

## A Success Story of Direct Seeding in Rice- Vallapuram Village

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**ARTICLE ID: 03**

Rice (*Oryza sativa L.*) is an important crop for 117 countries of the world hence called as “Global Grain”. Direct seeding of rice was a common practice before green revolution in India and is again coming into practice because of its potential to save water and labour (K.M Singh & Brajesh Shahi, 2015). Transplanting of rice is more water demanding, laborious cumbersome, time consuming and entails a expenditure on raising nursery, uprooting & transplanting. Scarcity of labour during peak period of transplanting, uncertain supply of irrigation water, depletion of ground water and increasing production cost necessitate an alternative for transplanting method of Rice cultivation (Ladha et, al 2003). The weather being the major aberration in the region and due to vagaries of monsoon, rains are delayed which further aggravates the labour demand situation. In this context, KVK, Wyra endeavoured to promote Direct seeding of rice in the district.

In Direct seeding Rice seeds can be sown in a puddle soils (Drum seeding or broadcasting) Farmer can overcome the major obstacles labour shortage for transplanting due to peak demand and high cost of cultivation. In case of delay in monsoon or shortage of water, DSR gives the farmer flexibility to take up direct sowing of paddy with a suitable duration variety to fit into the left over season. This allows timely sowing of the succeeding rabi crop. Rising labour cost and the need to intensify rice production in economical way, farmers were encouraged to switch to direct seeding, KVK Wyra spared no effort in Popularizing this water saving Technology , the outcome of the effort is evident in Khammam district that the Direct Seeding rice method of cultivation is scaled upto 30000 hectares..

### **Direct seeding in Rice:**

The scientist of Krishi Vigyan Kendra conducted large scale demonstrations in different parts of khammam district in the year 2018, Vallapuram being one of them. A

progressive farmer T. Rana Pratap garu came forward and took the initiation for conducting demonstration in direct seeding rice in his field in view of labour scarcity and erratic rainfall with guidance of scientist. Rana Pratap sought for guidance that was being provided by KVK, Scientist at regular intervals.

**Land preparation:**

Transplanting of rice entails adequate land preparation for both nursery and field, consumes (20%) of the total water requirement per hectare (1240mm) and requires 25 to 30 man days for the establishment manually depending on soil type.

In Direct seeding one can restrain for preparing nursery and sowing directly into the main field. Land should be leveled properly for water management.

**Seed Rate:**

Seed rate 30 Kgs of seed is required for direct seeding, light irrigation must be given at the time of sowing, care should be taken while sowing, so that the seeds does not drain off.




**Weed management:**

Spraying of pre-emergence herbicides pyrazosulfron ethyl @ 200 g/ha at 3rd or 4th das and post emergence herbicide (Bispyribac sodium @ 250 ml/ha) at 15-20 das. Fertilizer management same as of transplanting method except basal dose of nitrogen fertilizer application, which has to be applied at 15 days after sowing compared to transplanted crop, direct seeded rice crop can be harvested early by around 7-10 days.

In the first year itself the results were promising and saving substantial amount of water with no negative impact on yield. The farmer harvested a pleasant yield with good profit and retain his confident in direct seeding, noticing the advantages of Direct seeding and the monetary returns from this technology 12 farmers shifted to Direct seeding in Rice the next year.

A significant rise in the area under direct seeded rice was also witnessed in the next few years. Now the Vallapuram village has its own tale to tell as all the paddy cultivation area is under Direct seeding as the complete paddy growing area 100 hectares is under Direct seeding in Rice. Comparative statements of transplanted method and Direct seeding method of Rice cultivation

S.No	Particulars	Transplanting method	Direct Seeding
1	Land Preparation	13,750.0	13,750.0
2	Seed+ Seed treatment	2750.0	1140.0
3	Nursery	2500.0	0
4	Sowing / transplantation	12500.0	1250.0
5	Weed management	7250.0	6625.0
6	Fertilizer	8437.5	8500.0
7	Pesticide	8925.0	7875.0
8	Harvesting	7500.0	7500.0
9	Total cost of cultivation	63612.5	46640.0
10	Grain yield (Kg/Acre)	6375.0	6750.0
11	Gross income	119850.0	126900.0
12	Net income	56237.5	80260.0
13	C:B ratio	1.88	2.72

		
<b>Broad casting of seeds</b>	<b>Germinated Seedlings</b>	<b>Direct seeded rice at panicle initiation stage</b>