

approaching the buildings are some four miles in length, lined on both sides with rows of trees, mostly native maple, now from four to nine years of age, and all making rapid growth. Along the main avenue a half mile of native spruce trees add greatly to the appearance of the farm, and serve to show every visitor the possibilities with this beautiful native evergreen. In small edges there are some fifty varieties of trees and shrubs under test, and about three acres devoted to forest trees, which Superintendent Bedford places in the following order according to their usefulness and general adaptability: Elm, ash, maple, cottonwood (all natives), and the Russian poplars.

The lesson above all others taught is that of thoroughness in every department of farm work—plowing, harrowing, seeding—every detail being done with the most thorough care and at just the proper time. The best methods of summer-fallowing in order to conserve moisture and eradicate weeds is constantly under experiment, and the results kept before the public. The benefit of using absolutely pure, clean seed, is well illustrated from year to year, and fields of our standard varieties, grown from hand-picked seed, has a wonderful effect in stimulating the demand for pure seed grains. The foolishness of using seed unsound or of low germinating power is also constantly emphasized, and the demonstrations of the efficacy of bluestone as a

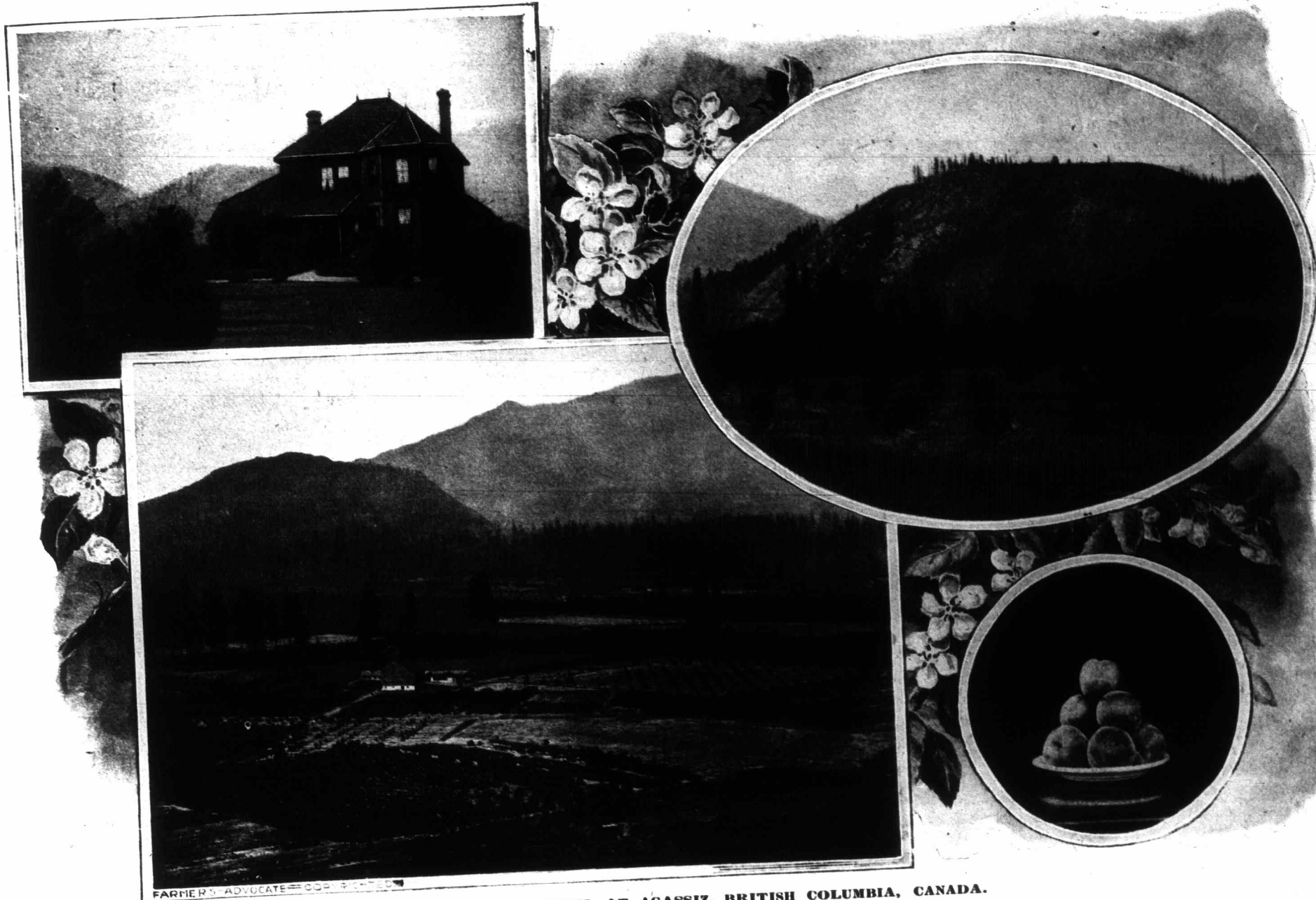
nurse crop the root growth has seldom been more than two inches.

Corn has been grown with gratifying success; an average of twenty-one tons of green corn to the acre has been reached, and ensilage of good quality made every year. Early-maturing varieties—North Dakota Flint and Canada Yellow corns—are the best; frequent and thorough surface cultivation is absolutely essential. Best ensilage results when corn is wilted a week from cutting to putting it into silo. Where there is no silo it can be saved satisfactorily by stacking in alternate layers with straw. It has also been shown that peas can be successfully grown as a farm crop. They require heavy soil, early and thick sowing, from 2½ for small and 3 for large varieties. Mixed with two pecks of oats, they may be cut with a binder and harvested from stooks. Yields as high as 68 bushels per acre have been reaped, 50 bushels per acre being the highest this year.

