International Journal of Agricultural Sciences
Volume 9 | Issue 2| June, 2013 | 517-520

RESEARCH PAPER

A study of effect of Sujala watershed programme on ground water recharge and sustainable crop productivity in Kanavisiddageri area of Haveri district, Karnataka

CHANDRU PATIL*, K.S. NIRANJANA AND B.S. SHIVAKUMARA
Horticulture Research Station, UHS (B), Sringeri, CHIKMAGALORE (KARNATAKA) INDIA
(Email : anupatil.chandru@gmail.com)

Abstract : Water crisis in present days as a result of climate change effect has significantly altered the annual rainfall and river flow regimes, and will in turn affect the groundwater recharging rate. Prevention of stress on ground water can be made possible by way of recharging the ground water through scientific watershed management. Therefore, watershed treatment is an ideal method for recharging ground water and to prevent stress on ground water. In the present investigation, a modest attempt has been made to assess impact of watershed treatment on ground water recharge in Totaganti micro watershed in Hirekerur taluk, Haveri district, Karnataka. The water harvesting structures like contour bund, recharge pit, farm pond, check dam, bore well recharge pit, earthen bunds and desiltation of tanks and agro-forestry were implemented. The nine bore well stations were randomly selected for taking ground water samples in upper, middle and lower reaches of the micro watershed. Out of 115 irrigation sources in the micro watershed, 65 sources were functioning and 50 sources were non-functioning before watershed treatment. After watershed treatment, functioning irrigation sources were raised from 65 to 105. This clearly indicates that there is a net raise in the irrigation sources due to increase in the ground water recharge. Further, the maximum average bore well yield 2.43 l/ sec. was recorded in stations of lower reaches and minimum bore well yield 2.30 l/sec. in stations of upper reaches. It also resulted in an increase in the productivity of some crops such as jowar from 3.0 to 3.7 q/acre, maize from 2.9 to 3.2 q/acre, cotton from 2.6 to 3.3 q/acre and red gram from 2.1 to 2.5 q/acre. This shows that there was significant difference in productivity between before and after watershed treatment. About 25.53 per cent of the farmers are found to be socio economically strong, 54.25 per cent medium class and 20.21 per cent lower class. Majority of people were actively participated in Mandal Panchayat (53.57%), 26.78 per cent in Zilla Panchayat and 19.64 per cent in co-operative society.

Key Words : Crop productivity, Ground water recharge, Micro watershed, Water harvesting structures

View Point Article : Patil, Chandru, Niranjana, K.S. and Shivakumara, B.S. (2013). A study of effect of Sujala watershed programme on ground water recharge and sustainable crop productivity in Kanavisiddageri area of Haveri district, Karnataka. *Internat. J. agric. Sci.*, **9**(2): 517-520.

Article History : Received : 16.10.2012**; Revised :** 12.02.2013**; Accepted :** 14.03.2013

*** Author for correspondence**