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GOVERNMENT OF MAHARASHTRA

DEPARTMENT OF AGRICULTURE

MANUAL
on
LAND DEVELOPMENT
for
IRRIGATION

IRRIGATION UTILISATION BRANCH

DEPARTMENT OF AGRICULTURE, M. S., POONA.

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FORWORD

Achieving self-sufficiency in food has been the urgent need since Independence and has received the highest priority in any development programme. Since the land resources are limited the problem can be solved mainly by producing more from the available land. It is wellknown that irrigated farming is the surest means of producing more food...as all inputs give maximum returns with assured water supply. Government have, therefore, invested huge amounts in increasing irrigation potential during the three Five Year Plans. What is now necessary is to utilise the irrigation potential expeditiously so that the investment gives fair returns and the country marches towards achieving self-sufficiency.

The Irrigation Commission has recommended that the period of development of irrigation should be reduced to 8 years from starting of construction work or 5 years from starting of irrigation. This is possible provided action is taken simultaneously with construction work, for development of land in the command area. This would involve a number of steps to be taken in a systematic manner and the same are enumerated in this manual on land development for irrigation for the guidance of the concerned staff.

Additional Director of Agriculture

Manual on Land Development for Irrigation.

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Introduction.

(Whenever construction of any irrigation project is undertaken, action should be taken simultaneously to develop the command area so that fields will become ready to receive irrigation as soon as it becomes available. At the outset, it may be said that all the area under irrigation command will not and should not need the same treatment. Areas with uniform slope upto 2 per cent may not need any levelling but only land grading, field channels and drains, to follow contour furrow irrigation. On the other hand, undulating lands with more than 2 per cent slope may require to be levelled and provided with field channels and drains. Very much cut up lands and low lying fields subject to water-logging may have to be converted into banded fields for growing paddy. Levelling and bunding operations involve considerable earth moving and restoration of soil fertility by green manuring may become necessary. The land development costs in such areas will be much more than that involved in mere digging of field channels and drains. It will thus be observed that no rigid procedure can be laid down for land development in command areas but there are certainly a number of steps which have to be taken in a systematic manner. The first such step would be to carry out a rapid topographical survey of the land from land development and utilisation points of view, followed by preparation of financial estimates for the project as a whole and making money available for land development work. The next step would be to carry out detailed survey of the land under each distributory, prepare plans and estimates and execute the work. Different items of work will be carried out by different agencies and it becomes not only necessary to list the items of work to be carried out but give detailed instructions for the guidance of the land development staff for carrying them out in the best way possible. The various steps involved in land development are mentioned below :

- ✓ (1) Topographical survey of the command area by the Land Utilisation Survey unit.
- ✓ (2) Soil survey of the command area.

- (3) Estimation of financial requirements and the procedure to be followed to get the same from the Maharashtra State Apex Cooperative Land Development Bank through the Agricultural Refinance Corporation.
- (4) A detailed contour survey of the fields coming under the command of each distributory by Soil Conservation Section.
- (5) Preparation of plans and estimates for field channels, diversion boxes, drop structures, channel crossings, Road crossings, drainage ditches, levelling, grading etc..
- (6) Execution of land development work.
- (7) Preparation of recovery statements.

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