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and Guernseys on the college farm, and some grades, will constitute the animals from which dairy type will be studied. In demonstrating in this work, the Principal and Mr. Fuller are being assisted by Mr. R. Robertson, of Nappan. Poultry also has been studied, and the class express themselves as exceedingly well pleased with the very capable manner in which that subject has been presented by Mr. J. P. Landry, of the college staff, who has a well-equipped poultry plant under his supervision on the farm. In all the above subjects evening lectures and talks were given by the men whose names we have mentioned.

AGRONOMY.

One has only to mention the names of Prof. Zavitz and William Rennie, who instructed in the work, to let the public know that no better instruction could have been given. The work was carried on concurrently with the animal husbandry, and it is a tribute to the ability of these men to state that the class was at least fully as enthusiastic over their studies in soils and crops, a much more difficult subject to make interesting, as in any of the work in the judging pavilion. Mr. Harlow, of the Normal School staff, and Mr. Broderick, of the Ottawa Department, also assisted in this department in a most acceptable manner.

HORTICULTURE.

Prof. Sears, with the assistance of Mr. A. McNeill, of the Dominion Department of Agriculture, have seen to it that the interest of the class has not been diverted from this most important Nova Scotian industry, and anyone who could have seen the class at work grafting, judging fruit and doing other practical work along horticultural lines, would have been convinced that the practical in this, as in all the other studies, has been kept paramount.

DAIRYING.

Miss Bella Millar, of Guelph, has just arrived, and as we write is arranging separators, churns, butter-workers, and all that sort of thing, so as to give a thoroughly practical course in this important line. Concurrently with this, the Principal, Mr. Fuller and Mr. Robertson will discuss dairy husbandry in all its other branches, and we feel assured that nothing will be left undone to make this work just as thorough as it can be.

FORMAL OPENING OF THE COLLEGE.

On Tuesday afternoon, February 14th, during the progress of the short courses, the college was formally opened. The Legislature having adjourned for the day, a large representation from that body came to Truro to lend their aid and show their interest in this important event. There were also present the members of the N. S. Farmers' Association, which held its sessions during the week, in order that the members might take advantage of the work at the college. Premier Murray presided. The opening address was given by the Principal, who particularly exhorted the farmers to stand by this, their own college, for without their aid and co-operation the services of the very best men in the world would be futile. Attorney-General Longley followed, and in most fitting terms discussed the interrelation existing between all industries of the Province, and the consequent importance to all classes of this institution, which stands forth as a mark of, as well as an impetus to, agricultural progress. A number of prominent speakers followed, and at the conclusion Premier Murray pronounced the agricultural college formally opened.

While the new institution has been constructed solely by the Nova Scotian Government, it is a significant fact that the personnel of the class at present studying at the college includes ten from Prince Edward Island and seven from New Brunswick. We are glad to see this, for the interests of the Maritime Provinces are very largely one, and whatever makes for the progress of one is for the good of the others. The college stands for the advancement of agriculture, and welcomes within its halls all to whom that subject is dear.

The series of short courses will be completed by the end of February, but after that some instruction will be given to the students at the Provincial Normal School, not so much with a view to giving technical information, but with a view to giving these, the teachers of the country, an intelligent appreciation of all those interests which concern the farmers whose children they are to instruct, and it is the hope of those interested in the college that it may link itself in with the public-school system of the Province, especially in the way of uplifting and advancing all that concerns the industry of agriculture.

Farmers' Institute Date Changes.

Mr. T. J. Cumberland, Secretary Peel Farmers' and Women's Institutes, advises of the following change of dates: Cookville, March 1st; Elmbank, March 2nd; Tullamore, March 3rd; Huttonville, March 4th; Mono Road, March 6th; Bolton, March 7th; Caledon, March 8th; Belfountain, March 9th; Brampton, March 10th. John Gardhouse, Ralph S. Eaton and Miss Gertrude Gray are the speakers.

Richard Sutton writes: "The past season in East Durham, Ont., has been, I think, above the average in yield of nearly all kinds of crops, with the exception of wheat. Weeds, especially sow thistle, seem to be the farmer's greatest menace, and the scarcity of hired help his greatest drawback."

GARDEN AND ORCHARD.

Two Artichokes.

By Mrs. Anna L. Jack.

"What are artichokes, and what are they for?" asked a correspondent, and it may be of interest to some readers to know the difference and the utility of this plant.

The Globe Artichoke is a member of the Cynara family, and has such handsome foliage that it is worth cultivating for its leaves, that are finely cut and interesting. The plants can be raised from seed sown outdoors or under glass; then when they are strong they should be transplanted out into deeply-trenched soil, in rows four feet apart, the plants in the rows being three feet apart. It is the flower heads that are cut, cooked and eaten as a vegetable. The plants are perennial, and may be increased in spring by lifting rooted suckers which are thrown out, and setting them out in rows.

The artichoke used as potatoes is a tuberous vari-



Jerusalem Artichoke.

ety, called Jerusalem artichoke, and a member of the great sunflower family—the proper name being Helianthus Tuberosa. It is easily grown, the general culture being to plant medium-sized tubers in deeply-dug and moderately-rich soil in early spring. The rows should be two feet apart, the plants 14 inches in the row. Single stems only, that reach to a great height, are thrown up, which produce single yellow flowers under favorable circumstances. The ground must be kept clean by hoeing, and when the stems die down the cluster of potato-like tubers can be lifted, the small ones reserved for future planting, and the large ones boiled and mashed as a vegetable, or used in soups and broths. The white variety is not so large as the old red-skinned, but of superior flavor, and taken altogether, for those who like variety in vegetables, the artichokes are worth cultivating.



