

late fall ploughing. The data at present available does not favour the teaching often advanced that deep fall ploughing is always best for second or third crop after fallow in climates such as ours where dry autumn, winter and spring seasons are the rule. At the same time, when ploughing is done in the fall it has not to be done in the spring, and until spring ploughing is finished it is not ready for a crop and may not be ready until it is too late.

Deep fall ploughing gave us good results when the soil was in condition, and when the autumn was moist and the winter snowfall heavy. Very favourable yields were also obtained from deep fall ploughing on land that was infested with quack grass and native shrubs and also where long stubble was ploughed under without burning and the land well worked down afterwards; but it gave us poor results when the fall and winter following were dry, as most of our fall and winter seasons are, and very poor results when a heavy stubble was ploughed under and the land not worked down after ploughing.

It would seem that deep fall ploughing, as a general rule, is likely to produce less favourable yields in our climate than in a humid one, and less in Western Saskatchewan than in either Eastern or Northern Saskatchewan. It would also seem from the point of view of weed control that deep ploughing before weed seeds have germinated should be discouraged.

Spring ploughing permits the stubble to hold snow when there is any to hold and gives less opportunity for the soil to dry out. In other respects what has been said of fall ploughing applies in a general way to spring ploughing. It has been observed, however, that spring ploughing for oats gives more favourable results than the same cultivation does with wheat, and invariably it produces more of any cereal than fall ploughed land that is left untilled and allowed to dry out. Favourable results from spring ploughing for barley have been reported by many different farmers.

It might here be emphasised again that if ploughing is done it should be firmed and well harrowed down, otherwise very disappointing yields may often result.

#### THE IMPORTANCE OF "NET" RETURNS.

From what has been said it is apparent that fair yields can be produced on stubble fields. Our aim, however, must be to produce "net" profits rather than "gross" returns. A large yield is not always the most profitable. On the other hand a poor yield, even though no cultivation has been given, may not pay the interest and maintenance charges against the necessary investment in land, buildings, machinery, fences and stock.

As long as land is cheap and labour and equipment are high in price intensive methods are not likely to prove as profitable as carefully thought out and intelligently practiced extensive ones. Nevertheless, if overhead charges against the investment are to be met the conditions that cause poor crops must be controlled. At the present time in Western Canada intelligent, timely and sufficient tillage is the greatest means at our disposal for controlling, not only the factors that limit yield, but the net revenue as well.

