

Good Seed as a Factor in Grain Production

HE who would reap the greatest crop returns possible within the soil and climatic limitations imposed by nature, the greatest net profit from his capital, and the greatest rewards for a summer and toil and responsibility in the field, cannot afford to neglect seed as an important factor in crop production. True it is that a full crop is the result of combining many essential factors of crop production, some of which like temperatures and rainfall are beyond the control of the farmer, while other factors like abundant soil fertility can only be provided sometimes after several years of careful planning and field management. The full crop, however, is not entirely a result of favorable climatic conditions, but only partly so, for the preparation of the seed-bed in which the crop is to grow and the seed from which the crop will arise are factors of crop production entirely under the control of the farmer. Of these two factors controllable by the farmer, the character of the seed-bed is undoubtedly the most important; but a good seed-bed in which poor seed has been sown cannot yield the full crop. The seed is an important item in growing the full crop, and worthy of far more care and consideration than is ordinarily given it.

What is Good Seed

Good seed is a very comprehensive term and in the broadest sense means (1st) seed of the variety best adapted to your local soil and climatic conditions; (2nd) seed that is pure and true to type; (3rd) seed that is free from foul weed seeds; (4th) seed that will germinate quickly and evenly and give the crop a vigorous start in its life, and (5th) seed that is free from such crop diseases as smut and flax wilt.

Seed that can stand all these tests can surely be called "good seed" and such seed will make a wide difference in crop yields as compared to seed that cannot stand all these tests.

Let us follow out these various points about "good seed" to briefly illustrate their revelations to crop yields, and also show how the grain grower can secure seed good enough to stand all these tests for "good seed."

Varieties

Careful plant breeders who know their business are nowadays breeding and improving field crops successfully. Varieties that represent years of careful, patient breeding and selection are

slowly being originated and the seed increased and distributed to grain growers. These varieties will produce more than common varieties because of the productive qualities fixed in the variety through the long continued process of breeding and selection, just as improved breeds of live stock will grow more vigorously on the given amount of feed, than will wild cattle. No longer can the grain grower afford to use scrub varieties of grain, for the improved varieties may mean a gain of 10 per cent. to 20 per cent. in crop with no additional cost for production.

grade and select the seed in future years as to prevent the variety from "running out" as it will if comes from the separator, but ap- the seed is not annually graded and selected.

Pure Seed Desirable

Any man who has ever raised and sold grain knows the value of a pure, uniform crop, if he will only stop to think about it. A crop from pure seed ripens evenly, and will grade and sell as a smoother product than a crop from mixed and impure seed. We will admit for the sake of argument that the grain buyer can also

of "Everybody's doing it." Grain intended for seed may appear perfectly clean of weed seeds as it comes from the separator, but appearances are usually deceptive, and the fanning mill will take out a surprisingly large amount of weed seeds that pass unnoticed in the original sample. It pays big to watch the weeds and to use every effort to keep them out, for they are competitors with our crops for food, water and sunshine and all they get is a debit on our books.

The Value of Plump, Heavy Seed

How familiar to the farmer are the runt pigs that appear every year in the pig crop. They start like with a handicap and they never seem to catch up. In the beginning the mother wasn't strong enough to give the full gift of life to the runt, then she fails to supply food enough for him as well as his strenuous brothers, and when weaning time came with the days of troughs the husky brothers again gave him the short end of the feed ration, and so he could never overcome his early handicap, but went to the butcher an unprofitable animal for his owner. A commonplace observation, a platitude, you will say, and what relation have runt pigs got to good seed? Runt pig observations are commonplace and yet sometimes we need commonplace ideas along familiar lines to start us thinking along other lines. The same conditions that produce our unprofitable runt pig may produce thousands of unprofitable runt grain plants in our grain fields. A light weight shrivelled seed is like the wheat sow, that started the run pig, only in this case the runt is a wheat or an oat plant. Then for many days after germination or birth, the baby plant is dependent for food on the stored-up starch food in the seed. If the seed is plump and heavy the baby plant gets a quick, strong start, and soon develops strong roots so that it can wean itself and rustle for its own food. On the other hand if the baby grain plant comes from a light weight shrivelled seed, its food supply during infancy is limited, its roots develop slowly and growth is not quick and vigorous, and the runt plant so produced never does catch up to the plant that had a vigorous start in life, or produce as much grain.

When heavy, plump seed is sown and even, uniform germination is insured, the crop starts



An apostle of Good Seed—"Caught" along the track of the G.T.P. Railway.

The desire to get new and better seed on the farm often leads farmers into the mistake of buying and importing seed from localities where climate and soil conditions are radically different from their own use. In a great majority of cases this practice will not increase yields even though the variety imported be an improved and productive variety. The bag of seed at the end of the rainbow may look very luring, but it may not contain as much gold as the bag that is closer home. Improved varieties are desirable, but if the seed comes from a different climatic zone it is highly probable that the crop yields will suffer while the variety is getting acclimatized. The safest policy is to get the seed of a new and improved variety as close to home as possible and then to so

find an excuse to levy dockage, but even so the smooth, uniform crop from pure seed will reduce somewhat the chances for fault-finding and dockage. Not only this, but when grain crops are kept pure and free from admixtures the opportunity is always at hand to sell seed grain at a premium on the market price.

Seed and Weeds

With a few exceptions the noxious weeds of our Western Canadian farms are annuals, and also with a few exceptions the weed seeds are gathered with the grain crops. Thus most weeds can be kept under control when the fanning mill is correctly used to clean the seed that is to be sown. Practically every farmer knows this, but it is a case where "Everybody isn't doing it" instead

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