

GRAIN CROPS.

All cultivated cereals manifest, sooner or later, a tendency to deteriorate or run out; some much earlier than others. New varieties freshly introduced into a country often show great vigour and a high average of productiveness. Hence the importance of introducing new or untried sorts, and of the exchange of seed between localities having different conditions as to climate. Spring wheat has been for some years past a comparative failure in Ontario, producing, it is said of late, an average of 12 bushels, as against a former yield of nearly 20 bushels. This is attributed to various causes, such as climate changes, exhaustion of soil and insect pests. All these have some part in the result, yet it is likely that deterioration is an important element in the case. More knowledge as to the proper rotation of crops, more thorough tillage and thorough drainage, would materially aid in advancing productiveness.

When we consider that a single grain of wheat carefully grown as a separate plant will yield an average of about three hundredfold, and how small compared with this is the ordinary yield in field culture, it is evident that there is abundant room for experiment and improvement as to methods of cultivation and treatment. The results of some researches are of such a nature, that after definite conclusions have once been reached and published, there is no special need of their being repeated. Not so with the growth of agricultural products; the circumstances of climate and soil are so variable, and changes in the character of plants so frequent, that experiments may be constantly conducted with profit.

Recent researches in Russia, lately published in St. Petersburg, demonstrate the fact that wheat grown in the northern provinces of that empire ripens in less time than that grown in the southern, the difference being about sixteen days. How much of this difference is due to variety has not been determined, but there is no question that if we succeed in obtaining for our vast wheat fields in the North-West earlier ripening varieties of good quality, the area of wheat culture will be extended, and the benefits resulting difficult to overestimate. Other field crops can, in all probability, in like manner be improved and made more profitable to the growers.

STOCK, HORSES, &c.

It is proposed to carry on a series of experiments with small herds of cattle, selecting such breeds as are likely to prove the most gene-