

SOIL FERTILITY

ITS ECONOMIC MAINTENANCE AND INCREASE.*

AN ADDRESS TO FARMERS' INSTITUTE WORKERS

BY

FRANK T. SMITH, M.A., D.Sc.,
Dominion Chemist.

We are again called upon to take part in an educational campaign, with the view of increasing the output of our agricultural products. It is in this most practical way, the larger production of foodstuffs, that many a Canadian farmer can, in the troublous times, very materially assist the Empire. It is thus that he can "do his bit" and "serve his King and country."

INCREASED PRODUCTION

In this campaign we are not so anxious to urge upon our farmers an increase in the acreage or area to be put under crops as to obtain a larger yield from the acreage at present under crop. We think that those who are engaged in this campaign should have that point well in view, and we might say with regard to that phase of the question there is plenty of scope for improvement in Canada. We realize, speaking generally, that our crop yields are very much below what is possible, probably in many cases below what is profitable; not merely below the maximum, but below a decent average. There is plenty of margin for improvement in that regard, and I think our energies, at the present time, should be more particularly bent in the direction of urging our farmers to bring up the average of the yield rather than to extend the acreage to be put under crop, although there are places where both may be necessary and desirable.

We have been terribly wasteful of plant food, especially in the Northwest, where farming has been likened to mining, and it is by sounding a note of warning for the future that we should endeavour to get our farmers to maintain and increase the fertility of our soils, and by better, more rational methods, to put a stop to that waste. This warning is necessary in Ontario and Eastern Canada. We must not blame the farmers too much for using methods, if such they can be called, that have impoverished their soil. We have now, however, arrived at that stage where we can change from the extensive to intensive farming. And we must change. It is going to be easier, more profitable, for the farmer to get 60 bushels from one acre than it will be for him to get 30 bushels per acre from two acres; of course this is a very rough and ready illustration, but it will convey the idea I wish to bring forward, viz., that on many farms there will be more profit coming to the farmer from the extra increase in his yield than by putting more land under tillage. Consequently in this present campaign we must place a great deal of emphasis upon this matter of increase.

* The material used in this address has been largely taken from the "Evidence" given by the writer before the Select Standing Committee on Agriculture and Colonization of the House of Commons, 1915. This "Evidence" is not available for general distribution.