

## WATER DEVELOPMENT.

The development of surface-water resources for agricultural use is a major rehabilitation activity which has already resulted in substantial benefits to farmers and ranchers in the drought area. The object of this work is to provide supplies of water throughout the year by storing spring run-off in dugouts and dams for domestic, stock-watering, and irrigation purposes. The principal value of this type of development is to enable live-stock production in areas where it would be otherwise impossible. This work is supervised by the Water Development Committee with headquarters at Regina, Sask. The personnel of this Committee includes representatives of the Dominion Department of Agriculture and of the water-rights branches of each of the Prairie Provinces.

Under the rehabilitation program, two types of projects are being constructed—small projects on private farms and large projects for community use. Small projects include excavations known as dugouts, dams on small streams, and irrigation works, in the construction of which farmers receive free engineering services, and financial assistance in proportion to the amount of work done. The basis of financial assistance is  $4\frac{1}{2}$  cents per cubic yard of earth moved, plus additional amounts for rock work and the purchase of materials. Maximum assistance for the different types of small projects are: \$75 per dugout, \$150 per stock-watering dam, and \$350 per irrigation project. Where two or more farmers co-operate in a project, the maximum may be increased to \$500. Government assistance for large projects is determined for each project on its merits, sometimes amounting to the full cost of construction.

Applications from the drought area for assistance with water development are received by the Water Development Committee. Small projects, when approved, are referred to the appropriate provincial member of the Committee for final authorization. Engineering and financial assistance for these projects are provided from rehabilitation funds. Large projects are passed through the Dominion Department of Agriculture for the Minister's approval.

**Progress with Small Water Development Projects.**—From the inauguration of the program in 1935 to Jan. 15, 1938, a total of 11,392 applications for assistance with small projects was received. During the same period 4,285 small projects were reported as completed, comprising 2,541 dugouts, 1,414 stock-watering dams, and 330 irrigation projects. The irrigable area represented by the 330 small irrigation projects is approximately 12,000 acres. Most of this area will be used in growing supplies of feed for live stock.

**Progress with Large Water Development Projects.**—Large projects include the construction of storage dams and irrigation works for incorporated bodies, such as rural municipalities and irrigation districts. In some cases assistance has been provided for repair and extension work on existing irrigation projects, where the discontinuance of water supplies would have caused serious hardship. The basic principle governing the selection of large projects is to secure a maximum of benefit with a minimum of cost.

In the development of large irrigation projects full advantage is taken of the experience gained in the irrigation districts of southern Alberta since the opening of the present century. The bulk of new irrigation is intended for the production of forage crops, to provide dependable supplies of feed to supplement grazing in range areas. The extensive production of grain on irrigated land is not contemplated.