

Investigating Farm Problems in the Annapolis Valley.

A TRIP through the Annapolis Valley, Nova Scotia, any time during the period from early June to late October will convince anyone that in the general scheme of creation "The Valley" was penciled off as a great apple-growing district. The soil and climate apparently combine to produce a natural habitat for the apple, and when apple trees once get their roots into the soil of that far-famed Valley they are pretty sure to develop into something that cannot be surpassed for color and stateliness. However, when man has his way he seldom improves on Nature's plans; and in the long run he usually destroys the happy equilibrium, exposes himself to the ills and forfeits the benefits which a kind Providence ordained should exist in the great scheme of which we are all a part. This, perhaps, is one reason for the Experimental Farm at Kentville, Nova Scotia, which began to take on shape in the spring of 1912 under the supervision of W. S. Blair. Orchards were planted in the Annapolis Valley twenty, thirty and forty years ago by pioneer fruit growers whose scientific knowledge could all be written down on the back cover of a public school primer and there would still be room to spare; and strange as it may seem those same early-planted orchards are the ones that are yielding the one million and 1½-million-barrel crops which the Valley now produces. In those early days the soils were not depleted, pests were few and unimportant, Nature smiled on the pioneers who went forth to plant trees. Perhaps it can be truthfully said that the men of twenty, thirty or forty years ago, in spite of their ignorance of nitrates, phosphates, insecticides and fungicides, were quite as well equipped to overcome the obstacles of their day as the modern grower is to battle with the infinitely more complex and stubborn problems of the present. Be that as it may, we desire here to pay a tribute to the early growers of the Annapolis Valley, whose prophetic vision and heroic efforts adorned that comparatively small area with the large producing orchards which earn for the Valley the distinction of being one of the foremost apple-growing districts in the world. They endured many hardships and denied themselves many comforts while the plantations were coming into bearing and to the writer, who has had a close acquaintance with the Valley for more than twenty-five years, it seems that we give too little credit to the stalwarts who laid the foundation for this great apple-growing industry.

If the fruit-growing enterprise has developed in the Annapolis Valley, and there can be no doubt regarding that, the problems and difficulties confronting growers have likewise increased. There are labor problems, marketing problems and, last but not least, cultural problems of no small magnitude. In order to throw some light on the general cultural methods best adapted to Valley farming and help solve the problems which confront the apple-growing specialist, the Experimental Farm, the theme of this article, was established at Kentville. This branch of the Dominion Experimental Farms System was primarily intended as a fruit station ministering to the needs of apple growers. However, during the past eight years, while the trees were still young, a fairly complete investigation of soils, farm crops, the relation of live stock to the fruit and general farm, and other kindred subjects, has been carried on.

THE DEARTH OF LIME.

The Annapolis Valley soils, and likewise those of the entire Province, of Prince Edward Island and of New Brunswick, are pronouncedly deficient in lime. The reason for this is not clear; some lay it to the character

and composition of the soil, others to the precipitation which is fairly heavy, while practically all those in a position to appreciate the real value and true function of lime agree as to the deficiency of it in Maritime soils. The Departments of Agriculture in the three Provinces are awake to the situation, and all are active in encouraging the application of lime in some form and putting it within reach of the farmers. At Kentville, Mr. Blair is experimenting with lime and endeavoring to reveal the useful part it plays in getting a catch of clover. He is of the opinion that 75 per cent. of the soils in the Annapolis Valley would return a handsome profit from 4 tons of limestone per acre broke up into two-ton applications just before seeding down, where a three-year rotation is followed. The aim at the Kentville farm is to get good catches of clover and build up the soil with humus. Lime is also being investigated in its relation to fertilizers and manure.

Maritime Province farmers would do well to test their soils and determine for themselves the actual needs of their farms. It is broadly proclaimed that lime and clover could be made to revolutionize farming in the Maritime Provinces if both were given proper recognition.



A Crop of Hay on the Dyked Marsh at the Experimental Farm, Kentville, N. S.

THE STRUGGLE WITH CLUBROOT.

Turnip growers in the East are fairly well acquainted with that enemy of the turnip field known as "clubroot." It has been steadily and persistently spreading until it has become a menace of no mean importance. Long blanks in the rows with no living turnip plants indicate the presence of this disease, and when it does not totally annihilate the crop the roots are dwarfed and contorted. The opinion has been entertained that an abundance of lime will prevent this scourge, and at Kentville a test has been carried on to determine the accuracy or fallacy of this contention. Slaked lime and ground limestone have been used in varying amounts on a number of plots purposely inoculated with clubroot, and when the results are compiled for this season's work the test should be completed. This is a matter of prime importance to farmers in the East where turnips grow to perfection when they do not fall a prey to this scourge.

CORN THE KING OF FIELD CROPS.

"There is no crop we can put into the ground that equals corn," said Mr. Blair, when asked if he still

championed and was successful with corn as a silage crop. The silos at the farm housed 225 tons of silage last year, and it was entirely satisfactory. They have yet to have a failure with the crop. Sunflower as a silage crop is being tried in an experimental way this year, and the results with it will be forthcoming later. A good many silos have been erected in the East, but for various reasons too many of them are allowed to stand unused, or in the case of the old-fashioned stave silo to collapse into a heap of ruins. Live stock cannot be carried successfully through the long winter period in Eastern Canada without succulent fodder, and the silos should be employed to contain silage made from some crops adapted to the climate.