The most important lesson in connection with root-growing taught by the experiments made on this farm is the importance of early seeding. Several plots of mangels have yielded over 2,000 bushels per acre this season. In vegetables the tests are being found very reliable and helpful to the farmers of Western Manitoba. In fruit-growing the small fruits all do well, and the utter uselessness of importing apple or other large fruit trees from east

Experimental Farm for British Columbia.

The object of the Experimental Farms in each Province is to first test those methods of farming and those agricultural products that from the nature of the climate and conditions would naturally be the agricultural staples and serve the interest of farmers by advancing this interest in every way practicable, and at the same time feel cautiously in every direction where there is a chance to diversify the farm products, either for commercial purposes or to widen the farmers' bill of fare for his own table. In our Pacific Coast Province, west of the Cascades, fruit-growing has, perhaps, the most promise of profit, and the object in this line on this farm, which is situated at Agassiz, seventy miles east of Vancouver, on the line of the C. P. R., and under the superintendence of Mr. Thos. A. Sharpe, was to secure from every quarter varieties of fruit to test under ordinary farm conditions, feeling certain that in this way those varieties of fruits best suited for the climate and for market requirements, and at the same time profitable to the grower, would be found. For example, the list of apples is now nearly one thousand. Many of these have only been received as scions, and of course have not fruited, but of the considerable number fruited, some varieties have been found that are of sufficient promise to warrant recommending them to planters.



EXPERIMENTAL FARM AT AGASSIZ, BRITISH COLUMBIA, CANADA.

preventive of smut have done much towards checking the ravages of this destroying fungi.

From year to year careful tests are made with an average of about 30 varieties of wheat, 60 of oats, 20 of two-rowed and a like number of six-rowed barleys, and about 35 of peas. There is nothing yet, however, that Mr. Bedford can recommend for general sowing superior to the standard Red Fife wheat, which this year averaged 37 bushels per acre; Banner oats, 106 bushels per acre this year; and Odessa and Mensury barley, about 55 bushels per acre; and quantities of these varieties, absolutely pure, have been distributed as largely as possible among the farmers. The big average yields obtained on these farms year after year is substantial evidence of the superior cultivation given.

The growing of grasses has, ever since the establishment of the farm, received a very great deal of attention; and apart from assisting in the introduction of the *Bromus inermis* native rye (*Agropyrum tenerum*), and native Lyme (*Elymus americanus*) grasses, it has been demonstrated that a much better catch of grass can be secured by seeding without nurse crops. After years of failure, several of the clovers have, for the last few years, given satisfactory results, which Mr. Bedford attributes mainly to seeding *without nurse crop*, thus enabling the plants to make good roots to withstand the first winter. Red clover sown alone has made from six to nine inches of root by winter, while with

of the Great Lakes has been repeatedly proven. In forest trees and ornamental shrubs, over 200 varieties have been found perfectly hardy, and each year the list is being added to. This is also true of the perennial flowering plants.

This is the only farm in Western Canada where tile draining has been attempted. Some 4,000 feet of mains, with 1,000 feet of branches, serve to reclaim about 15 acres of land near the foot of the hills. As there are no springs along the course of the drains, they work perfectly, as there is no flow of water during the winter months.

About the superintendent's house an arboretum has been set out, in which are many varieties of trees and shrubs. There are also grass plots and beautiful beds of annuals and perennials. The barn, which is 111x50, with 10-foot stone foundation, accommodates 40 cattle and 12 horses, also root cellar and silos. The superstructure, with 16-foot posts, furnishes room for fodder and feed granaries. The storehouse is 72x28 or 16-foot posts. In this are implements, and carriage house, sample and store rooms. Abundance of excellent water is obtained from wells on the high land above the buildings. The live stock consists of work horses, and a few specimens of Shorthorns, Ayrshires, Holsteins, and a Guernsey bull; Berkshire and Tamworth swine, and several breeds of poultry. Some useful tests have been made in cattle feeding, with such feeds as are available to the average farmer.

The same may be said of plums, and perhaps of pears, but in the latter case longer time is needed before one could speak with certainty, for not only vigor and productiveness in the tree and fine appearance and quality in the fruit are required, but to be of most value as a variety, it must also be a good shipper, and to determine all these points requires time, and until all these points are definitely settled, it is not wise to recommend a variety for extensive planting, nor would careful nurserymen care to propagate a stock for sale.

On this farm attention has also been paid to testing numbers of the principal varieties of grains and roots with satisfactory results, but owing to the fact that nine years ago almost all of this farm was almost wild land, and to the area needed for fruit plantations, it has not been practicable to devote very large areas of land to these branches of farming; but for determining comparative values, small areas answer fairly well in testing a large number of varieties of grains. About one-third of the farm is valley, and the balance mountain land, a great deal of the latter being planted with the best and most valuable of Eastern hardwood trees. Orchards have not only been established on the valley lands of the farm, but on the bench lands on the mountain sides at altitudes varying from 150 to 1,050 feet. Our artists in the picturesque engraving given elsewhere have afforded the reader a very good conception of the farm and its main purpose.