

SOIL SURVEY OF THE BASALT PLAINS OF WESTERN DISTRICT

1. General Purpose of the survey.

A soil survey is being carried out in the Western District to provide basic information to extension officers for advice with regard to aspects of soil and crop management. This information will include a detailed inventory of the soils of the region so that it will be possible to locate any future crop or pasture experimental plots on soils typical of the region.

2. History of the survey unit.

Over the past 40 years officers of the Department of Agriculture have been examining and mapping soils of the irrigation areas of Victoria. These have now been almost completely mapped and soil bulletins have been published describing the soils and giving detailed advice on land capability problems associated with the soils and on reclamation methods. In more recent years the department has begun looking at the soils of dry land areas in order to be able to provide the same kind of information. Some seven years ago a soil survey of the Wimmera wheat-growing areas was commenced and some reports have been published of this area. Apart from this only scattered small areas of dry land in Victoria have been surveyed by the department although a number of land system surveys which include information on the soils have been carried out by the soil conservation authority of Victoria.

3. Background of the Basalt Plains Survey.

A major area for which practically no soils information is available in a systematic form is the basalt plains of Western Victoria. The far western portion of the area to be surveyed is included in one of the conservation authority's surveys but for the remainder, departmental officers and others are served only by geological maps and by their own experience of the soils of the region. Early work in the region suggests the existence of at least 14 groups of significantly different soils. However, the proportion of those soils groups and their locations are not known in any detail. A soil and land capability survey of the region has therefore now been commenced.

4. Progress of the survey.

To date field work is nearly complete in the Bacchus Marsh, Werribee, Geelong and Winchelsea areas.

5. Anticipated completion of field work.

It is anticipated that field work will commence in the Portland, Hamilton and Warrnambool areas in early December and will be completed for the region as a whole by May, 1981.

6. Procedure adopted for the survey.

In general the survey involves the identification of the different soil types of the region taking into account not only the surface soils but the whole profile deep into the sub-soil. Because of the area to be covered and the short time available relatively few farms will be visited. The farms which will be visited are those considered typical of the region in terms of current knowledge of soil, topography and geology. Final selection was based on stereo analysis of serial photographs. On each selected farm the surveyor concerned (Mr. John Maher) will attempt to contact the owner or manager at the house on the property. He will carry an authorisation card, would travel in a clearly recognizable Departmental vehicle and would of course strictly respect crops, stock, fences, gates etc. The work has to be planned well in advance but is dependent on the weather so that the surveyor is not in a position to make a definite appointment.

It is hoped that the surveyor will be allowed to examine soils and collect samples. Samples would normally be collected from a hand augered 10cm (4 inch) diameter, 120cm (4 ft.) hole, or possibly a very shallow pit, which would, of course, be immediately filled in. Because some subsequent laboratory tests may refer to soil fertility levels, a knowledge of the past paddock management history is relevant and any discussion in this regard would be greatly appreciated.

7. Other uses and features of the survey.

Data obtained from the survey can be used to assist in the construction of maps to give guidance on the capability of the soil for various major agricultural uses such as crops of different kinds and pastures. Problems such as salting and bad drainage which may not be at present apparent from the surface or which may become serious under particular land use patterns can be predicted and recommendations made in many cases for reclamation of the soil. It is not anticipated that the maps produced will be sufficiently detailed for a farmer to determine the boundaries of the different soils on his own land but the maps will indicate the various types of soil likely to occur in any area. The description in the survey report will enable a land owner or an agricultural advisor to determine which particular soils occur on a particular property. This knowledge will enable farm management to take into account not only the information supplied in the report associated with the survey but also information derived from experimental work from the Department of Agriculture on similar soil types. Such a survey will not answer all the farmers questions or provide a solution to all his problems but will be an information resource available to him and to the agricultural advisor in planning land use and increasing the productivity and profitability of the farms in Western Victoria.

8. Final important points with regard to the survey are: -

1. There is absolutely no cost to the property owner or manager.
2. The project has the full support of the Department of Agriculture.
3. The surveyor would be travelling in a clearly recognizable Department of Agriculture vehicle.

4. Because of the nature of the survey there can be no immediate result in terms of advice regarding management decisions.
5. Because of the necessity for advance planning and the dependence of field work on weather, the surveyor is not in a position to make definite time at which he would be on any property. However, he would make every effort to see the owner or manager on location, before entering the property.
6. The surveyor would strictly respect crops, livestock, fences, gates etc.
7. Anyone who would like further information could contact:

Mr. Grahame Richardson, E.D.
78 Henna Street, Warrnambool.
Phone (055) 62 4277.

Mr. Peter Schroeder,
Regional Veterinary Laboratory, Hamilton.
Phone (055) 72 3722.

Mr. Greg Cahill, E.D.
State Public Officers, Gellibrand Street, Colac.
Phone (052) 31 5377.

Mr. Bruce Muir, E.D.
6 Dawson St., Ballarat North.
Phone (053) 31 1733.