Clover has a staunch supporter in the Superintendent, who argues that if timothy and clover are sown plentifully sufficient of the natural grasses will find their way in even far pasture land. The regular grass mixture sown consists of timothy, 8 pounds; alsike, 2 pounds, and red clover, 8 pounds.

Growers in the Annapolis Valley, particularly, have swung around to a liberal use of commercial fertilizers, where formerly they used it very sparingly. At the farm in question the matter is under test, and economical results have accompanied its use up to 1,000 pounds per acre. Above that amount the yields do not justify one in going.

MILK PRODUCTION PROFITABLE.

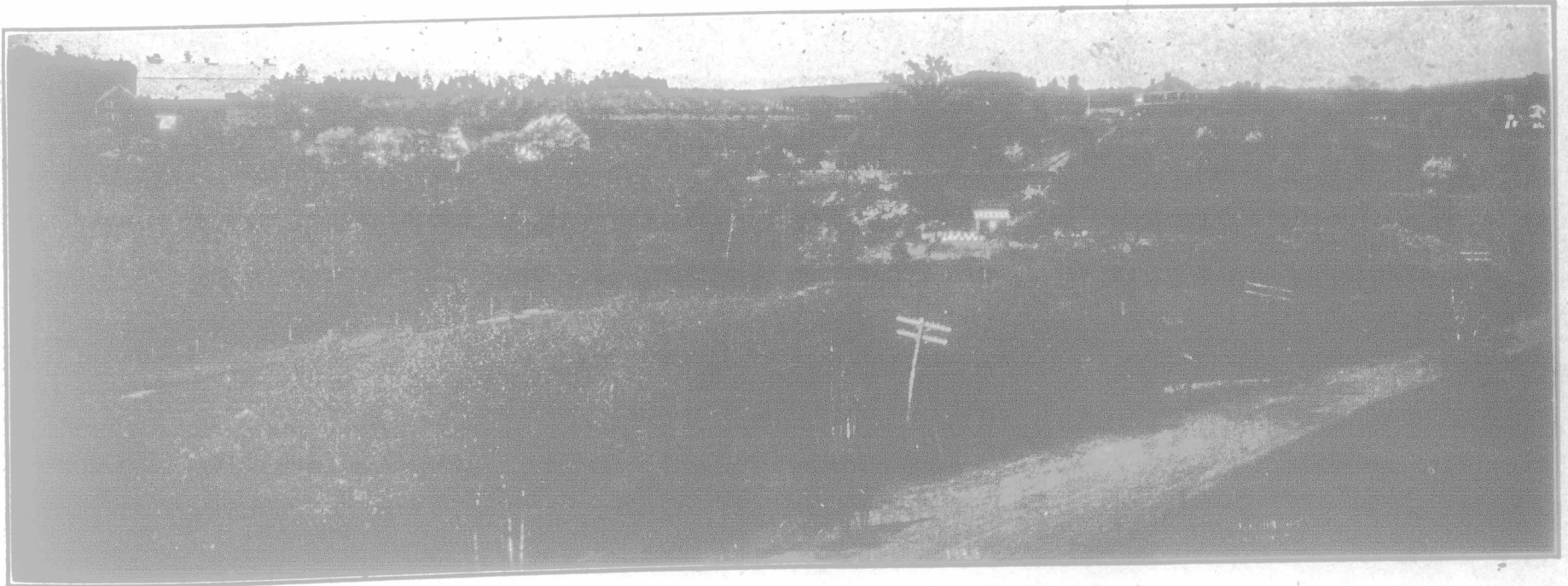
A very creditable herd of dual-purpose Shorthorns are maintained at the Kentville Farm. The foundation for the herd consisted of good milking Shorthorn cows with plenty of type and character, and on them have been used bulls strong in the blood of Butterfly King and St. Claire. When visiting the Farm we observed as nice a bunch of heifers and heifer calves as one would see in a long journey; they were well grown for their ages, thrifty and typey. We were pleased, indeed, to see such splendid stock bred for the purpose of improving the live stock in a district where the need of improvement is so apparent. It has always been a debatable question whether the fruit growers of the Annapolis Valley should stick exclusively to apple production or have two strings to their bow. Without entering into the pros and cons of the argument at this time it is sufficient to say that good live stock never did a country any harm, and where it is handled wisely it invariably does inestimable good.

A better description of the herd is contained in the report for one of the recent years when the complete records show that 10 aged cows and 4 heifers (14 in all) averaged 6,079 pounds of milk each for the year. The daily average was 19.02 pounds. The butter-fat test was 4.14 per cent. The average butter production for each cow in the year was 296.6 pounds, and the profit per cow was \$50.18.

THE FRUIT FARM PROPER.

The Experimental Farm at Kentville has been transformed from a wilderness to a fruit farm with amazing rapidity. Approximately 50 acres were planted to apples and other fruits during 1912, 1913 and 1914. A part of this is a commercial orchard planted 20 by 20 feet apart, and some 20 by 40 feet. There is also a variety orchard containing in the neighborhood of 450 varieties. In addition to this a farm recently added to the original purchase has 18 acres of trees, making over 60 acres of fruit. One of the tested varieties which is quite promising for the district is the Opalescent, a

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A Panoramic View of the Experimental Farm at Kentville, Nova Scotia.