

procedure conducting standard soil survey

Procedure for Conducting Standard Soil Survey

DEPARTMENT OF AGRICULTURE
MAHARASHTRA STATE

FIRST EDITION: 1966

EDITOR:

Dr. W. B. RAHUDKAR,
AGRICULTURAL INFORMATION OFFICER.

FOREWORD

Soil Survey is one of the essential prerequisites for scientific planning of Agriculture. The main object of Soil Survey is to assemble all possible information of the land resources and present the data thus collected in a suitable form. Its utility in soil conservation planning is unquestionable.

In Maharashtra State Soil Surveys were being carried out for a considerable period, in a scattered manner with some specific objects only. However there remained a lacuna of regular statewide soil survey for all purposes. This lacuna has now been overcome, with the launching of the new Soil Survey Scheme with the main object of land use planning.

In order to achieve this object, villagewise soil survey would be ideal, as it would fetch a sort of Agricultural Atlas of the village. But it is very expensive and may require very long period for completion of work. Hence it is proposed to survey an area of about 3,000 acres from a village or two at a grid interval of 10 miles. Thus an average of 50 to 60 villages will have to be surveyed per district.

A survey party is proposed for each district and thus there are 25 soil survey parties. Each party is expected to survey about 30,000 acres from 10 to 12 villages per year. Thus about 7.5 lakh acres from about 250 villages would be covered each year. Accordingly the proposed State plan would be completed in about 6 to 7 years.

There is a Soil Survey Officer for each division and he is to be provided with a well equipped laboratory and drawing branch. In addition a central laboratory has been proposed for the Chief Soil Survey Officer, who is to co-ordinate their work.

The programme of Soil Survey is to be planned and developed in successive stages. In order to carry out soil survey work on such a large scale, it is needless to stress the importance of adopting uniform method of survey and standard pattern of mapping. Any survey without uniformity of method is practically of a little use. Hence to achieve uniformity "the procedure for conducting Soil Survey" has been laid out wherein field examination of soil and recognition of various soil characteristics have been explained. The system of nomenclature and use

of symbols etc. has been kept as far as possible similar to one proposed in soil survey manual prepared by I. C. A. R. in 1960. The procedure for Soil Survey in Maharashtra State has been compiled by Shri K. V. Joshi, Chief Soil Survey Officer on the basis of one which he had originally prepared for sugarcane soil gurvey in 1957.

Tam sure that this procedure of survey will not only be useful for actual field survey workers, but also to the students of agriculture.

Poona-1,

Dated: 27th November/1966

.M. B. GHATGE,

Director of Agriculture,
Maharashtra State:

CONTENTS

			٠.	. F	ΛĢE
1.	OBJECT OF SOIL SURVEY	•••	***	•••	1
	Plan of Work	•••	•••	•••	1
	Stages of Development	***	***	•••	2
	Detailed Procedure for Sur	vey Wo	rk	•••	3
2.	SURFACE SOIL CHARACTERIST	ıcs		-	8
	Soil Colour	***		•••	8
	Soil Texture	•••	•••	***	8
	Soil Structure	•••	•••	•••	10
	Consistency and Density	•••	•••	•••	15
	Roots Distribution	•••	***	•••	15
	Concretions	•••	•••	•••	15
	Miscellaneous	•••.	•••		16
3	. Soil Profile Studies	***	•••		17
4.	How to Prepare and Desc	CRIBE A	PROFILE	•••	18
5	. Collection of Soil Sampl	ES ·	•••	•••	19
	Grid Samples	•••	***	•••	19
	Profile Samples		•	•••	19
6	. Collection of Monolith	•••	***	•••	20
7	COLLECTION OF MICRO-MON	OLITH	***	•••	21

(ij)

			PAGE	
8.	Soil Maps	*** * **	•••	22
	Irrigation Capability			22
٠٠.	Land Capability Grouping	•••		23
9. ε	PREPARATION OF VILLAGE SOIL SURVEY	Report	•••	25
10.	PROFORMAE TO BE ADOPTED IN CARRYING THE SOIL SURVEY.	OUT	•••	26