

# **ICAR-IIRR-SCSP Annual Report (2020-21)**

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**Scheduled Castes Sub Plan (SCSP)**

**ICAR-Indian Institute of Rice Research**

Rajendranagar, Hyderabad-500030



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# Foreword

As per Census 2011, Scheduled Castes constitute 16.6% of the total population. The people belonging to Scheduled Caste communities are spread all over the country while a majority of them i.e. 76.4 % reside in rural areas. The socio-economic development and protection of SCs from discrimination and exploitation has been a high priority from the very start of the planning process. The Constitution of India mandated special protection and provisions for the development of SCs. The Special Component plan (SCP) was formulated in the Sixth Five Year Plan period (1979-80) and was renamed as Scheduled Caste Sub Plan in April, 2006, and currently renamed as Allocation for the Welfare of Scheduled Caste (AWSC) in February, 2017.

A number of initiatives have been taken by the Government of India for the development of SCs, which have yielded positive outcomes. It has been mandated that all the States, Ministries and Departments shall earmark certain percentage of the funds under their major schemes for the Scheduled Caste population so that adequate resources are available for their socio-economic upliftment. The allocation for welfare of Scheduled Castes was stepped up from Rs.72,936.29 crores in 2019-20 to Rs.83,256.62 crores in 2020-21, an increase of about 14.15%.

The people from the SC community have been impacted disproportionately because of the Covid-19 pandemic. There has been a significant disruption in livelihood options and economic conditions of the Scheduled Caste (SC) population in the remote and far-flung areas of the country. Rising to the challenges posed by the pandemic, the multidisciplinary team of ICAR-IIRR implemented the SCSP scheme by organizing 2630 demonstrations on SC farmers' fields in various states of the country. The interventions undertaken under SCSP were oriented towards technology and input support to the beneficiary SC farmers. I congratulate the ICAR-IIRR-SCSP team for successfully implementing the SCSP program with strict adherence to COVID-19 protocols. An improvement in the technical efficiency and resource endowments of beneficiary farmers has been recorded due to the implementation of the program.



**(Dr. R.M.Sundaram)**  
Director, ICAR-IIRR





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## 1. An over view of ICAR-IIRR – SCSP activities during 2020-21

ICAR- Indian Institute of Rice Research organized 2,630 (two thousand six hundred and thirty) demonstrations under the Scheduled Castes Sub Plan (SCSP), in collaboration with KVKs, AICRIP centers and NGOs in 2020-2021. The total allotted budget of Rs.1.45 crores was effectively spent. Under the ICAR-IIRR-SCSP, paddy seed was distributed to 2,630 SC rice farmers of Rangareddy, Khammam, Nagarkunool, Nalgonda, Wanaparthy, Warangal, Karimnagar and Yadadri Buvanagiri districts of Telangana and Guntur district of Andhra Pradesh. Drying sheets (560), sprayers (290), fertilizers (120), pheromone traps and lures (58), herbicide (58), insecticide (58) and fungicide (58) were distributed to the SC beneficiaries of Telangana and Andhra Pradesh. A training program on ‘Integrated Crop Management in Paddy’ was organized in collaboration with KVK, Perambalur sponsored under ICAR-IIRR-SCSP. Pheromone traps, lures, light traps, Azolla, panchagavya, jeevamritham, pest repellent, *Trichogramma chilonis*, *Trichogramma japonicum*, NSKE 5%, vermicompost, *Azospirillum*, *Phosphobacteria*, *Trichoderma viride*, *Pseudomonas fluorescens* were distributed to 75 SC farmers of Perambalur district of Tamil Nadu. Pheromone traps, lures, light traps, vermicompost, Azadirachtin, *Azospirillum*, *Phosphobacteria*, *Trichoderma viride*, *Pseudomonas fluorescens*, Azolla, *Trichogramma chilonis* and *Trichogramma japonicum* were distributed to 80 SC farmers of Nagapattinam district of Tamil Nadu.

‘Field Day’ was organized in Venkatayapalem village of Khammam district of Telangana on 29<sup>th</sup> August 2020. On 5<sup>th</sup> March 2020, SKUAST, Jammu organized a ‘Field’ Day at Chatha, Jammu, in collaboration with ICAR-IIRR under ICAR-IIRR-SCSP. Off-campus and on campus training programs were organized on various aspects of rice production technologies. The SC rice farmers were trained on ‘Integrated Nutrient Management’, ‘Integrated Pest Management’, ‘Integrated Weed Management’, preparation of vermi-compost and water saving technologies. Fifteen training programs were organized by ICAR-IIRR in collaboration with KVK Sikkal and KVK, Perambalur, Tamil Nadu, RASS KVK, Andhra Pradesh, KVK, Mandya, Karnataka and SKUAST, Jammu.

## 2. List of collaborators under ICAR-IIRR-SCSP

Demonstrations on ‘Good Agricultural Practices in Rice’ were conducted on the fields of (2630) two thousand six hundred and thirty SC farmers of Telangana and Andhra Pradesh under the SCSP scheme being implemented by ICAR-IIRR. A total of fifteen off-campus training programs on rice production technologies were organized by IIRR and capacity building of SC farmers has been undertaken in selected districts of Telangana. Various inputs *viz.*, quality seed, herbicide, water pipes and vermicbeds were provided to the SC beneficiary farmers. Skill training programs have been organized on the use and production of quality seed, appropriate herbicide use, water management through paani pipes, waste management through setting up vermicompost unit and adoption of appropriate post-harvest management practices. Drying sheets, sprayers and storage bags were also distributed to the selected SC farmers. ICAR-IIRR collaborated with Agricultural Universities, KVKs and also NGOs for successful implementation of the SCSP program. Listed below are the various collaborating organizations:

1. ANGRAU, Andhra Pradesh
2. KVK-RAAS, Chittoor, Andhra Pradesh
4. KVK-YFA, Wanaparthy, Telangana
6. NGO-BLESS, Yadadri Bhongir, Telangana
7. NGO-ARDS, Nalgonda, Telangana
8. NGO-Jagruthi, Khammam, Telangana
9. RARS, Kampasagar, PJTSAU, Telangana
10. KVK, Jammikunta, Karimnagar, Telangana
11. KVK, Sikkal, Tamilnadu
12. SKUAT-J, Chatha, Jammu
13. KVK, Perambalur Tamilnadu
14. KVK, Yagantipalle, Andhra Pradesh

