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Irrigation management along with micro irrigation system (MIS) community tube wells in Gujarat

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Department of Soil and Water conservation Engineering, Dr. Panjabrao Deshmukh Krishi Vidyapeeth, AKOLA (M.S.) INDIA Email : ytlrahul4u@gmail.com ■ ABSTRACT : Participatory irrigation management (PIM) with micro irrigation improving water and fertilizer use efficiency through appropriate technological and policy interventions with an objective to relieve pressure on fragile groundwater appears to be the prime challenge in the Gujarat state. Ground water is the key factor defining agricultural land use in Gujarat state. Government of Gujarat has aggressively promoted micro irrigation technologies in Gujarat by providing 100 per cent subsidy through Gujarat Water Resource Development Corporation Ltd. operated tube wells by implementation of PINS (Pressurized Irrigation Network System) along with MIS. These tube wells had been in operation by farmer co-operative societies in Gujarat by participatory irrigation management since long and used to deliver the water with flow irrigation. Now introduction of micro irrigation aims to provide timely and adequate supply of water to crops for improving the agricultural production. Each tube well envisages covering a demarcated area and growing specified crops which requires specific water requirement in specific time period of growth. Earlier without micro irrigation implementation in many tube wells water levels used to go down and due to this, actual coverage under irrigation was much below the targeted coverage. Tail end reaches of command of the tube well used to suffer from inadequate and unreliable supplies. Most of the area was deprived of irrigation facilities. This gap is now filled up by implementing pressurized irrigation networking along with micro irrigation systems. It is found that there is a substantial improvement the operation, maintenance and management of the system by involving both the water users groups (farmers) and Gujarat Water Resource Development Corporation Ltd. (GWRDC) (the owner of the Tube wells). The life of tube well has increased and electricity consumption as well as maintenance is reduced to a great extent. These are the results of participatory irrigation management. Obviously farmers in a command area of community tube well will be in a large number, with different concepts, priorities, requirements etc. To bring these varied interests together and enable them to be effective partners in management of irrigation system is both challenging and time consuming. It is necessary that the behaviour and attitude of the Government officers need to be changed and make conducive to work with farmers and users in order to develop a collective and self-regulative work culture. This should ultimately result in to improvement of "On- farm water use efficiency" and the affordability for the farmers to adopt the systems and doing irrigation through micro irrigation only. The multifold advantages of drip and sprinkler irrigation systems over conventional flow irrigation would bring large sale adoption of these technologies.

KEY WORDS : Participatory irrigation management, Water use efficiency, Micro irrigation, Tube well

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