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Participatory approach on adoption of water management technologies to ensure agricultural productivity

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Tater resource management is an important tool to the researchers to address the issues like climate changes, natural disasters, pollution hazards, environmental degradation, deteriorating soil health for attaining food and livelihood security and mitigating such undesirable situations. In addition to the present status of water availability, rainwater harvesting and its economic utilization coupled with inter basin transfer of water from surplus to deficit basin needs to be executed to maximize full water resources potential. Adoption of proven and cost-effective water management technologies are essential to maximize crop production and minimizing gap between irrigation potential created and utilized. Application of water to minimize conveyance losses; methods and scheduling of irrigation, selection of crop(s) and crop sequence(s) also played an important role for enhancement of water use efficiency. Conservation, distribution and utilization of irrigation water are the basic parameters of on-farm water management. Optimum scheduling of irrigation, choice of suitable method, conjunctive use of rain, surface and ground water for crop cultivation, provision of drainage and use of improved agro-production technology is the basic need of successful on-farm research. Application of proper amount of water at proper time increased the water use efficiency and crop yield and reduced the evaporation and deep percolation losses. The participatory action research is an effective and communicative measure in the developmental processes and involves the users in systemic process of change to make the socio-technical system more viable. On-farm participation encouraged the farmers to adopt irrigation technologies for growing crops on the basis of cost-benefit approach. On-farm water management practices proved to be efficient for dissemination of the location specific technologies to the farmer's field wherein active involvement of the farmers at every stage were ensured. A series of on-farm water management research activities in collaboration with Indian Council of Agricultural Research under the aegis of AICRP on Water Management (BCKV) were conducted in selected deep tube well commands of West Bengal and developed a package of intervention or component technology for different field crops. The results of these studies revealed that there were positive impacts of irrigation water on crop productivity, cropping intensity, input use efficiency, farmers' income and employment generation on adoption of water management technologies with active participation of the farmers.

Biography

A.Zaman specializes in Agricultural Water Management for enhancing crop and water productivity as an Agronomist and presently acting as Dean, Faculty of Agriculture, in Bidhan Chandra Krishi Viswavidyalaya [SAU], West Bengal, India. He is a former Chief Scientist (Water Management), Professor and Head, Department of Agronomy. He has coordinated, associated and involved with post-graduate teaching programme at the University and has significant research experiences in field of water management and in academia and well as having considerable administrative experiences in different capacity at various time frame. He is also designated as IFFCO-Chair Professor. Completed his Ph D from BCKV, West Bengal, published research papers in the journal of National & International reputes: 192; Popular & Scientific articles: 12; Annual Progress Reports: 15 & Others: 10 Participated in the various training and advance courses on irrigation water management for crop production; Attended different National & International seminars, symposiums, workshops, meetings on several aspects of agricultural development including Television programs; Associated with the post graduate teaching in the department of Agronomy since 1983; guiding students at least 50 M. Sc. students & 6 (six)Ph. D. thesis and actively engaged in Teaching, Research and Extension activities.

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