### Details of the collaborators and number of beneficiaries

Sl. No.	Organization	District	State	No. of Beneficiaries
1.	PJTSAU	Nagarkurnool	Telangana	229
2.	ICAR-IIRR	Yadadri Bhongiri & Jangaon	Telangana	230
3.	NGO Jagruthi	Khammam	Telangana	1200
4.	ICAR-IIRR	Warangal	Telangana	100
5.	KVK-YFA	Wanaparthy	Telangana	238
6.	KVK-Jammikunta	Karimnagar	Telangana	55
7.	ICAR-IIRR	Rangareddy	Telangana	200
8.	ANGRAU	Guntur	Andhra Pradesh	370
9.	KVK-RASS	Chittoor	Andhra Pradesh	180
10.	JSS, KVK	Suttur	Karnataka	100
11.	SKUAT-J	Chatha	Jammu and Kashmir	197
12.	KVK, Sikkal	Nagapattinam	Tamilnadu	80
13.	KVK, Perambalur	Perambalur	Tamilnadu	75
14.	KVK, Jammikunta	Karimnagar	Telangana	30
<b>Total</b>				<b>3284</b>

### Inputs provided to beneficiary farmers by ICAR-IIRR under SCSP

Sl. No.	Inputs	No. of Beneficiaries
1.	Paddy seed	2630
2.	Urea	120
3.	Sprayers	290
4.	Drying sheets	560
5.	Herbicides, Insecticides and fungicides	58
6.	Lures	50
7.	Traps	50
8.	Vermibeds	20

### 3. Demonstrations organized by ICAR-IIRR

ICAR- Indian Institute of Rice Research organized 2,630 (two thousand six hundred and thirty) demonstrations under the Scheduled Castes Sub Plan (SCSP). These demonstrations were organized in Rangareddy, Khammam, Nagarkurnool, Nalgonda, Wanaparthy, Warangal, Karimnagar and Yadadri Bhuvanagiri districts of Telangana and Guntur district of Andhra Pradesh.

#### Distribution of seed under ICAR-IIRR-SCSP in Telangana

On 13<sup>th</sup> May 2020, quality paddy seed was distributed to one hundred SC farmers of Lingasanipally village of Bijnepalle Mandal of Nagarkurnool district of Telangana. On 21<sup>st</sup> May 2020, paddy seed was provided to one hundred twenty farmers of Kummera and Karukonda villages of Nagarkurnool district under ICAR-IIRR-SCSP.



On 23<sup>rd</sup> May 2020, seed was distributed to one hundred twenty farmers of Rangareddy district of Telangana. Seed was provided to one hundred eighty SC farmers of Pebbair, Wanaparthy district on 1<sup>st</sup> June 2020 in collaboration with YFA KVK, Pebbair.



On 4<sup>th</sup> June 2020 seed was distributed to 100 farmers of Warangal





On 6<sup>th</sup> June 2020, Telangana sona seed was distributed to 150 farmers of Bhongir and Rangareddy districts.



During 8-15<sup>th</sup> June 2020 Siddi seed procured from KVK, Wyra was distributed to 800 farmers of Khammam district



On 10<sup>th</sup> June 2020, BPT5204 seed was distributed to 160 farmers of Yadadri Bhuvangir district



On 17<sup>th</sup> June 2020, BPT5204 seed was distributed to 100 farmers of Mudigonda village, Deverakonda mandal of Nalgonda district.



On 25<sup>h</sup> June 2020, BPT5204 and KNM118 seed was distributed to 55 farmers of Karimnagar district in collaboration with KVK, Jammikunta

On 17<sup>th</sup> October, 2020, under ICAR-IIRR-SCSP, Koonaram sannalu seed purchased from KVK, Wyra, Khammam, Telangana was distributed to 100 SC beneficiary farmers of Gaigollapally village of Kusumanchi Mandal of Khammam district of Telangana.





### Distribution of seed under ICAR-IIRR-SCSP in Andhra Pradesh

On 24<sup>th</sup> June 2020, BPT5204 seed was distributed to 370 farmers of Guntur district.



### Distribution of sprayers under ICAR-IIRR-SCSP in Telangana

On 18<sup>th</sup> July 2020, sprayers were distributed to 80 farmers of Kokkireni village of Khammam district of Telangana. Awareness was created among farmers on Pest and disease management practices in rice along with distribution of sprayers under ICAR-IIRR-SCSP scheme.



The SCSP demonstrations were monitored at Venkatayapalem and Pallegudem villages of Khammam district of Telangana on 29<sup>th</sup> August, 2020. The need for adoption of ‘Good Agricultural Practices’ was emphasized to achieve better yields under farmers’ field conditions. Drying sheets were distributed to the SC beneficiary farmers. A farmer-scientist interaction was organized on the various issues related to rice production



A field visit to monitor SCSP demonstrations in Khammam was made on 08<sup>th</sup> January, 2021. Sprayers were provided to 20 beneficiary farmers of Kattakur village of Mudigonda Mandal of Khammam district of Telangana.



On 22<sup>nd</sup> January 2021, a training program on ‘Good agriculture practices in Rice’ was organized at Nalluripalem village of Repalle mandal of Guntur district. A farmer-scientist interaction was conducted with 60 SC beneficiary farmers of Nalluripalem.

On 28<sup>th</sup> January 2021, under SCSP, 30 sprayers were distributed to Kasaram village of Deverakonda mandal of Nalgonda district.



On 8<sup>th</sup> March 2021, Women’s Day was organized in Mutharam, Mudigonda and V.V.Kistapuram villages of Khammam district under SCSP.



