

**A Soil, Land-Use, and Erosion Survey
of Parts of the Counties of
Moirra and Delatite, Victoria**

Including the Parishes of Pine Lodge, Dookie, Devenish,
Currawa, Stewarton, Caniambo, Gowangardie, Upotipotpon,
Goomalibee, Tamleugh, Shadforth, Wills, Warrenbayne, Boho,
Moglonemby, and Balmattun

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SUMMARY

A comprehensive study has been made of an area of 600 square miles in north-eastern Victoria, to provide basic information concerning soils, soil erosion, climate, and land use, the prerequisite knowledge required for an informed approach to the problems of soil conservation in that district.

The soils have been classified and mapped in detail for four parishes (180 square miles), and for the whole area a map of soil associations has been produced. The pedogenesis of some of the soils and their position in a major classification system has been discussed.

Chemical and physical studies of the more important soils have been made, the former being of value in the studies of the pedogenesis, the latter enabling an understanding of the relative susceptibility to erosion of the soil types most likely to be affected.

The existing climatic data have been examined and an attempt made to indicate the major features of the climate contributing to erosion damage. Variability of rainfall, intensities and the times of the year in which most intense rains are likely to occur are the main features studied in relation to erosion, but a detailed study of the variability of the growing season has also been made since it assumes importance in deciding possible changes of land use in a soil conservation programme.

The present occurrence of soil erosion damage has been mapped and classified and is discussed in relation to soil type and past history of land use. A map of the watershed and drainage pattern classifies the area into units requiring soil conservation, and those units requiring most urgent attention have been indicated.

Since the ultimate objective of soil conservation is the establishment of the optimum system of land use, namely one which gives the maximum level of production but at the same time establishes an ecological equilibrium, the area has been mapped on the basis of "units of land husbandry". Within such units there is similarity of soils, topography, and climate which marks them as ecological units each of which presents a particular study in the establishment of its optimum land use. The present land use within these units is discussed and suggestions made for improvement in some of them.

The whole Bulletin is a collection of the basic data needed for planning soil conservation.