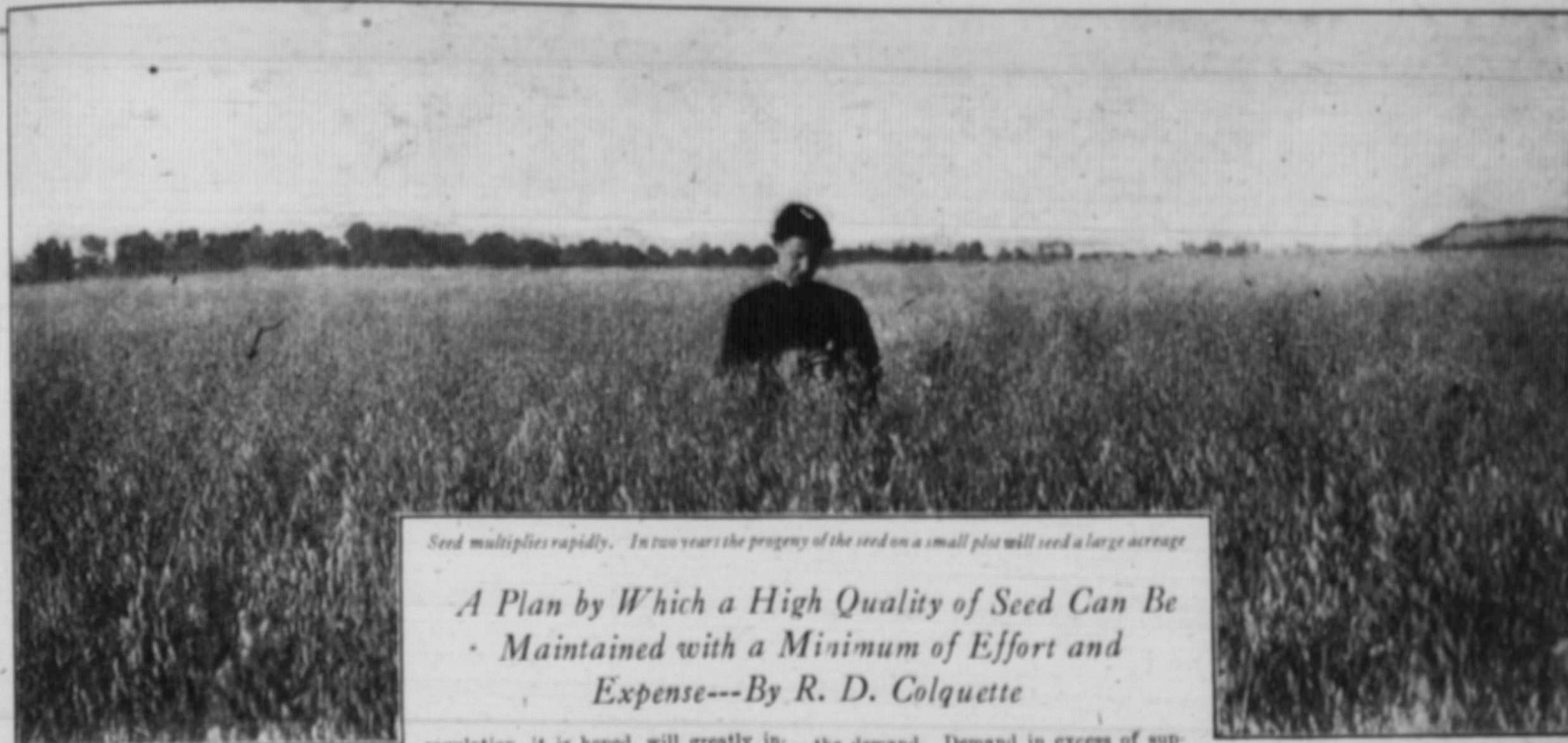


Improved Seed for Every Farm



Seed multiplies rapidly. In two years the progeny of the seed on a small plot will seed a large acreage

A Plan by Which a High Quality of Seed Can Be Maintained with a Minimum of Effort and Expense---By R. D. Colquette