#### **4. Demonstrations on ‘Integrated Crop Management’ organized in collaboration with Rashtriya Seva Samithi (RASS) – KVK, Chittoor, Andhra Pradesh**

Rashtriya Seva Samithi (RASS)-KVK, Chittoor has conducted demonstrations and trainings on ‘Integrated Crop Management (ICM)’ in paddy to SC farmers during *Rabi* 2020-21 with the financial support of ICAR-Indian Institute of Rice Research, Hyderabad under SC Sub Plan, 2020-21. RASS-KVK identified SC paddy growing farmers at Agaram, Mangalagiri Kandriga and Athuru villages of Nindra mandal. Totally 150 demonstrations were conducted under the project. Paddy variety, Telangana Sona (RNR15048) was distributed to Agaram and Athuru beneficiary farmers, whereas, NLR 3354 variety seed was distributed to the Mangalagiri Kandriga beneficiary farmers. Other inputs like green manure (Dhaincha) seed, Zinc sulphate, Carbendazim for seed treatment were supplied to all the beneficiaries. Pre & post emergence herbicides Pyrazosulfuron & Bispyribac sodium were supplied to the farmers for effective and timely weed control. Under Integrated Pest Management for stem borer control in paddy, neem oil, chlorpyrifos, cartap hydrochloride, scorio lures and funnel traps were supplied to the farmers. For control of sheath blight and blast disease, fungicide, hexaconazole was supplied to the beneficiary farmers.

Custom hiring centers were established in the three selected villages of Chittoor district of Andhra Pradesh. The equipments, *viz.*, drum seeders, rotavator, power & finger weeders, power & battery sprayers and tarpaulin sheets were made available in the custom hiring center. Establishment of custom hiring center helped the farmers for doing timely operations like sowing and spraying. RASS-KVK has conducted eight need based training programs on ‘Integrated Crop Management’ in paddy to SC farmers under this project. Totally, 406 farmers participated in the training programs. Skill training on ‘repairs and maintenance of equipments’ in the custom hiring center was also conducted for the benefit of SC farmers. Two demonstrations were conducted on seed treatment and placing pheromone traps in the paddy field. Ten field visits were conducted during the entire crop

period from sowing to harvest. Three field days were conducted in the paddy field. Individual farmer wise details were collected on educational status, farming situation, subsidy, cost of cultivation, yield and feed back under this SC sub Plan project. Higher yield of 25.07 q/acre (30.57%) was recorded in the demonstration whereas, farmer practice recorded grain yield 19.20 q/acre. The higher gross returns (Rs.36577/acre), net returns (Rs.12182/acre) and B:C ratio were recorded in the demonstration fields over the farmer practice.

### Yield & Economics of the demonstrated technologies (title revise)

Treatment	Yield (q/Acre)	% of Yield increase in demo	Cost of cultivation (Rs./ Acre)	Gross income (Rs. / Acre)	Net income (Rs./ Acre)	B:C ratio
Demo Practice	25.07	30.57	24395/-	36577/-	12182/-	1.50
Farmers Practice	19.20		21446/-	26316/-	4870/-	1.23

### ❖ Farmers' feedback:

Farmers were satisfied with the yield in the demonstration plot over the farmer practice. Establishment of Custom Hiring Centre is helping the farmers for doing field operations timely. Weeds were also effectively controlled by the application of pre and post emergence weedicides which had also saved the cost of labour for weeding. Timely control of stem borer and other pest and diseases with suitable insecticides and fungicides resulted in higher yield realized by the farmers under the IIRR-SC Sub Plan project.



Establishment of Custom Hiring Centre under SC Sub plan



Field photos of demonstration of ICM in paddy under SC Sub plan

## **5. Demonstrations on ‘Integrated Crop Management’ organized in collaboration with ICAR-JSS KVK, Suttur, Karnataka**

ICAR-JSS Krishi Vigyan Kendra (KVK) is an NGO-managed agriculture science centre hosted by JSS Mahavidyapeetha, Mysuru, Karnataka. Established with the support of Indian Council of Agricultural Research (ICAR), New Delhi, in the year 1994, the KVK has made significant contribution to the development of agriculture and allied enterprises in Mysore district, through its mandated activities and innovative approaches. The excellent support from the host institution by way of providing vision, guidance and management support, coupled with the strong technical backstopping and generous financial assistance from the ICAR, together, have made the KVK a well-recognized, well-equipped and vibrant ‘Technology Resource Centre’ in Mysuru. The KVK has been working with farm families, rural women, youth, and extension functionaries of the various development departments of the government of Karnataka in its endeavor of technology assessment for bringing appropriate technology options within the farmers’ reach.

District has two Agro-ecological zones, Sothern Dry Zone (Zone 6) and Southern Transition Zone (Zone7). The district receives an average annual rainfall of 782 mm. The geographical area of the district is 6.76 lakh ha of which 3.84 lakh ha is arable land, characterized by sandy red soil and shallow black soils. About 30 percent of the total arable land is under canal irrigation where paddy is the major crop grown. Cotton, sugarcane, Virginia flue-cured tobacco, finger millet, black gram, cowpea, pigeon pea, horse gram, groundnut, sesamum and castor are the other major crops. These apart, coconut, banana, turmeric, tomato, brinjal, chilli, watermelon are the important horticulture crops grown extensively in the district. Sericulture is another heritage crop of Mysuru district.

Farmers in the district are facing challenges such as low productivity, increasing production cost, non-availability and high cost of labour, climate change and non-remunerative prices for their produce. On the other hand, there are

also opportunities before farmers like new crop choices, varieties and improved technologies that offer better returns, natural resource management practices, enterprise diversification, especially the Integrated Farming System (IFS) and high value horticultural crops, new methods of farming such as Direct Seeded Rice (DSR) and Sustainable Sugarcane Initiatives can be economically rewarding and intellectually stimulating for the farmers. The KVK is playing the dual role of enabling the farmers to deal with the problems and helping them take advantage of emerging opportunities.

### **Demonstration of ICM in Paddy**

Paddy is the major irrigated crop of Mysuru district covering over 30% of the total cultivable area. Low yield & less profit in paddy mainly due to delayed transplanting, planting more seedlings per hill, irregular spacing, untimely management practices, high COP, imbalanced nutrition, improper weed management and improper pests & diseases causes yield loss to the extent of 60-70%.

KVK conducted demonstrations on ‘Direct Seeded Rice (DSR) in Paddy in *Kharif 2020*. These demonstrations were funded by ICAR-IIRR under SCSP.

### **Economics of DSR & Conventional method of Paddy Cultivation**

Direct sowing by drum seeder in 8 rows facilitated to take up organic fertilizer application, plant protection measures and weed control in an efficient manner. Further the crop duration is reduced around 10-12 days in direct sown rice as compared to normal transplanted. The farmers have realized that direct sowing by drum seeder is a viable option to reduce cost of cultivation of rice and increase net return due to less seed rate, less labour requirements at the time of sowing and no need of nursery raising. The gross returns, net returns and the B:C ratio were higher for DSR demonstration fields in comparison to the conventional transplanting method of the non-beneficiary farmers.

