eight varieties of barley sown there, all gave larger crops from the seed from selected heads. While in two instances the difference was only 20 pounds per acre, yet the average difference in favour of the seed from the selected heads of barley was 1 bushel 24 pounds per acre. It seems evident from these experiments and from others that we have tried before, that where the soil is very uniform, as it is on the North-west plains and where it is highly charged with plant food, there is not the same advantage gained in selecting seed that we have in other parts of the Dominion, where the land is more variable and contains less plant food. We have had in a former season from rejected seed, that would not be saleable at all for seed purposes at Indian Head, as good crops as we had that year from well screened seed.

It would appear that where the seed is sown in a soil where there is an abundance of nitrogenous matter and other plant-food, and its power of holding the moisture is good, there is such an abundance of food for the young plant, that it does not matter as to the supply laid up for it in the seed, the young plant is able through its rootlets to begin to feed at once on the abundant food with which it is surrounded. Hence it does not matter so much under these circumstances whether the seed kernel is plump or shrunken provided the germ is strong and vigorous. We have had in the past several instances where farmers from Manitoba and the North-west have sent samples of small wrinkled, shrivelled seed, but with good germinating power, asking advice as to whether such grain should be used for seed. I have invariably advised farmers not to sow such grain. In some instances it has been sown, and I have received samples after harvest of good grain produced from such seed and heavy crops reported. This can be done in other parts of the Dominion, but I mention these facts because I think they go to show that we need not expect such good results from the careful selecting of seeds in the North-west country as we may look for where plant-food is less abundant and other conditions are less favourable. It stands to reason that under average conditions plump seed, whether hand-selected or well screened, is necessary to give the plant a good start, so that it may have its roots well grown from nourishment stored in the seed itself before it is thrown on its own resources—with such a good start its chances of maturing a good crop are much increased.

By Mr. Heyd :

Q. Suppose there is a continuous selection from year to year, would not the qualities of the selected seed be a factor you did not experience in the first year ?

A. We have been carrying that on for several years, but, perhaps, we have not pursued it long enough to be able to answer such a question in a decided manner, but my impression is that the selecting of grain for seed or having the seed well cleaned and screened so that the sample may be plump, is a most important thing for the farmer in the eastern parts of Canada, and one which will in the long run well repay him for any extra trouble he may take in this way.

By Mr. Wilson :

Q. I think that the choice of plump seed for sowing would recommend itself to the common sense of everybody ?

A. Yes.

By Mr. Farquharson :

Q. In unselected seed you have more pickles ?

A. I beg your pardon.

Q. With unselected seed you have more pickles or kernels of grain, probably 50 per cent. In selecting your seed you simply throw away the small wheat. You would have many more grains in the bushel of unselected wheat. That may have something to do with the yield?