THE best system yet devised for making definite, conscious progress under farm conditions in seed improvement is that recommended and practiced by the Canadian Seed Growers' Association. For wheat, oats and barley it is briefly this:—

From ripe grain grown from seed of recognized quality, selections of heads of uniform and desirable type are made. These heads, after thorough curing, are threshed by hand. From the threshed grain the best kernels are selected. The following spring this specially-selected seed is sown on a plot, known as a Hand-Selected Seed Plot, on which favorable cultural conditions are provided. During the growing and ripening period all foreign plants and off-type progeny of the selected seed are carefully eliminated. When this work is carried on by a member of the C.S.G.A. and all the regulations of the association complied with, the product may be registered as Elite Stock Seed.

Method of Increasing Good Seed

The next consideration is to increase the desirable strain of seed which has been obtained by this process of selection. Elite Stock Seed is sown on a multiplying field. Good cultural conditions are again provided and elimination of undesirable plants continued. The product of this field, if it has passed official inspection by the C.S.G.A., may be registered and sold as First Generation Registered Seed under the rules of the C.S.G.A. the following year, may be recorded and sold as Second Generation Registered Seed, and this in turn may be multiplied in the succeeding season, producing Third Generation Registered Seed. After this the seed passes out of the registered class.

In order to qualify for membership in the Canadian Seed Growers' Association, it is necessary to produce Elite Stock Seed from hand selections and to comply with the by-laws of the association. The applicant for membership must give satisfactory evidence of his determination to make seed growing a special branch of his farming operations. Until the last meeting of the C.S.G.A., which was held in Ottawa, in September, only members of the association could register seed grain. Under new regulations then adopted, non-members of the association are granted the privilege of having grain inspected and officially recognized as First, Second or Third generation registered seed as the case may be. This new

regulation, it is hoped, will greatly increase the amount of seed of recognized quality, that will be made available for seed purposes.

It has been found that only a comparatively small number of farmers will undertake the production of Elite Stock Seed from their own selections. More could profitably engage in it. The work offers a splendid opportunity to those who are in a position to undertake it. All registered seed of first, second and third generation must be derived from Elite Stock Seed. For these qualities of seed there will be an ever increasing demand as the benefits derived from sowing them become more and more recognized. Up to the present about 400 farmers through Canada have become members of the C.S.G.A., while about 1,000 others have applied for membership. This includes practically all the men in Canada who have made a start at producing Elite Stock. When the small amount of this seed that can be produced per man is considered it will readily be seen that their output will be inadequate to supply

the demand. Demand in excess of supply means high prices and every encouragement exists for a greater number of farmers to engage in the work of improvement by hand selection under the supervision of the Canadian Seed Growers' Association.

To the farmer who wishes to improve the quality of his grain crops by planting registered seed and multiplying it on his own farm, but who does not desire to conduct hand selected plots only one alternative presents itself. He must buy each year enough registered seed to sow a small plot so that in one or at most two years he will have enough seed of recognized pure strains to meet his seed requirements. Elite Stock Seed is not available for this purpose. Nor is it probable that it will be in the near future. The producers of this quality of seed find that it pays them better to sow it and confine their sales to its progeny.

An Alternative Plan

First and second generation seed is, however, available in considerable quantities. The former should be secured if at all possible, even if only enough is obtained to sow an acre. In normal years this would produce at least 30 bushels of second generation seed, which, at the same rate of increase would in turn yield easily enough third generation seed to supply, with a safe margin, the seed requirements of the average farm. Only a small amount of labor would be entailed in maintaining the purity on such a plot by roguing foreign plants and undesirable types. Besides, if the crop is inspected and approved by the C.S.G.A., it can be recorded and sold as Third Generation Registered Seed at a premium over ordinary commercial wheat or even good seed wheat which has no official standing.

