

Government itself must be uneasy about the position and that the established State Departments are opposed to some of the acts projected or being done. The policy of the Soil Conservation Council was submitted to us as follows :—

The main objective of the Council is the conservation of the soil and its fertility. To obtain this objective the Council aims at the best use of the land according to the country's needs and the capabilities of the soil, having due regard to the requirements of each particular catchment. To attain this end it is undoubtedly necessary to assist the farmer to conserve his soil. This assistance will have to be both financial and technical. The Council is also quite satisfied that, to attain its objective completely, rural life will have to be made more attractive, but it has not yet considered details as to how this should be done.

Reference has been made, in previous evidence, to the Soil Conservation and Rivers Control Act as "disastrous." This no doubt referred to the fact that the Act did not provide for compensation in the case where land is closed up for soil-conservation purposes or where other action leading to a reduction in farming operations is taken. Although no compensation can be claimed in these cases, the Council has every intention of assisting the farmer in every possible way to restore the fertility of his soil and the grazing-capacity of his land. There is no intention of loading the land, beyond its capacity to pay, for any kind of work be it soil conservation, rivers control, drainage, or any other work associated with soil conservation.

Simultaneous development of its conservation work in five closely related and inter-dependent fields is necessary.

*Defining the Problems by Field Surveys.*—The first essential step is defining soil-erosion problems and assessing the conservation requirements by field survey in each catchment. For this purpose soil-conservation surveys combining the findings of topographic, soil, type and degree of erosion, climate, and land use surveys are necessary. They provide data from which the land capability and conservation needs of each farm in relation to the entire catchment can be assessed. In many regions one or more of these surveys has been undertaken, but in most cases further survey work is needed to complete the inventory prior to collation of the data. Such data is also required for the implementing of the Council's soil conservation proposals and Catchment Board by-laws. The field-work will be organized through the different Departments, and the collation of data will be undertaken by the Council's staff.

*Demonstrating Conservation Measures.*—The second step is the establishment of demonstration farms on the major problem areas in each region. It is most necessary to have one in each Catchment District to give a lead to the Boards in developing positive action with their co-operation. Because of the necessity to modify many aspects of farming, of trying measures that have unknown effects and of maintaining continuity of records over long periods, the Council intends to purchase farm units for this purpose. Successfully demonstrated practices can be extended further in the farming community by co-operative demonstration, which is the most effective way of doing this phase of the work. It is necessary that this should be done in close association with, or by, the Catchment Boards and the Fields Division, Department of Agriculture.

*Investigating Erosion Problems.*—The third step is the investigation of fundamental erosion and conservation problems, the chief of which are the causes of the various types of erosion and the ways and means of preventing and controlling them. At the outset records must be kept over considerable periods of climate, comparative stream-flow, run-off, and soil loss by sheet, wind gully slip, flow and creep erosion, while records of changes in vegetation, soil fertility and stability to measure the effect of various conservation practices are essential. The investigation work necessary in erosion and conservation problems is of sufficient magnitude, importance and variety to involve team work of specialists in soils, grasses, biology, farming, and forestry. In order to do it effectively teams of specialists must work in the field together and be closely associated with laboratories. This involves accommodation and handiness to centres from which staff would be available. Accordingly it will be necessary to establish research stations near centres of population—say, in the Wellington and Canterbury Provinces. At such central stations basic research would be done on the erodibility of soils and related factors, on the reaction of small catchments to varied management and of vegetative and mechanical conservation measures. Local adaptation and trial of new practices could well be effected at substations on the regional demonstration and research farms—on other departmental experimental areas and on farms where soil conservation operations were being assisted by the Council.