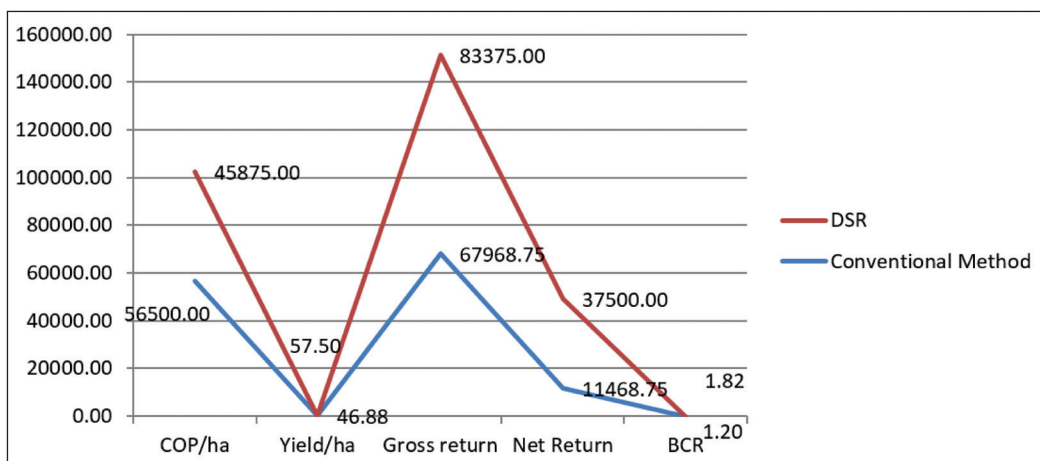


Fig 1: Comparison of economics of DSR vs. Conventional method of rice cultivation

## Capacity building programs for dissemination of technologies

### Trainings

Trainings (7 Nos.) were organized in the selected villages viz., Magudilu/ Niluvagilu (30 farmers), Doddakanya (27 farmers), Debur (44 farmers), Danayakanpura (40 farmers), Geemarahally (40 farmers), Hosahalli (34 farmers), Moodalli (27 farmers) villages of Mysuru district. The farmers were trained on the DSR benefits, uses of INM, IWM and IPDM in Paddy by scientists of JSS KVK.

### Field Visits

Field visits (15 Nos) were made to selected villages of Debur, Hosahalli, Bylaru, Danyakanpura, Suttur, Moodalli, Hadinarumolae, Sinduvalli, Yechagalli and Magudilu. During the visits important pests like stem borer, leaf eating caterpillar, BPH and the diseases like Blast, Sheath blight, Bacterial leaf blight were also noticed for which suitable control measures were recommended. Paddy fields were visited along with farmers for visual observation of pests and natural enemies and attempts were made to clarify farmers' doubts at the field level.



### **Group Meetings**

Group meetings (8 Nos.) were conducted in the selected villages, the scientists – Plant Protection and Agronomy from KVK and the Facilitator of Department of Agriculture from the selected villages along with 25-30 farmers participated in the meetings. Adjacent fields were visited by the team after the meeting for advising the farmers and recommendations were given regarding agronomic practices, pest and diseases control measures.

### **Field Days (2 Nos.)**

Field Days were conducted at Danyakanapura, T.N.Pura taluk on 15.12.2020 (50 Nos.) and Magudilu, HD Kote taluk on 21.01.2021 (57 Nos.) in which farmers participated along with the line department officials viz., Deputy Director of Agriculture, Deputy Project Director (ATMA), Assistant Director of Agriculture, ATMA officials, Community Radio Station Officer, Village Heads, Progressive farmers of the village.

The Field Day was used as an opportunity to discuss about the DSR benefits & uses, insect pests, diseases, agronomic aspects, harvesting method, cost of production and other problems faced by the farmers during the cropping season.

Further, the scientists highlighted the importance of land preparation for DSR, nutrients, weed management, water management, IPDM, role of beneficial insects, parasites and predators as also the means of reducing the cost of cultivation. Finally, the farmers were advised to adopt ICM and DSR to get higher yield by decreasing the man power in the ensuig paddy season.

### **Farmers' Feedback**

The farmers stated that sowing with 'Drum seeder' drastically reduced the man power in raising the nursery and transplanting. Usually a labor can sow 1.5 to 2.0 acres a day using drum seeder and the labor required for direct seeding in one-acre area is only 2 against 15-18 man days required in normal transplanting method of cultivation. This method is one of the most important cost saving technologies by reducing quantity of seeds to the minimum and number of manual labours for nursery raising & transplanting.

The average seed cost (10 kg) involved in drum seeder per acre is about Rs.300.00 against 25 kg of seed worth of Rs. 750.00 in the traditional method of cultivation.

The crop duration reduced by 10-12 days when compared to the traditional cultivation methods.

The cost of cultivation reduced by 23.16 % with an additional net income of 30.58% and the farmers could realize an incremental yield of 22.65% with the adoption of DSR.

### **Outcomes**

- The direct sowing of paddy using drum seeder technology has spread over an area of 8,650 acres.
- The technology has given good relief to the paddy growers from labor shortage during the peak seasons.
- Farmers readily accepted the DSR technology as ‘seeing is believing’. It involves less cost of cultivation than conventional transplanting method, mainly it reduces labor during peak periods i.e. transplanting, moreover it is technically viable and economically feasible and it is easy to practice without affecting the crop yields, increases the yield, reduces the crop duration, drudgery and cost of cultivation.
- However, better weed management practices in DSR can decrease the weed management costs.



**Demonstration on use of Drum seeder**



Method Demonstration of Traps & Scorpio lures in management of Stem borer



Training & Group Discussion on DSR & ICM in Paddy

### Field Day





## 6. Demonstrations on 'Integrated Crop Management' organized in collaboration with Sher-e-Kashmir University of Agricultural Sciences & Technology - Jammu

Paddy is a main *kharif* crop in the plains of Jammu Province with cultivated area of about 1.19 lakh ha out of which basmati paddy is being cultivated in an area of about 70,000 ha. Most of the farmers have small holdings and there are villages with scheduled caste population more than 40 % in blocks Bishnah, Arnia and R.S. Pura of Jammu. In order to support the schedule caste paddy farmers of these blocks, AICRP (Rice) of Jammu implemented the project entitled "Schedule Caste Sub Plan in Paddy for Jammu" in an area of about 160 acres involving about 187 scheduled caste paddy farmers.

