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Corresponding Author
B. Nirmala
e-mail: nirmalaicar@gmail.com

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Impact of SCSP Demonstrations on Good Agricultural Practices in Rice Cultivation

B. Nirmala[1*], Santosha Rathod[2], T. Sriramulu[3] and P. Muthuraman[4]

Abstract

Rice is the staple food crop of India. A total of 3,284 demonstrations on 'Good Agricultural Practices' were organized in five different states of India during 2020-21 under the Scheduled Caste Sub Plan of the Indian Institute of Rice Research. In Telangana and Andhra Pradesh, 2,832 demonstrations were organized. The technology demonstrated included quality seed, herbicide, water pipes and vermicomposting. Also, skill training programs have been organized on various aspects of rice production technology. Drying sheets and sprayers were distributed to the selected SC farmers. The impact of the demonstrations was analysed. The results revealed that the productivity of rice under demonstrations was superior over the control plots in both states. Hence, efforts should be made to promote the adoption of good agricultural practices for enhancing the income of rice farmers.

1. Introduction

The Scheduled Caste Sub Plan (SCSP) for the Scheduled Castes (SCs) was introduced in India during the sixth five year plan for channelizing the funds to the people of SC category to avail their due share of plan benefits and outlays. The basic objective of SCSP is channelizing the flow of outlays and benefits from all the sectors of development in the Annual Plans of States/UTs and Central Ministries at least in proportion to their population both in physical and financial terms.

The Indian Council of Agricultural Research - Indian Institute of Rice Research (ICAR-IIRR) received SCSP funds for implementing SC-Sub Plan and the Institute is implementing SCSP since 2019. The institute has organized 3,284 demonstrations under the programme in collaboration with Krishi Vignan Kendras (KVKs), All India Coordinated Rice Improvement Project (AICRIP) centers and , Non-Government organizations (NGOs) in 2020-2021.

Rice provides up to 60% of the daily energy requirement and a

Author's Address
ICAR-Indian Institute of Rice Research, Rajendranagar, Hyderabad (500 030), India

substantial part of the protein intake and therefore is crucial for nutritional security (Nirmala, 2016). Rice production needs to be increased to meet future food requirements amid strong competition for limited resources (Nirmala, 2021; Bhanusree, 2022). Rice occupied the highest area among the crops grown in the country with a production of 104 million tons in 2022-23. It is estimated that there will be a demand of 146 Mt of rice for the year 2030(Nirmala et al.2012). To meet the growing demand, a rapid increase in rice production is needed (Nirmala 2015). Demonstrations on 'Good Agricultural Practices in Rice' were conducted in the fields of SC farmers of Telangana and Andhra Pradesh during the year 2020-21.

2. Methodology

Paddy seed was distributed to the selected SC rice farmers of Rangareddy, Khammam, Nagarkunool, Nalgonda, Wanaparthy, Warangal, Karimnagar and Yadadri Buvanagiri districts of Telangana and Guntur district of Andhra Pradesh. Besides, drying sheets, sprayers, fertilizers, pheromone traps and lures, herbicide, insecticide and fungicides were distributed to the selected SC beneficiaries of both the states. Training programmes and field days on 'Integrated Crop Management in Paddy' were organized in the villages selected for demonstrations during September, January and February months and about 600 farmers were benefitted (Figure 1 and 2). The data on the paddy yield was collected from 200 beneficiaries and 59 non-beneficiary farmers of Andhra Pradesh. Similarly, the data on the paddy yield was collected from 645 beneficiary farmers and 158 non-beneficiary farmers of Telangana.

Figure 1: Field Day organised in Andhra Pradesh

Figure 2: Training program organised in Telangana

3. Results

A comparison of paddy productivity on the beneficiary and non-beneficiary farmer fields was made and the results are presented in Figures 3 and 4. On an average, in Telangana, the adoption of improved practices (5.8 t ha^{-1}) resulted in 11% yield improvement over farmer's practice (5.2 t ha^{-1}).

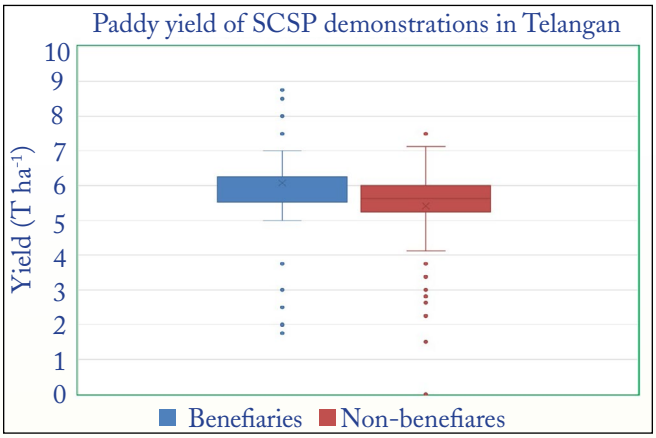

Figure 3: Comparison of paddy yield in SCSP demonstrations vs control plots in Telangana

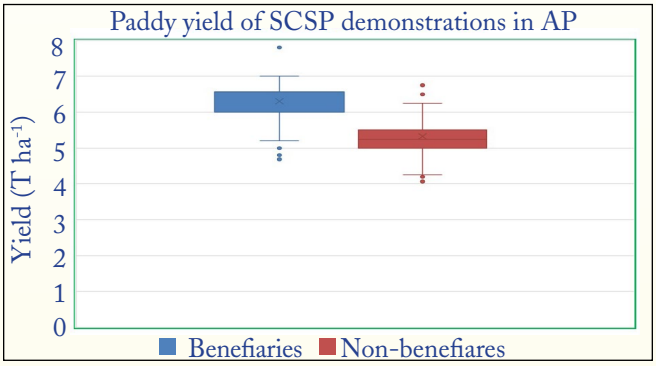

Figure 4: Comparison of paddy yield in SCSP demonstrations vs control plots in Andhra Pradesh

The productivity of the rice under SCSP demonstrations was compared with that of the non-beneficiary farmers' rice yields. The mean productivity of demonstration plots and control plots were 6.4 t ha^{-1} and 5.3 t ha^{-1}, respectively in Andhra Pradesh The farmers had an additional yield advantage of 21% over the control plots. Similar results were reported by Nirmala et al. (2022).

4. Conclusion

The demonstrations of the improved rice production technology were conducted under ICAR-IIRR-SCSP during 2020-21. The results revealed that there was a positive impact of demonstrations on the yield of the beneficiaries. The results also revealed that the adoption of good agricultural practices would help in harnessing higher productivity levels and bridging the yield gaps. Hence, efforts should be made to disseminate good agricultural practices in rice production.

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