

# AND & RURAL HOME

We Welcome Practical Progressive Ideas

Trade increases the wealth and glory of a country; but its real strength and stamina are to be looked for among the cultivators of the land—Lord Chatham.

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## The Hardiness of Alfalfa Under Canadian Conditions

A Review of Experiments Conducted in Every Province of Canada But One—Varieties That Have Stood the Test

WHERE alfalfa succeeds the success of agriculture is assured. It is the most nutritious of all home-grown forage crops. It yields more abundantly than any other field crop with the possible exception of corn. It is by all odds the cheapest source of protein in the rations of cows, steers, work horses, sheep and unsexed sows. It is highly valued by poultry men. The editors of Farm and Dairy can remember when men actually debated the feeding value of alfalfa hay. Its feeding value is now taken for granted, and the only question ever heard nowadays are such as these: "Is it hardy? Can we be reasonably sure of a crop? Will it stand our winters?"

Thousands of farmers in Canada have experimented with alfalfa. Many of these, perhaps the majority, have satisfied themselves that they can grow alfalfa profitably, and are taking advantage of the crop. Others are equally sure that alfalfa cannot be grown under their conditions and give up trying. We have often found, however, that in the same community and under apparently the same soil and climatic conditions some men are making a first crop success with alfalfa while others declare the crop a failure. Possibly those who failed have neglected some essential condition, the observance of which would have changed their failure to success. In the Bedford district of Quebec, for instance, we found one farmer who was making a great success with alfalfa, while many of his neighbors had limed the crop and failed. The man who succeeded had limed his soil and had used seed of the hardy Grimm variety. None of his neighbors had either limed or taken any particular pains to get seed of a good variety. Hence their failure.

It is this frequent neglect of essential conditions that makes the experiments of individual farmers a not too trustworthy indication of the adaptability of any particular section to alfalfa. We can fairly assume, however, that the superintendents of experimental farms will provide these essential conditions and a review of their results in the farms scattered all over Canada should afford conclusive evidence as to the hardiness of alfalfa. The reports from these experimental stations and agricultural colleges is of particular interest this season because of the severity of the winter of 1915-16, which has eliminated several varieties previously considered hardy. The following summary of results is gleaned from a series of reports to The Agricultural Gazette, the official mouthpiece of the Dominion Department of Agriculture.

### Alfalfa in the Maritimes.

Let us start with the Maritime Provinces. Climatic conditions there are certainly not favorable to alfalfa. The winters are open and the alternate thawing and freezing of the soil which plays havoc with all winter crops is there the rule rather than the exception. For many years it was taken for granted that alfalfa could not possibly succeed under maritime conditions, and the crop could scarcely be said to be even experimented with. In recent years, however, many varieties of alfalfa have been tested, and J. A. Clark, Superintendent of the Experimental Station at Charlottetown, P. E. I., reports that Grimm, Baltic and Ontario Variegated have proved to be equally hardy and quite superior to common alfalfa. A good stand has always been secured the first year after seeding, and when sown in rows it has usually wintered well for two or three seasons. An acre and the winter in Grimm sowed last year has come through the winter in good condition, and looks promising. "Our experience with alfalfa for some nine seasons," writes Mr. Clark, "in summarizing his conclusions, has led us to think that the crop is about as sure as red clover in this province, and while on the average it has not lived longer than you would expect red clover to stay in the soil, there is always the possi-

bility that it will remain for years. On the higher soils of King's county, alfalfa is more satisfactory than in the western part of the province."

Prof. J. M. Truman, writing from the agricultural college at Truro, N.S., says: "We have used two varieties of alfalfa in our field plots at the Nova Scotia Agricultural College—Grimm and Ontario Variegated. Both varieties came through the severe snow red clover in good condition, while common red clover in adjoining plots was killed out completely." There are no reports available from New Brunswick.

### Alfalfa in Quebec.

The climate of the Province of Quebec is, on the whole, much more severe than that of Ontario. In that province is an Experimental Union similar to the Experimental Union of Ontario. During the last five years over 1,000 lbs. of alfalfa seed of various varieties have been distributed to every section of the province through this organization, and the seed of this opportunity to state again that alfalfa thrives well in all parts of the province and under all climates, under the climate of Montreal as well as under that of Abitibi and of Lake St. John Gaspé coast. But the ordinary conditions of success must not be neglected—deep soil, well tilled, well drained by natural or artificial means, free from weeds, and especially free from couch grass."