### Selection criteria of the location and households

In rice growing area, villages with more than 25% SC population were selected through the concerned Panchayat. The beneficiaries were selected from Bishnah, Miran Sahib and R.S.Pura villages of Jammu.

### List of Tools/Equipment/ Machinery provided to SC farmers

Sl. No	Item	Justification	Present Status (New or up-gradation of existing)
1	Butachlor @ 20 kg/ ha	Due to covid-19, almost all migrant labourer moved towards their native places , as a result the labour cost for <i>kharif</i> crop in 2020 was very high	The weedicide reduced cost of labour due to reduction in manual weeding cost and improved yield
2	Bispyribac Sodium	It effectively controls most of the weed species affecting rice crop both in nursery and main fields	The use of these two weedicides significantly improved rice yields, economic returns and water productivity
3.	Storage bins with one quintal capacity for every beneficiary farmers	Farmers faced proper storage problem for seed / grain.	With proper storage, farmers can protect rice seed / grain from rodents and other insects, so they were provided storage bins.

Sl. No	Item	Justification	Present Status (New or up-gradation of existing)
4.	Tarpaulins 18 x 24 m for every beneficiary farmer	At the time of threshing the wastage of rice grains is very high	Tarpaulin can save the production at the time of threshing, so tarpaulin was also provided to the beneficiary farmers.
5.	Umbrella	They have to go to the field in rainy season without umbrella.	The farmers can move to the field in rainy season

Due to covid-19, almost all the migrant labors moved towards their native places, as a result the labor cost of transplanting in *kharif*, 2020 was very high. Butachlor is used to control the growth of weeds in rice field. Bispyribac effectively controls most of the weed species affecting rice crop both in nursery and main fields. These weedicide reduced cost of labor of manual weeding. Basmati growing farmers reduce their cost of cultivation with these weedicides. Timely use of weedicides increased the production of Basmati rice of the beneficiary farmers.

During the group meeting the beneficiary farmers discussed their problems, especially post-harvest problems. At the time of threshing the wastage of rice grains is very high and they expressed the need for big tarpaulin sheets. Another problem being faced by them is proper seed / grain storage. As per the need of the farmers, umbrellas to protect from rain and sun were distributed to the farmers.

### Selection of Villages

Villages were selected on the basis of schedule caste population percentage. The details of selected villages are tabulated below:

S. No.	Name of the villages	Panchayat	District	No. of house holds	Popula-tion	S C Population		Total land under agriculture (ha)
						Total SC Population	Benefi-ciaries	
1	Jinder Melu	Jindar	Jammu	417	1993	708	31	284.1
2	Qutab Nizam	Jindar	Jammu	125	617	533	41	88.2
3	Ban Sultan	Ban Sultan	Jammu	1338	7184	1741	25	162.2

S. No.	Name of the villages	Panchayat	District	No. of house holds	Population	S C Population		Total land under agriculture (ha)
						Total SC Population	Beneficiaries	
4	Sher Garh	Sher Garh	Jammu	192	950	611	11	88.4
5	Pratap Singh Pura	Pratap Singh Pura	Jammu	186	1084	913	89	150.1

### Training cum Field Days

Two outreach programs to create awareness about the 'ICM in Rice' under SC Sub Plan in the form of training and field days were organized in the selected village and at SKUAST-Jammu. In these programs, scientists interacted with farmers and provided their expertise on new varieties, latest technical know-how and successful modules of rice farming. The beneficiary farmers also shared their experiences on benefits of this SC sub-plan. The selected items i.e. Tarpaulins for threshing, storage bins and umbrella were also distributed to the beneficiary farmers during these field days. Both the programs were chaired by Hon'ble Vice Chancellor, Prof. J.P. Sharma along with the Director Research, Director Education and other dignitaries.

### Publications

Under this project two folders and one bulletin were published in Hindi language for the easy understanding of the farmers.



Distribution of inputs to the selected beneficiaries under SC Sub Plan Project





**Rice Field Day organised at SKUAST-Jammu**



## 7. Demonstrations on 'Integrated Pest Management' organized in collaboration with KVK, Sikkal, Tamil Nadu

Nagapattinam district being one of the Cauvery Delta regions, is primarily divided into Vennaru Basin and Cauvery Basin. The crops grown in this region include paddy, green gram, groundnut, black gram, castor, sesamum, maize, sugarcane, oil palm, ragi, coconut, sunhemp, tobacco, coconut, banana, mango and other vegetables. Nagapattinam district is one among the backward districts (36%) in Tamil Nadu. Amongst various crops, Paddy is one of the major crop cultivated in this region. Paddy is cultivated during various seasons (Kuruvai, Samba, Thaladi and Summer) by adopting several methods like conventional, Direct sowing and SRI. The total area under paddy cultivation during 2019-20 was 1,63,800 ha. Amongst several limiting factors, the loss due to pest and disease is the most vital constraint for achieving greater yield in Paddy in Nagapattinam district. Stem borer, leaf folder, BPH (Brown Plant Hopper), False smut, Gall midge Blast and BLB have been the main problems in paddy cultivation in the area and result in low production. Farmers rely exclusively on pesticides and fungicides to control and as a consequence this has led to the increased cost of cultivation. Due to monoculture, the magnitude of this problem has spread widely in past years. Usage of various types of chemical insecticides to manage pest and disease has also led to environmental pollution, decreased yield leaving back pesticide residues on soil and crop. Short-term high yield varieties, increased use of mineral fertilizers as well as improved irrigation systems have led to phenomenal increases in crop productivity. However, this has led to the gradual replacement of organic manures as plant nutrient sources. After the termination of the subsidy there has been a rapid rise in P and K fertilizer prices, which contributed to a decline in fertilizer consumption. The available organic inputs for rice production includes FYM, fast growing leguminous shrubs (Dhaincha) and trees (Pungam) which are grown in the cropping sequence and in alley formation. Furthermore, their loppings can be used for mulching. Nitrogen fixers like Azolla and Blue green algae are added to the main field to improve the crop yield for *Kharif* rice. With regard to this

point of view, this project was implemented with the objective to promote the use of organic sources in rice cultivation through training, distribution of inputs and demonstration for rice crops in Nagapattinam District to reduce pesticide consumption and enhance rice yields.

