

RIGHT CULTIVATION AND IMPLEMENTS.

Wherever cultivation is carried out it is essential to increased production that it be as thorough as the season, labour, and facilities available permit. Thorough and timely cultivation makes available plant-food and conserves soil-moisture, the two most important factors in promoting abundant crop-growth. In adverse seasons attention to thoroughness and timeliness as regards cultivation frequently means the difference between success and failure in crop-production. A fine firm seed-bed is important in giving a crop a good start—a highly important factor; and the rule to follow in the seeding of crops is, the finer the seed the finer the seed-bed. Elimination, as far as possible, of rough-and-ready cultivation will go a long way toward materially increasing production from our soils.

The adoption of methods of cultivation and the use of implements suited to varying conditions of soil, climate, and labour-supply will, where possible, contribute a great deal toward increased output. Labour-saving machinery can materially assist in this direction. The farm tractor, on land suitable for its use, can play an important part.

In parts of the country where the rainfall is prevailingly somewhat limited, or where in seasons the weather conditions are dry during the growing-period, implements designed for "dry-land" farming could be used to advantage. In preparing a seed-bed under such conditions use could be made of the subsurface and surface packers, as used in the western States and provinces of North America. These implements pack the soil, both lower and upper portions, and thereby encourage moisture to travel upwards by capillarity. The thin dust mulch that, in addition to packing, is produced by the subsurface packer tends to check evaporation from the soil. Thus moisture is both conveniently concentrated and conserved, and so made the most of by the crop subsequently sown. Disk drills, especially the double disk, also pack the soil around the grain as it is sown, thereby causing the young plant to have the benefit of a maximum of the moisture available in this comparatively dry soil.

Failing the use of these special-purpose implements, the roller, of as heavy a type as made, should be made plentiful use of in preparing "dry-land" seed-beds, and their use should always be followed by a final stroke of a chain or brush harrow to promote a dust mulch, and so prevent evaporation. After every shower of rain in such climates or seasons a stroke of the harrows (light tine), where possible, will conserve this extra moisture to a marked extent. Indeed, during a dry spell when a cereal or turnip crop seems to "stand still" a stroke of the harrows (crosswise) often works like magic in promoting growth. This, again, is due to evaporation of moisture being checked and concentrated at the roots of the crop.

In like manner the intercultivation of drilled crops during a dry season often means the difference between success and failure with respect to such crops. This being so, the expenditure on labour for such purpose where at all available or procurable is thoroughly justifiable. In other words, it pays.

INTELLIGENT USE OF FERTILIZERS.

A better understanding of the chemistry and use of commercial fertilizers on the part of a greater number of our settlers would be