If First Generation Registered Seed cannot be secured, at least enough Second Generation Registered Seed should be purchased so that the increase

in two years would meet the seed requirements of the farm. If he can afford it the farmer might buy enough so that the increase in one year would seed his farm. This is not necessary, however. By thoroughly roguing the smaller plot the strain can be kept practically pure and its quality maintained. The farm acreage will be sown with seed one generation further removed from Elite Stock Seed than if first generation seed is obtained to start with. With careful attention to the maintenance of purity but little deterioration in the quality of the seed sown on the farm acreage will be encountered.

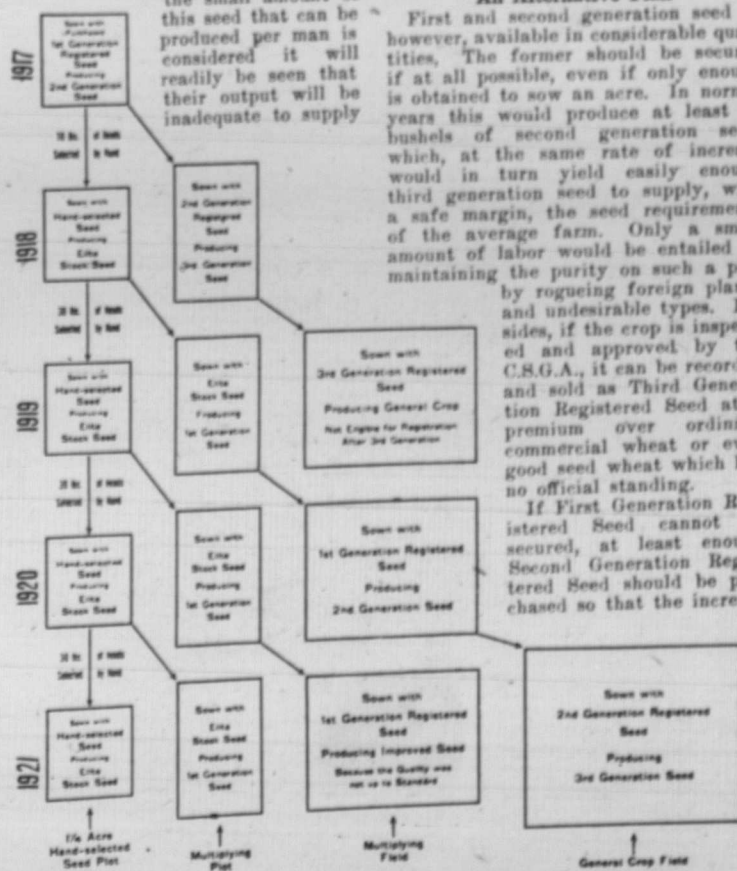
A Matter of Good Business

There is but little of sentiment in this proposition. It is a matter of good business. To balance the outlay of money in purchasing registered seed and of labor in keeping it pure until its increase is large enough to seed the farm there is the heavier yield that will be secured and also the premium that can always be secured for seed grain of known quality over that sold for commercial purposes.

This plan must be consistently followed year after year if permanent benefits are to be secured. Sporadic or intermittent efforts will not get one anywhere. Each year enough registered seed will have to be obtained from an outside source to seed a plot. This will have to be carefully rogued and the seed kept separate for sowing a small field the following season. This field will also have to be given attention, off-type plants and plants of other varieties being as carefully eliminated as time will allow so as to keep the strain pure. Each year, therefore, there will be the product of a seed field for seeding the farm acreage. The seed plot and the seed field will have to become a regular part of the farm organization in order that the benefits of the scheme may be permanent.

Science is on the side of the man who endeavors to maintain the purity of strains of such cereals as wheat, oats and barley. These plants are self fertilizing. That means that they ordinarily breed true, and seldom show any marked variation from the parent plant. A strain or pure line of wheat, oats or barley will breed practically true from generation to generation as there is seldom any outside crossing. Thus a strain selected for yielding quality, stiffness of straw and other desirable characters has only to be kept free from mixtures of other strains or varieties in order to keep the seed in bulk true to standard. Modifications in the characteristics of the strain

Continued on Page 26



How Registered Seed is Grown under the Plan Evolved by the Canadian Seed Growers' Association