Globe Artichoke.

Apples and Plums for Wabigoon District.

A correspondent at Vermilion Bay, in the Wabigoon District, Algoma, Ont., asks for a list of varieties of apples and plums likely to succeed in his district.

Several years ago a number of hardy varieties of apples were planted on the Pioneer Farm at Dryden, with the intention of finding out what would be the most suitable for that section, but, unfortunately, the trees were planted on rather heavy, undrained soil, in an exposed location near the house, although a much better location some distance away could have been used for this purpose. The result was that the trees have had a hard struggle for life, and most of them have failed. I am of the opinion, however, that many of the hardier varieties of apples and plums can be grown in your section if put on suitable soil, and given some protection from prevailing winds by a wind-break or belt of timber. I would suggest the following as a few of the most hardy varieties of apples most likely to succeed in your section: Yellow Transparent, Duchess of Oldenburg, Charlamoff, Wealthy, Longfield, and the Whitney and Martha crab apples.

Among the plums, only the hardiest American varieties can, of course, be expected to succeed. Among these I would suggest Aitkin, Cheney,

Bixby, Mankato, Wolf, Hawkeye and Stoddard. The varieties mentioned in each list would give you quite a long season of fruiting. All of the varieties of apples may be obtained from any of our leading Ontario nurserymen, but as yet few of them are propagating the American varieties of plums mentioned. These might be obtained from J. W. Kerr, Denton, Maryland, who has made a specialty of the native plums.

H. L. HUTT.

Ontario Agricultural College, Guelph.

Applying Wood Ashes.

Mr. H. F. S., Norwich, Ont., writes: Sir,—One of my neighbors had a field of good medium clay loam, well drained, which he seeded down in 1893 to clover and timothy. He cut nine successive crops of hay, the last two yielding about half ton per acre of June grass. He then broke it up and took off a crop of Hungarian grass, and in 1903 sowed the field to oats, seeding to clover, no manure being applied to the land for about 15 years.

Last winter I got possession, and put about 10 tons of green manure on one acre of it, and in last week of May plowed that acre and two more, turning under a heavy crop of clover. On the manured acre, and one other, I planted tomatoes. They made a fine growth where the manure was, but poor on the rest. The other acre I planted to potatoes, and when they were about ready to bloom, broadcasted 100 bushels of unleached soft elm ashes on them. This fall I plowed in a good coat of rotted barnyard manure on the tomato ground, which received no manure last year, and am covering potato ground with manure this winter.

Now I want to put the whole in strawberries next spring. Can put 100 bushels ashes to the acre on tomato ground if advisable.

What commercial fertilizer can I profitably add, and how much per acre?

Is there any danger of overdoing the matter, using 100 bushels ashes per acre?

Will I waste the ashes at that rate, or will the potash remain in the soil for successive crops? The ashes cost me about three cents per bushel, and I have to haul them two miles.

Would it be profitable to use them heavily on timble berries? They are on rich, heavy clay land, comparatively new.

Ans.—You would be quite safe in buying all of the ashes you can get at the price stated, and applying them liberally to every field on the place. I would be very glad to pay you double that price for a carload if you can procure them for me. There is not much danger of overdoing the matter in applying wood ashes, as the potash and phosphoric acid which they contain is mostly retained in the soil, and not lost through drainage water, as is the case with highly nitrogenous fertilizers. Heavy soils are naturally richer in potash than the lighter soils, and, therefore, do not show as marked results from applications of wood ashes, but even on such soils it is well to have plenty of potash and phosphoric acid, as these elements tend rather to the production of fruit and seed than to rank growth of plant. I think you would find no necessity for purchasing any other commercial fertilizer in growing the crops you mention. All the nitrogen your soil requires can be added through vegetable matter obtained from growing leguminous crops, such as clover and vetch.

Ontario Agricultural College.

H. L. HUTT.

APIARY.

Don't Let the Bees Starve.

To the Editor "Farmer's Advocate":

By this time in the winter the bees in many Langstroth and other shallow hives will have but little and in some hives no honey left in the center combs, and as the bees that are packed on their summer stands won't leave the cluster in cold weather to go to the outside combs in their hives for honey after they have consumed all the stores out of the center, death will result from starvation. Hundreds of colonies are lost every winter just in this way. Can colonies in this condition in midwinter and in cold weather be saved? Yes, they certainly can; and every one of them brought into spring in grand condition.

I bring combs of sealed honey into the house, and hang them for several hours near the self-feeder until the comb is warmed right through. I then go to the colonies short of stores in the center combs, take the packing off the top, put little sticks across the frames, and then from the house bring a warmed comb of honey, and place it on its flat right over the cluster. On this comb I place a few little sticks, and put on the queen excluder with cloth over it. Upon this I put four inches of forest leaves, on these the lid of the hive, and over all the cover of the winter case. No colony, if taken in time and prepared this way, will die if the other conditions are right. Those who have no combs of honey on hand can find some in the hives near the side, which have no bees on. These may be removed, warmed and placed over the cluster, thereby saving the bees until the weather gets mild enough for them to move through the hive in search of food.

WM. McEVROY.

Wentworth, Ont.