The Nagapattinam district consists of eleven blocks and the block wise SC farmers were as follows (Nagapattinam block – 31,161; Keelaiyur block – 28,004; Kivelur block – 38,993; Thirumarugal block – 37290; Thalainayar block – 22,680; Vedaranyam block – 30,166; Mayiladuthurai block – 67,615; Kuthalam block – 44,834; Sembanarkovil block - 58,980; Sirkali block – 48,999; Kollidam block – 52,154). The total SC farmers in Nagapattinam District is 4,60,876.

The project activities aimed at enhancement of soil health by using organic and inorganic fertilizers based on soil test based nutrient application and enhance productivity.

Target SC beneficiaries were selected from Sirkali Block in Nagapattinam district (80 members). Sirkali is a major region where paddy is cultivated during Kuruvai, Samba and Thaladi. 80 participants (two batches) were selected for imparting training on ‘Integrated Pest Management’. Trainees were selected by advertising through various mass media like All India Radio, Karaikal, M kisan portal, facebook, WhatsApp groups and newspapers. Eligible participants were screened based on certain criteria such as: Crop sown (Paddy) and community (SC) based on group meeting.

The selected trainees have been imparted training to enable them for getting skill on cost effective and environmentally safe pest and disease management and to encourage farmers to use organic manure, biofertilizers, biofungicides and bio control agent. The selected SC farmers were trained and a strong knowledge on key competencies about soil test based fertilizer application, major pest and diseases, life history, symptoms of damage, and integrated management techniques for nutrient, pest and diseases.

A four days training program under ICAR-IIRR- SC Sub plan on ‘Integrated Pest Management’ in paddy was organized at Tholuthur village, Sirikali block

during 08.02.2021 to 11.02.2021. The objective of the training programme was to delineate and enrich knowledge on improved production technology in paddy cultivation to modernize the SC farmers of Tholuthur village (Sirkali block) in Nagapattinam district.

At the outset, the training programme was inaugurated by the chief guest, Dr. Rajkumar, Director of Extension Education, TNJFU who delivered a special address. Dr. A. Gobalakannan, Programme Coordinator, KVK, Nagapattinam, gave a prelude regarding the importance of the program. Dr. Chandrasekar, Subject Matter Specialist (Plant Protection), delivered the lectures on ‘Production and application of Azolla in paddy’, ‘Panchakavya preparation’, ‘Production and application of vermicompost in Paddy field’ and ‘Pest and disease resistant paddy varieties suitable for Nagapattinam district.

On the second day, Dr. Chandrasekar, Subject Matter Specialist (Plant Protection) disseminated information on major pests of paddy, symptom of damage, identification of natural enemies and preparation of organic pest repellent (Panchakavya, NSKE), safe method of pesticide application. Subsequently, another session was dealt by Dr. S. Muthukumar (Animal Husbandry) to clear doubts of the farmers pertaining to dairy, goat and poultry.

On the third day, the farmers visited Krishi Vigyan Kendra, Sikkal, Nagapattinam. Dr. Chandrasekar Subject Matter Specialist (Plant Protection), delivered lectures on ‘Mass production of biocontrol agents (*Trichoderma viride* and *Pseudomonas fluorescens*). Dr. V. Kannan, Subject Matter Specialist (Agronomy), handled session on ‘Organic input production and selection of Paddy variety’, ‘Organic fertilizers recommendation in paddy’ and ‘Methods of organic fertilizer application and Foliar spray of nutrients in paddy’. Mr. Ganabharathi, demonstrated on how to collect soil and water samples. Following this, the farmers owning farm pond got clarification on their doubts related to fresh water fish culture techniques. Sequentially, Mr. K. Ragu, Subject Matter Specialist (Horticulture), gave a lecture on ‘Roof garden’. This was followed by the last lecture delivered by Dr. A.Mathivanan, Subject Matter Specialist (Home Science) on ‘Value added products in paddy and fish products’.

On the last day (fourth day), Dr. Chandrasekar, Subject Matter Specialist (Plant Protection), delivered lectures on ‘Major diseases of paddy, symptoms of damage and IDM module’. Totally 80 SC farmers participated and were benefitted through this programme. In the valedictory function, Dr. Rajkumar, Director of Extension Education, TNJFU; Dr.A. Gobalakannan, Programme Coordinator, KVK; Dr. P. Jeyakumar, Principal Scientist and Dr. P. Muthuraman, Head, Transfer of Technology, ICAR-Indian Institute of Rice Research, Hyderabad; Assistant Director of Agriculture in Sirkali block participated and distributed the certificates, inputs and training material to the farmers. The feedback was also collected from the farmers.

### **Day 1 (08.02.2021)**



**Farmers' training**



**Farmers' training**

### **Day 2 (09.02.2021)**





### Day 3 (10.02.2021)



Visit to KVK, Sikkal, Nagappattinam district

### Day 4 (11.02.2021)



Valedictory Function

## **8. Demonstrations on 'Integrated Pest Management' organized in collaboration with KVK, Perambalur, Tamil Nadu**

Perambalur district is one of the drought prone backward districts in Tamil Nadu. The major crops of this district are rice, millets, pulses, sugarcane, cotton and oil seeds. Rice is third most important agricultural crop of *kharif* season after cotton and maize in Perambalur District. Paddy covers an area of 3353 ha during *Kharif* and *Rabi* seasons.

Among the many limiting factors, losses caused by pests and disease remained an important constraint for achieving high rice yields in Perambalur district. Major problems in rice cultivation in Perambalur district were leaf folder, stem borer, BPH (Brown Plant Hopper), False smut, Gall midge and BLB and leads to low productivity. The farmers rely exclusively on the application of pesticides to control pests and disease which has increased cost of cultivation. The magnitude of problem has been wide spread over the past years due to the monoculture area. The farmers rely on using number of chemical insecticides for the management of pests, which leads to more cost of cultivation, environmental pollution, pesticide residue on crop and soil and results in reduced yield.

