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FARM AND DAIRY

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Comments on a Fertilizer Experiment

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My attention was called the other day to a fertilizer advertisement in which a district representative of the Ontario Department of Agriculture allows his name to appear as sponsor for the result of an experiment, which, we are asked to believe, proves the superiority of a factory-mixed over a home-mixed fertilizer. One wonders what could have induced this man, who is a graduate of an agricultural college, to lend his name to the perpetration of such a fraud on unsuspecting farmers or to insult the intelligence of those who know something of the principles of fertilizing.

Do Canadian agricultural colleges impart no instruction on the subject of fertilizers and on the essential conditions required for comparative tests? In order that a fair test be assured, it is necessary that the plots should be located in the same field and that the soil conditions throughout are in every respect similar. yet the test, cited in the advertisement, was conducted on two different farms. On one farm 500 lbs. of a home-mixture, composed of 100 lbs. of nitrate of soda, 300 lbs. basic slag and 200 lbs. potash (presumably phosphate or sulphate of potash), together with eight loads of manure per acre, were employed; while on the other farm 500 lbs. of a "factory-mixed" fertilizer, analysing 36-10, supplemented by six loads of manure per acre, were applied.

Now the same amounts of nitrogen, phosphoric acid and potash, contained in 500 lbs. of this 36-10 mixture, could be supplied in 400 lbs. of a mixture compounded of 100 lbs. nitrate of soda, 200 lbs. acid phosphate and 100 lbs. muriate of potash, which, according to to-day's prices on

the separate materials, as quoted to me, would cost \$7 or \$8. It appears quite obvious then that, besides the necessity of having equal soil conditions, it would also be essential to supply in the home-mixture amounts of plant food corresponding to those in the factory-mixture, if the experiment is to be of any value as such. Again in one instance eight loads of manure per acre were used, while six were used in the other. The nature of the two soils was not mentioned, but doubtless the dissimilarity was as pronounced in this as in other respects. So glaring, in fact, are the inequalities of conditions in every direction that one is forced to the conclusion that a fair test was perhaps perfectly avoided. This is perhaps perfectly natural, on the part of those responsible for the preparation of the advertisement in question, since they are themselves conscious of the fact that in 99 cases out of 100, given "fair field and no favor," the indisputable advantages of home-mixing would be demonstrated. Is it not a significant fact that extensive experiments, made by agricultural colleges, both in the United States and Canada, advocate the practice?

Ordinarily, I should not trouble to comment on such exaggerations, which not infrequently appear in advertisements, but I must confess surprise at seeing the statements (misleading in the extreme) supported by a representative of the Ontario Government, whose duties, as to give the farmer reliable information on all agricultural subjects.

An Expert on Alfalfa Seed Production

PROF. C. A. Zavitz gave an illuminating paper at the recent Canadian Seed Growers' Association Convention on "The Production of seed of alfalfa in Canada." He said there was no question about the value of the alfalfa plant, which is a deep-rooted perennial, gathering and storing nitrogen to enrich the soil and furnishing excellent forage for stock of all kinds.

During a period of experimentation of 12 years with alfalfa at Guelph, he had realized an average of 19.9 tons of green crop per acre or 4.3 tons of dry matter. Their practice was to use 18 to 20 lbs. of seed per acre more with a nurse crop of barley and to take the three cuttings which occurred about June 21, July 31st, and again late in September. He believed the crop was adopted to all kinds of soil that had good drainage, sufficient richness of soil, and plenty of lime in it.

During the last year there had been a decrease of over 22,000 acres, due to winter killing of varieties which were too tender for this country. This was not an unmixing evil, as it would likely draw the farmers' attention to growing the more hardy strains, such as Ontario Variegated and Grims' alfalfa.


ONTARIO HAS BEST SEED DISTRICT. He said he had heard Prof. Smith of Maryland make the statement that he considered the Niagara Peninsula the best alfalfa seed growing district east of the Mississippi, with territory around Utica, N.Y., as the next best place. Prof. Zavitz thought seed could be grown well all along the lower basin of the Grand River, in Lambton county and imports of south-western Ontario profitably.

The highest yields obtained in the province had been seven bushels an acre, but the average per acre was not more than two bushels. The time to cut alfalfa for seed was judged by the color of the seed pods and it could be harvested with a mower, with or without a table attachment, a reaper, or a binder. The seed is usually obtained from the second cuttings when the weather conditions are favorable for seed production. It is threshed with a clover huller.

There are four kinds of alfalfa, of which the common or violet kind is grown most extensively, although it is scarcely hardy enough for our northern conditions. The Variegated alfalfa are the only kinds that are of some of the common alfalfa strains seem to become fairly well acclimated.

Besides those parts of Ontario where alfalfa seed can be produced, parts of southern Alberta and Saskatchewan seem to be adapted to seed production. Reference was also made to Prof. Hansen's introduction of a yellow alfalfa from Siberia, which is being tested out now for northern conditions in the United States and Canada. Summing up, Prof. Zavitz said that

- (1) Alfalfa can be successfully grown in many parts of Canada.
- (2) Seed can be produced in Canada.
- (3) Ontario Variegated and Grims' should be the strains to grow.
- (4) Seed growing centres should be organized.
- (5) The C.S.G.A. could be an agent both for the encouragement of seed production and its distribution.



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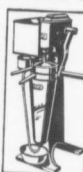
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