

## Watershed development in alfisols through soil conservation

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### ABSTRACT

Improvement of rainfed farming is key to development of agriculture and removal of poverty. To increase the production and productivity from dry land areas, the Government of India launched NWDPR in different parts of the country including Karnataka. This was also implemented in Haveri district, demonstrating different soil conservation practices in different villages. Demonstrations were mainly conducted in major crops of the area like sorghum, groundnut, pulses, chillies and cotton. The study was conducted in Kadkol watershed of Karnataka. New crop varieties were introduced along with watershed treatment in different crops. Different soil conservation measures like contour bands, vegetative barriers, rubble check and contour cultivation had given more yields compared to conventional practices with local varieties. The farmers were also convinced to a great extent.

### INTRODUCTION

Agriculture production in India is vitally linked with dry land farming. With respect to other crops it accounts for nearly 75% of oil seeds, 90% of the pulses and 70% of the cotton (Kanwar, 1990). Thus, the improvement of rainfed farming is key to development of agriculture and for removal of poverty. These dry lands are more impoverished due to continuous tilling, erosion, ill distribution of rainfall and poor crop management. More over the timely operations have become difficult due to poor look after of animal power with many of the small and marginal farmers, operating these lands with meagre resources and low risk bearing capacity.

To mitigate the hardships of the dry land farmers by increasing production and productivity from dry areas, the Government of India launched the NWDPR in different states including Karnataka, on a massive scale, where research component is also included. The University of Agricultural Sciences, Dharwad having the jurisdiction of northern twelve districts has started the ORPs in each district.

The Agricultural Research Station, Hanumanamatti was identified for NWDPR activities in the northern transitional zone having a geographical area of 11.30 lakh ha. Out of 14 taluks under NWDPR, seven taluks come

under the jurisdiction of ARS, Hanumanamatti. Demonstrations were conducted at Hoovinasigli village of Kadkol watershed of Savanur taluk. The total area of the watershed was 4270.25 ha with the annual rainfall of 676.30 mm. The watershed is divided in to 3 sub-watersheds namely, Hoovinasigli, Basavanakoppa and Kodkol. The existing productivity level of major food crops is very low which is due to low fertility status of lands, inadequate rainfall and traditional agricultural practices. The major portion of the agricultural land is covered by the millets. The soils are predominantly red sandy loams with soil depth varying from 45 to 80 cms.

The major food grains grown in the areas are sorghum, groundnut, pulses, chilli and cotton. It is very much essential to adopt suitable cropping system, high yielding varieties of different crops and also better utilization of soil and moisture to the maximum extent, to increase the productivity. Sufficient technical information suiting different regions to raise the crop productivity under dry-lands is available. However, these technologies are not fully used by the farmers.

Hence, this study was conducted with the objective of demonstrating the simple soil and water conservation technologies along with improved varieties in boosting the yields of major crops of the region.

### Key words :

Watershed, Dry land farming, Soil conservation structures

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