

## Extension Management in Drylands under Climate Change Scenarios

Y.V. Singh\* and R.N. Kumawat

Zonal Project Directorate, Zone-VI, CAZRI Campus, Jodhpur 342 003, India

Received: December 2012

**Abstract:** In drylands of arid and semi-arid regions extension management is challenging task under climate change scenario. The brief accounts on technology development and dissemination since 1928 alongwith constraint issues for transferring like; technological, economical, socio-physiological, infrastructure at managerial, communicational, political are described. Professionalism particularly in dryland areas need more attention, where in parameter like work under complex and fluid situation, diagnose farmers' problem efficiently, learn from farmers, communicate efficiently and work with group of farmers. It can be enhanced through education and training where KVK have to play an important role to promote secondary agriculture for livelihood security with the cooperation of line departments. This may help in increasing the production and productivity of dryland areas.

**Key words:** Dryland, extension, climate, management.

The Indian economy is mainly dependent on agriculture, which contributes 15% of country's capital GDP and 60% employment potential. The concerted efforts in the form of green revolution and TAR have no doubt saved the country from starvation and have brought it to the level of food security. However, their benefits have largely been restricted to the better endowed areas inhabited by economically advantaged farmers of irrigated area. Ecologically disadvantaged areas (rainfed/drylands), having predominantly economically handicapped people, have not been benefitted much. Consequently, the already existing gap in the socio-economic situation between the two sub-sectors has further widened causing considerable socio-economic imbalance requiring urgent action for bridging this gap besides meeting the food and allied requirements of the burgeoning population. Rainfed agriculture occupies 65% of the net sown area, contributing 44% of food grain production supporting 40% of the population. Secondly, livestock forms an integral part of rainfed ecosystem and two out of every three animals are thriving in these regions. These areas are spread out throughout the length and breadth of the country in arid, dry semi-arid, wet semi-arid and dry sub-humid regions. The National Commission on Agriculture in 1976 predicted that even when the full irrigation potential is tapped by 2010-2020 AD, over 50% of the arable land will continue to remain rainfed in the foreseeable future.

\*E-mail: zpd6jodhpur@gmail.com

Zone-VI comprising the Rajasthan, Gujarat and Union Territories namely Daman & Diu and Dadra & Nagar Haveli occupies 5.40 lakh sq. km area. Of this 52% area is under arid. Out of total arid area 60% is in Rajasthan and 20% is in Gujarat. On the whole arid and semi-arid areas together occupy around 75% of the total area. Climatically, the arid areas are vulnerable to various types of biotic and abiotic stresses often leading to drought.

Change in climate like cloud burst, drought, rise and fall in temperature, green house effects and global warming are some of the prominent factors influencing productivity and production of crops and livestock all over the world. The arid and semi-arid regions are facing the problem of climate change for more than 3500 years. The western districts of Rajasthan and Gujarat, once a part of Indus civilization, were granary of India due to better network of Sindhu River and its tributaries including Saraswati. Saraswati River vanished due to geo-morphological changes in Great Himalaya. CAZRI, Jodhpur, has well documented its path and hidden water bodies. Mahenjodaro and Harappa civilization spread over at Pilibanga in Hanumangarh, Dholveera in Kutch and Lothal in Khambhat gulf of district Ahmedabad have been eloped due to floods followed by desertification led by climate change in these parts of the country. Climate change is not new for arid and semi-arid regions of Rajasthan and Gujarat as farmers of this region managed to cope up with drought situation for ages.