple but they are worth trying and when the summer is over and your crop is harvested you can again separate the