Impact of National Watershed Development Project for Rainfed Areas on Farmers' Knowledge and Adoption of Rainfed Agro Technology

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The study was undertaken during 1997 with 2 dependent variables (level of knowledge and extent of adoption) and 14 independent variables at Gujarat Agricultural University, Junagadh. A sample of 90 beneficiary farmers and 90 non beneficiary farmers representing eight villages of Junagadh district of Gujarat State were drawn by using multistage random sampling technique. The major findings were :

1. The BFs and NBFs differed significantly in their characteristics like, size of land holding, social participation, employment status, irrigation potentiality, cropping intensity, production, overall modernity, extension participation index, level of attitude, knowledge index and adoption index.

2. Majority of the BFs (60.11 %) and NBFs (74.45 %) belonged to medium level of knowledge category with 70.25 and 59.72 mean knowledge index, respectively. Even though they differed significantly in their level of knowledge of RAT.

3. Majority of the BFs (58.89%) and NBFs (71.11%) were medium adopters of RAT with 67.43 and 52.86 mean adoption index, respectively. Eventhough they differed significantly in their extent of adoption. The practices like use of short duration crops and their varieties, timely sowing, optimum plant population, interculturing, use of organic manure, opening of furrow in summer season, weeding, supplementary irrigation, use of chemical fertilizer and plant protection measures were adopted by more than 74.00 per cent BFs. In case of the NBFs, the practices like: use of organic manure, opening of furrow in summer season, optimum plant population, timely sowing, use of short duration crops and their varieties, mid season correction, supplementary irrigation, weeding interculturing and use of chemical fertilizer were adopted by more than 55.00 per cent respondents.

4. There was a positive and significant association between BFs' level of knowledge about rainfed agro technology and their characteristics like : education, social participation, employment status, Irrigation potentiality, cropping intensity, production, extension participation index, training received, level of attitude and adoption index. They were jointly contributing significantly to 85.15 per cent of the variation in the level of knowledge of BFs.

5. There was a positive and significant association between NBFs' level of knowledge about RAT and their characteristics like : size of land holding, employment status, education, herd size, social participation, irrigation potentiality, production, extension participation index, training received and adoption index. They were jointly contributing significantly to 53.74 per cent of variation in the level of knowledge of NBFs.

6. There was a positive and significant association between BFs' extent of adoption of RAT and their characteristics like : education, social participation, irrigation potentiality, cropping intensity, production, extension participation index, training received, level of attitude and adoption index. They were jointly contributing significantly to 76.21 per cent of variation in extent of adoption of BFs.

7. There was a positive and significant association between NBFs' extent of adoption of Rat and their characteristics like: education, social participation, production and knowledge index. They were jointly contributing significantly to 45.69 per cent of variation in the extent of adoption of NBFs.

8. Some of the important constraints faced by the BFs in adoption of RAT were : (i) lack of knowledge (71.11%), (ii) lack of technical guidance (66.67%), (iii) lack of training (63.33%), (iv) non availability of inputs at local level (58.89%), (v) high cost of inputs (52.22%) and (vi) lack of finance to purchase inputs (48.89%).

9. The important suggestions made by the BFs to overcome the constraints in adoption of RAT were (i) training should be given to the farmers in relation to rainfed agro technology (78.89%), (ii) easy and timely availability of agricultural inputs (74.44%), (iii) organization of need based demonstration (72.22%), (iv) easy and timely availability of credit facility (65.56%), (v) written material on rainfed agro technology should be published (63.33%) and (vi) extension system should be streamlined to disseminate latest rainfed / dryland technology (50.00%).

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