

Telangana Development Studies

The Telangana Development Series is an ongoing initiative on Studies in agriculture and allied subjects aimed to support policy decisions in the state. The initiative has been supported by the Planning Board, Govt. of Telangana. The collection of studies, mostly concentrated in the wide field of agriculture are now in various stages of completion.

Agriculture - Completed Studies

(i) Seed Industry in Telangana

Despite seed being one of the most important components of agriculture, it constitutes underestimated input in agriculture production. Since the green revolution in the middle of the 1960s, the significance of seed has grown significantly, and seed quality has become critical. There are three steps involved in the process of seed production: the first stage is the creation of new varieties, the second stage is the production and re- production of high-quality seeds, and the third stage is the utilisation of seeds in agricultural production. Research conducted on the subject of the economic analysis of seeds, during the third phase has garnered most attention in the literature. To the best of our knowledge, the production and reproduction of seeds has received little or no attention in the literature. In this context, the present research investigates the second phase of seed activity in Telangana, namely the generation and reproduction of seeds.

To achieve this objective, study relies on secondary data sources. As per the Agricultural Research Data, published by Indian Agricultural Statistics Research Institute (ICAR), at all India level, we found that during the period 2014 to 2019 cereals (including millets) accounted for most of the varieties notified, as much as 51.59 percent. Food crops (cereals, pulses, and oilseeds) are the major crops for which most varieties were notified (86.00 percent). By taking agency-wise and crop-wise crop varieties notified during 2014-2019, it is observed that for State Agricultural Universities (SAUs) cereals account for 43.93 percent of crop varieties notified and all food (cereals, pulses, and oilseeds) account for 85.26 percent of crop varieties notified. In this sense the portfolio of SAUs in food crop varieties notified is much more balanced than for other agencies. Private companies concentrate only on cereals and maybe most of them are hybrids. Data on crop-wise number of field crop varieties/ hybrids notified and released which were developed by Professor Jayashankar Telangana State Agricultural University shows that PJTSAU accounts for 5.03 percent of varieties/hybrids developed by all the SAUs in India. Most of the varieties notified are in the area of cereals and forage. As per the breeder seed production for the year 2019-20, Madhya Pradesh occupies the first place while Telangana is ranked 12 among 20 states.

Overall, this study found that first, there is a lack of detail in either agricultural statistical or general economic statistical publications regarding seed production and reproduction data. There are occasions when the data are not reported for all of the years. Given these limitations, it is necessary to state that data on India as a whole are reported more accurately than data on individual states. Second, public sector concentrated on food crops and left many non-food crops and vegetables and horticulture to the private sector. Finally, public institutions are being

neglected which resulted in their decline, private sector (both domestic and foreign) is being promoted at the cost of public institutions.

Team: C Niranjana Rao and M Srinivasa Reddy

(ii) Groundwater Development, Degradation, and Impact of Free Power Policy: A Study from Telangana State

This study is an attempt to examine the dynamics of groundwater development over time and across regions of Telangana. Specific objectives include a) to examine the spatio-temporal variations in groundwater development in Telangana; b) to discuss the relevance of the existing information to the user or farming communities; to study the implications of free power (24x7) on groundwater development and challenges of 24x7 power supply to agriculture; and d) to explore the possibilities for generating reliable and useful information based on the existing experience at the ground level.

The study is based on the evidence from Telangana, which is among the states where groundwater is the single largest source of irrigation as well as drinking water. The study shows how groundwater is depleting along with increasing dependence over the years across regions of Telangana. It is argued that the negative externalities could be mitigated to a large extent with proper dissemination of information among the communities. This must be fostered through policy support that paves the way for treating the resource as a common pool resource instead of allowing it to be exploited like a private resource.

The study also establishes the increasing importance of groundwater and its management and also highlights the importance of energy policies on groundwater development. By examining indicators like growth in agricultural service connections, energisation of wells and power consumption, an attempt has been made to assess the impacts of free power policy using the official data. No change is observed in power consumption at the individual level, before or after free power policy. In fact, farmers complain that they get less than seven hours of supply against the promised nine hours of supply per day. The free power policy has not triggered an increased pace in the race for groundwater exploitation. The benefits seem to be more psychological rather than real to the farming community. Anecdotal evidence on agriculture power supply, based on comments of farmer organisations during public hearings suggests frequent power outages, Distribution Transformer failures and long time to repair as the reasons. A farmer centric approach is required to explore power supply options based on the agro- climatic conditions and demands of the farmers. Solar based options, especially solarising feeders which have significant agriculture pumpset load, would be a good option. Along with power supply options, efforts should be made to improve irrigation efficiency, regulate groundwater use, recharge bore-wells, promote suitable cropping patterns, and extend the required market and credit support to farmers.

Team: M. Srinivasa Reddy

(iii) Inland Fisheries Development in Telangana: Status, Issues, and Opportunities

Telangana is bestowed with natural inland water bodies like tanks and reservoirs that are suitable for inland fishery and has made significant efforts to develop this sector further. The objective of this paper is to analyse the status of the sector and to identify major opportunities and challenges for developing this sector. An analysis of the trends in the production of inland fisheries shows that the sector is well in the way of achieving targeted production levels. Our field surveys show that issues are at the ecological or at the water body level, economic, technology related and institutional. At the ecological or waterbody level, it may be noted that the tanks are multiple-use water bodies. Institutionally they are managed and regulated by various departments. It was observed that the priorities of these departments in terms of the use of the water in the tank sometimes are conflicting. Therefore, there must be proper coordination of activities among the various departments to ensure these water bodies continue to provide multiple benefits to the society.

Fish is a fugitive resource and is sensitive to water quality and changes in water quantity. These must be considered while planning for water use for irrigation purposes and other uses. The maintenance of tanks, including clearing of bushes, bunding, desilting, etc., must be carried out regularly. Encroachment of tanks needs to be regulated wherever it is happening. At present, small tanks are found to use a much higher quantity of fingerlings due to the low survival rates. It appears that there is scope to reduce wastage of fingerlings by adopting proper farm practices. The timely supply of fingerlings of an appropriate size fit for survival needs to be ensured. Wherever needed adequate supply of fingerlings and other assistance must be provided to the fishers. Moreover, the fishers must be given training and orientation in rearing the stocked fingerlings and in harvesting technologies.

Team: Jeena T Srinivasan