

Investigations on the feasibility of cultivation in draw down areas of Almatti reservoir

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ABSTRACT

The cultivation in the draw down areas of irrigation projects is an age old practice but making use of these areas judiciously for sustained and economical crop production is of prime importance. Considering the non-availability of research findings for cultivation of these draw down areas, a transact survey was carried out to interact with the concerned farmers (land owners) in Almatti reservoir (Upper Krishna Project (UKP) Karnataka state). Based on this we came out with a few recommendations to practice cultivation of improved varieties of short duration crops like fodder jowar, fodder bajra, fodder cow pea, cow pea, green gram and vegetables like methi, amaranthus, coriander and cucumber in these draw down areas depending on the soil moisture availability periods. Besides, certain fruit and tree species like tamarind, sapota, casuarina and silveroak were also recommended for planting near the periphery of full storage of the reservoir in order to check the soil erosion and its deposition in the reservoir from the cultivated lands situated on the upper ridges.

Key words : Draw down area, Almatti reservoir

INTRODUCTION

The Almatti reservoir which is mainly meant for storage of water has its draw down from first week of January in the farthest areas to the last week of February in the areas nearer to the dam. The effective moisture availability for crop growth in these areas varies from 30-60 days depending on the soil type. The survey of representative villages on the banks of Krishna and Ghataprabha rivers revealed that the farmers are using these lands for the cultivation of crops like groundnut, green gram, cow pea, sunflower, maize, field bean, sorghum, cucumber etc., by providing protective irrigation from the bore wells and lift irrigation facilities available during summer season. Although the protective irrigation was provided, the performance of most of these crops was not satisfactory. Further in the years to come due to the proposed disconnection of presently available power supply, the prevailing protective irrigation facility may not be possible. On completion of Almatti reservoir project, approximately 75,600 acres of fertile land in Bagalkot, Bijapur and Belgaum districts has been submerged. During the summer months, the water in the reservoir recedes exposing the submerged area for the period of two to five months. Hence, there is a possibility of cultivation of short duration crops by utilizing residual moisture in the draw down areas.

MATERIALS AND METHODS

An elaborative survey was conducted in draw down areas of Almatti reservoir comprising four villages with the following objectives (1) To identify the suitable cropping

patterns and their management for the draw down areas of Almatti reservoir (2) To work out the economics of draw down cultivation with different crops.

A thorough discussion was held about the draw down area cultivation with the Commissioner and farmers of Bagalkot during May 2001. It was emphasized by the Commissioner that the draw down area should be utilized in a proper way by indicating suitable crops and their management by making survey of representative villages in the basins of Krishna and Ghataprabha rivers. Depending on the distance from the dam and soil types, the villages namely Dhavaleshwar, Herkal, Gani and Kolhar were selected. Along with Land Acquisition Officer and Sociologist of UKP we visited river banks of each villages in the month of May 2001. The team transacted in the draw down areas making notes on soil type and condition, existing crops and their condition. And also collected soil and water samples from that area. During the transact, the team met some of the farmers who were working in their fields. The meetings of farmers were arranged in the respective villages in the evening for discussion regarding cultivation in draw down areas. The information collected during transact was confirmed through Participatory Rural Appraisal (PRA) technique (Ajaykumar Sah *et al.*, 2004).

Village wise situation analysis:

Dhavaleshwar:

The village is located on the right bank of Krishna where the river water starts receding from second week of January and earliest sowing can take place after 15-20 days. The soils are deep black and the moisture is