

Success Story Dry Direct seeded Rice- A Profitable Resource Conservation Technology

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Introduction

Rice farming is more water efficient using Direct Seeded Rice (DSR). DSR Technology, one of the oldest crop establishment systems, has a low input need. The traditional rice production system has a number of issues, including a declining water table, a paucity of labour for transplanting during peak seasons, and poor soil health. The Dry DSR technology is regaining popularity in recent days because it solves many problems, including being less labour intensive, requiring less water, requiring less drudgery, assisting in early crop maturity, having a low production cost, providing better soil physical conditions for crops, and reducing methane emissions.

An exposure visit was conducted to the farmers to Dry direct seeding in Paddy field at RARS, Jagtial to motivate the farmers to adopt the technology. After watching the performance of the technology the farmers were interested to follow the technology and took the help of the research station in selecting the suitable variety seed for cultivation by Dry DSR and machinery i.e. seed drill for sowing.

The farmer Sri.D. Laxmirajam was motivated by the technology and had sown the Paddy by Dry Direct seeding method of cultivation by the knowledge gained through the demonstration conducted by RARS, Jagtial on Dry direct seeding method through seed cum ferti drill. After the harvest of rabi crop, the land was ploughed with M.B. Plough, followed by



running cultivator followed by rotavator once. The farmer used the paddy variety KNM 1638 and sown the paddy by Direct seeding with seed drill at a seed rate of 12 kg/acre. The farmer said that he could save the labour cost in sowing to an extent of 5100/-. Compared to conventional method.

Irrigation management:

Upto 30 days the farmer gave need based irrigations to the crop by maintaining soil at saturation capacity. After 30 days the crop was converted to submerged condition by maintaining 2-5 cms of water.

Nutrient Management:

The farmer applied recommended dose of fertilizer. The basal dose of fertilizer was applied with seed cum ferti drill at the time of sowing.

Weed Management:

Although weed problem is the major challenge in Dry DSR technology, the farmer said that he followed the weed control measures in time i.e. especially to control the post emergent weeds which is a serious problem to control the farmer sprayed Phenoxulam 2.7% + Benjosulphonic acid 10% O.D + Cyhalofop – Butyl 5.1% 800 ml for two litres of water was sprayed for one acre. by taking suggestions from scientists of RARS, Jagtial. With this he had controlled the weed effectively.

Harvesting:

The Paddy variety KNM 1638 is a short duration variety and comes in 125 to 130 days. The farmer said that the crop was matured in a duration of 125 days and harvested with combined harvester.

A field day was conducted in the farmer field to show case the performance of the technology to other farmers also. The dry direct seeding technology was adopted by some of the other farmers also in the village and got good results. The farmer said that the by this method the field is also pest free and sprayed the pesticide only once when compared to the previous year when his field was attacked by pest and diseases i.e. BPH, stem borer and false smut.

Comparison of cost and returns through Dry Direct seeding technology and conventional method of cultivation of Paddy

S.No	Operation	Cost incurred /acre	
		Dry DSR	Conventional
1	Land preparation	2700	2700
2	Nursery	0	400
3	Puddling	0	1600
4	Seed cost	600	1000
5	Sowing	1500	6600
6	Weeding	3500	2000
7	Irrigation	680	1600
8	Plant Protection	800	950
9	Fertilizers	2180	2580
10	Harvesting	1400	1400
11	Transport	2000	2000
11	Cost of cultivation	15, 360	22, 830
12	Yield	29 q	30 q
13	MSP	1940	1940
14	Gross returns	56, 260/-	58, 200
15	Net returns	40, 900/-	35,370

The Farmer earned an additional amount (net returns) of Rs. 5, 530/- by the adoption of Dry Direct seeding by saving of labour , no. of irrigations, electricity and cost incurred on pesticides compared to conventional method of cultivation of Paddy.

Photographs



Advantages to take forward the technology expressed by the farmer:

- Saving of seed to an extent of 8 to 10 kg per acre.
- Saves up to 30% water
- Increased fertilizer efficiency due to fertilizer distribution in the root zone
- Crops mature 7-10 days earlier, allowing for timely seeding of succeeding rabi crops.
- Saving of labour in sowing to an extent of 5100/- where the labour demand is high.

Suggestions to take forward the technology expressed by the farmer:

- Trainings, awareness programmes and field visits has to be conducted to the farmers on technical aspects i.e. irrigation management, weed management etc and of the technology.
- Machinery i.e. seed drills should be made available to the farmers.
- Exposure visits should be conducted to the demonstration units or successful farmer fields adopting Dry DSR technology.