Short-duration high-yielding varieties along with increased use of mineral fertilizers and improved irrigation facilities have resulted in spectacular increases in crop productivity. This has, however, led to gradual replacement of organic manures as sources of plant nutrients. There has been a sharp increase in the prices of P and K fertilizers following withdrawal of subsidy, which has led to their decreased consumption by the farmers. Organic sources available for use in rice production include the bulky organic manures like FYM, quick growing leguminous shrubs (Dhaincha) grown in the cropping sequence, leguminous trees (Pungam) grown in alley formations. Their loppings are used as mulch materials. Blue green algae and Azolla added at main field improve nitrogen fixation as well as yield potential in rice-based cropping systems. Keeping the above point in view, project

was planned to conduct to those Paddy farmers to reduce the chemical usage and managing the pest and diseases and increasing the yield through training, input distribution and demonstration for Rice crop in Perambalur District.

A four days training programme on ‘Integrated Pest Management in paddy’ was organized in collaboration with ICAR- Krishi Vigyan Kendra, Perambalur from 15.12.2020 to 18.12.2020. The objective of the training programme was to delineate and enrich knowledge on improved production technology in paddy cultivation to the SC farmers in Perambalur district.

On the first day, the training programme was inaugurated by Dr. Somasundaram, Cotton Research Station, Veppanthattai, as Chief Guest he delivered special address in the program. Dr. V.E. Nethaji Mariappan, Senior Scientist and Head, KVK, Perambalur welcomed the participants and gave a prelude about the importance of the program and handled the technical session on soil sampling and soil sample analysis. M.Punithavathi, Subject matter specialist (Agronomy), KVK, Perambalur explained about the organic inputs and criterion for selection of paddy variety. Dr. Somasundaram, Assistant Professor and Head, Cotton Research Station, TNAU Veppanthattai, Perambalur district delivered lecture on inorganic fertilizers recommendation in paddy and methods of inorganic fertilizer application. Ms.Pameswari, Assistant Professor, TRIARD demonstrated the Azolla production and application in paddy and Panchakavya preparation.

On the second day, Ms.Pameswari, Asst. Professor, TRIARD demonstrated the preparation of foliar spray of nutrients in paddy and Jeevamritham preparation. M.Punithavathi SMS Agronomy KVK, Perambalur handled session on Vermicompost production and application in paddy field. Dr. Sakthivel, Assist. Professor, Cotton Research Station, TNAU, Veppanthattai delivered lecture on major pest and diseases of paddy, symptoms of damage in paddy and seed production.

On third day, all the SC farmers had a field visit to Tamil Nadu Rice Research Station, Aduthurai for exposure visit. Dr. Elamathi Assist. Professor (Agronomy) handled session on recently released paddy varieties from TRRI, Aduthurai.

Dr. Sathyabhama Assist. Professor (Soil science) arranged field visit around trial fields in TRRI farm.

Fourth day, Dr. Divya, Assist. Professor, TRIARD handled Natural enemies identification in field, Organic pest repellent preparations (Panjagavya, NSKE). Dr. Rajapriya, Research Associate of Cotton Research Station, TNAU, Veppanthattai delivered lecture on green manuring in paddy field. Mr. N. Satish Kumar, Lab Technician, KVK, Perambalur explained mass production of *Trichoderma viride* and *Pseudomonas fluorescens* in Biocontrol lab. Totally 75 SC farmers participated and benefitted through this programme. In the valedictory function, Dr. K.Varadharaajen, Chairman, KVK - Dr. P. Jeyakumar, Principal Scientist, ICAR-IIRR, Dr.B.Nirmala, Senior Scientist and PI-SCSP, ICAR-Indian Institute of Rice Research, Hyderabad participated and released booklet on ICM in paddy and collected feedback from the farmers.



**Inaugural address by Chairman, KVK**



**Special address by Senior Scientist, IIRR, Hyderabad**



**Booklet released**



**Inputs distribution**



**సోనా వరి విత్తనాల పంపిణీ**

ప్రభుత్వం ఖమ్మం జిల్లా బుస్సెట్

భారతీయ వరి పరిశోధన సంస్థ ఐ.ఐ.ఆర్. అర్ రిజిస్ట్రార్ కింద, పుల్లారావర వారి సహకారంతో షెడ్యూల్డ్ కులాల ఉప ప్రణాళిక లో ఎన్ సి సి బాగా ఉన్న జిల్లా కేంద్రానికి మంజూరు చేసిన పొగొట్టిన గ్రామంలో వరి పండితీ షెడ్యూల్డ్ కులాల రైతులకు ఉచితంగా తెలంగాణ సోనా వరి విత్తనాలను పంపిణీ చేశారు. వరి సాగు చేసే ఎన్ సి రైతులు వాణ్జిన విత్తనాలు వాడి మొగ్గిన సాగు పద్ధతులు పాటించి తమ ఆదాయాన్ని మెరుగు పరచుకోవచ్చని ఇఆర్ఆర్ఆర్-ఎన్సిఎన్సి ముఖ్య ఉద్దేశ్యం. ఈ పథకానికి అందార్లు అభినవ్ రా. డి.నిర్మల సీనియర్ శాస్త్రవేత్త బిఆర్ఆర్ ఆర్ ఈ విత్తనాలను పంపిణీ శాస్త్రవేత్తల సర్పాంట్ శ్యామ సుందర్ రెడ్డి, ఎంపీ శ్రీ.ఎన్.ఎన్.సి సీనియర్ రిజిస్ట్రార్ రమేష్, వేదవంకం, కిరణ్, ముంద్రపాటి, పరిమల గ్రామ రైతులు పాల్గొన్నారు.