Brother Liguori mentions the varieties that have given the best results as one imported from Belgium, which can no longer be secured, and the others practically no failures have been recorded during the last four years. Writing from the Ontario Agricultural Institute Rev. Pere Athanasie reports no winter killing with the following varieties: Lyman's alfalfa, Grimm No. 139, Grimm No. 338, Grimm No. 72, Montana, Dryland and Ontario Variegated. 71 of

these varieties came through the winter without damage, and if the weather keeps on being favorable four crops are anticipated this year instead of the usual three.

At McDonald College, St. Anne de Bellevue, Que., the past winter here with unusual severity on alfalfa, grasses and clovers. Most of the plots of red clover were killed while a number of blocks of alfalfa, sown broadcast and in rows, that have survived all winters since they were seeded in 1912 and 1913, have been from 75 to 90 per cent winter killed. There were some plots, however, which came through with little damage, and it was noticeable that those which had a good covering when winter set in survived out of all proportion to the protection afforded. Reviewing results Mr. Summery, of the Field Husbandry Department, writes as follows:

"The results of the test this year under these severe conditions again strongly emphasize the importance of leaving a good growth to freeze down to hold the snow and to protect the crowns. In previous work with this crop a number of varieties, including the Grimm, showed themselves to be particularly hardy. This variety has again shown hardness, but has been more severely winter killed than ever before. A number of new and improved varieties that are in the row tests seem to be completely resistant to conditions of a winter of this year, for, although on heavy soil, with little aftermath, and where ordinary alfalfa had frozen out almost every year, these new strains have not been winter killed at all. Hardy varieties, given good conditions for wintering by making provision for after growth and drainage, seem to be the most important factors in preventing winter killing."

### Ontario Reports.

There are two reports from Ontario. Mr. Fred Forsyth, Agricultural Representative in Lanark county, writes as follows:

"In the county of Lanark we have several alfalfa demonstration plots. These are planted with the Grimm variety, so that we have no evidence as to the relative vitality of different sorts. The plots were put in two or three years ago and to-day will average an 85 per cent stand. The purpose of these demonstrations is to prove to farmers that alfalfa will stand our climatic conditions providing the right variety is sown. Many farmers had tried to grow alfalfa, but failed. The demonstrations, it is hoped, will encourage many to again begin raising this crop. The plots are scattered fairly well throughout the country, and are thus demonstrating to a wide circle of farmers the lessons they were established to teach."

Mr. J. S. Knapp, representative in Waterloo county, is brief and to the point when he says: "The Grimm and Ontario Variegated are the only varieties of alfalfa that have given satisfaction in the county of Waterloo. Farmers who have been able to secure seed of these varieties have fairly good stands. Our farmers have practically given up sowing alfalfa, except where they can secure seed of these varieties."

### Severe Test in Western Canada.

Reports from Western Canada emphasize the absolute necessity of hardy strains. If alfalfa is to be grown successfully on the prairies, Mr. W. Southworth, of the Manitoba Agricultural College, reports that out of about 40 different commercial strains that out of various sources, the only one which showed any real capacity to resist winter killing was from a Grimm strain, and even in this strain a high percentage of plants were destroyed or considerably weakened. Mr. Southworth reports interestingly on their breeding work as follows:

"The alfalfa showing most resistance to winter

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### The Great Farm Trio

By Tom Alfalfa.

Corn, clover and cows. Here we have the great farm trio. If I can grow good corn, if soil and climate conditions favor the clovers, particularly alfalfa, then, with a herd of good dairy cows, it would take more hard of good dairy cows, it would take more hard of good dairy cows, it would take more hard of the farming game. We tried grain growing. We made money in poultry. Yes, we have even had strawberries in dozen crate lots. But when it comes to depending on alfalfa we always had to come back to corn, clover and cows. What an admirable trio they are; the corn, large, rich in succulence and carbohydrate, the clovers rich in protein; the dairy cow able to take the two, assimilate them, balance the surplus of the one against the deficiencies of the other and turn out a product for which the world always has a market, be it in the form of raw milk, butter or cheese. But we must have all three. The good farmer will fill his silos and his mows, but if he is stocked up with poor cows in his manufacturing plant he will fall of the best success. The man who is good with cows but short on farming is likewise on the road to disappointment. The trio spells the best and most satisfying and most enduring success that can come to the farmer of to-day.