**రైతులకు ఉచితంగా వరి విత్తనాలు పంపిణీ**



**రైతులకు విత్తనాల బస్సులను లండ్నిస్సు సర్వీస్, కేటీ శాస్త్రవేత్త**  
**సూత్రాల్:** మండలంలోని లండ్నిస్సు గ్రామంలో బుద్ధవారం భారతీయ వరి పరిశోధనా సంస్థ సౌజన్యంతో ప్రకాశం కృషి విజ్ఞాన కేంద్రం, జమ్మికుంట ఆధ్వర్యంలో 20 మంది రైతులకు ఉచితంగా వరి విత్తనాలను పంపిణీ చేశారు. ఈ సందర్భంగా టీక శాస్త్రవేత్త శ్రీనివాసరెడ్డి మాట్లాడుతూ 20 మంది రైతులకు ఒక్కొక్కరికీ ఎకరాకు సరిపడే వరి విత్తనాలను పంపిణీ చేశామని తెలిపారు. ఈ విత్తనాలను పండితీ రైతులకు సర్పాంట్ ప్రణవ రెడ్డి శాస్త్రవేత్తల సర్పాంట్ శ్యామ సుందర్ రెడ్డి, ఎంపీ శ్రీ.ఎన్.ఎన్.సి సీనియర్ రిజిస్ట్రార్ రమేష్, వేదవంకం, కిరణ్, ముంద్రపాటి, పరిమల గ్రామ రైతులు పాల్గొన్నారు.

5/13  

**సమగ్ర పోషక యాజమాన్యంతో మంచి దిగుబడులు**

**నింజ్ర, జనవరి 23, (ప్రభుత్వం)**  
 భారత వరి పరిశోధనా సంస్థ ఐ.ఐ.ఆర్. అర్ రిజిస్ట్రార్ కింద, పుల్లారావర వారి సహకారంతో షెడ్యూల్డ్ కులాల ఉప ప్రణాళిక లో ఎన్ సి సి బాగా ఉన్న జిల్లా కేంద్రానికి మంజూరు చేసిన పొగొట్టిన గ్రామంలో వరి పండితీ షెడ్యూల్డ్ కులాల రైతులకు ఉచితంగా తెలంగాణ సోనా వరి విత్తనాలను పంపిణీ చేశారు. వరి సాగు చేసే ఎన్ సి రైతులు వాణ్జిన విత్తనాలు వాడి మొగ్గిన సాగు పద్ధతులు పాటించి తమ ఆదాయాన్ని మెరుగు పరచుకోవచ్చని ఇఆర్ఆర్ఆర్-ఎన్సిఎన్సి ముఖ్య ఉద్దేశ్యం. ఈ పథకానికి అందార్లు అభినవ్ రా. డి.నిర్మల సీనియర్ శాస్త్రవేత్త బిఆర్ఆర్ ఆర్ ఈ విత్తనాలను పంపిణీ శాస్త్రవేత్తల సర్పాంట్ శ్యామ సుందర్ రెడ్డి, ఎంపీ శ్రీ.ఎన్.ఎన్.సి సీనియర్ రిజిస్ట్రార్ రమేష్, వేదవంకం, కిరణ్, ముంద్రపాటి, పరిమల గ్రామ రైతులు పాల్గొన్నారు.



**SKUAST-J organises Training-cum-Field Day**

**STATE TIMES NEWS**  
**JAMMU:** In a programme to benefit farmers from SC community of villages Qutab Nizam, Ban Sultan, Jinder Melu and Shergarh, SKUAST-Jammu organizes a Training-cum-Field Day under Schedule Caste Sub Plan in Paddy at Conference Hall, Main Campus, Chatha.  
 Vice Chancellor, Prof. J.P. Sharma was the Chief Guest of the event and while interacting, he invited the farmers to visit the University during the upcoming Kissan Mela to be organized by the university from March 16-20, 2021 at Chatha.  
 Prof. Sharma was accompanied by Director Research eum Registrar Dr. Jag Paul Sharma, Associate Director Research Dr. Pradeep Wali , Dr. A.K. Sharma, Chief Scientist, WMRC, Dr. B.C.

Sharma, Prof. and Head (Agronomy) and Dr. Amrish Vaid, Head, Mega Seed Project.  
 During the programme, storage bins, tarpaulins and umbrellas were distributed among the beneficiaries of this project.  
 Dr. Anuradha Saha, Senior Scientist and Incharge of the scheme presented a detailed outline of this project and the farmers also presented their views about the scheme.  
 Scientists namely Dr. Vijay Bharti, Dr. V.B. Singh and Dr. Bhupesh Kumar also delivered lectures on different aspects of rice production.  
 The event was also attended by scientists working in AICRP (Rice) and Division of Plant Breeding and Genetics.



**నిరుపేద రైతులకు వరి విత్తన పంపిణీ**  
 పరిసాగులో ఆధునిక, యాజమాన్య పద్ధతులు పాటిస్తే అధిక దిగుబడి సాధించవచ్చునని భారతీయ వరి పరిశోధన సంస్థ రాజేంద్రనగర్ శాస్త్రవేత్త డాక్టరు బి.నిర్మల అన్నారు. గురువారం చింతపల్ల గ్రామంలో భారతీయ వరి పరిశోధన సంస్థ ఆధ్వర్యంలో రైతులకు విత్తనాల పంపిణీ చేశారు. ఈ కార్యక్రమంలో పాజెక్షన్ సభ్యులు పిశాచిత్ గ్రామ సర్పాంట్, సెక్టరీ మరియు రైతులు పాల్గొన్నారు.

**యాంత్రిక బీజాసాయ అగ్రత్య**



మంజూరు చేసిన పొగొట్టిన గ్రామంలో వరి పండితీ షెడ్యూల్డ్ కులాల రైతులకు ఉచితంగా తెలంగాణ సోనా వరి విత్తనాలను పంపిణీ చేశారు. వరి సాగు చేసే ఎన్ సి రైతులు వాణ్జిన విత్తనాలు వాడి మొగ్గిన సాగు పద్ధతులు పాటించి తమ ఆదాయాన్ని మెరుగు పరచుకోవచ్చని ఇఆర్ఆర్ఆర్-ఎన్సిఎన్సి ముఖ్య ఉద్దేశ్యం. ఈ పథకానికి అందార్లు అభినవ్ రా. డి.నిర్మల సీనియర్ శాస్త్రవేత్త బిఆర్ఆర్ ఆర్ ఈ విత్తనాలను పంపిణీ శాస్త్రవేత్తల సర్పాంట్ శ్యామ సుందర్ రెడ్డి, ఎంపీ శ్రీ.ఎన్.ఎన్.సి సీనియర్ రిజిస్ట్రార్ రమేష్, వేదవంకం, కిరణ్, ముంద్రపాటి, పరిమల గ్రామ రైతులు పాల్గొన్నారు.





