

## **Case of Large scale adoption in Direct sown paddy cultivation using Drum Seeder in Thiruvannamalai district**

### **Problem Statement:**

Paddy is an important food crop grown in 93636 ha in almost all the part of Thiruvannamalai district. The farmers were following conventional methods of paddy cultivation. The conventional method leads to high investment cost, non availability and higher costs on labour at the critical crop stages like transplanting, weeding and harvesting. This leads to higher cost on cultivation and delaying in carry out the required operations resulted in yield reduction. Besides delay or no seasonal rainfall and unequal distribution of rain is affecting the regular operations in paddy cultivation. The area under paddy cultivation is decreasing annually mainly due to labour constraints.



### **Plan, Implement & Support:**

There is lot of awareness created on machineries used in paddy cultivation by the KVK as well as the State Department of Agriculture. Mechanization in Paddy cultivation can be possible at all the stages of the crop i.e from sowing to harvesting. The various implements were used to cultivate the paddy are laser leveller, Puddlers, Paddy Drum Seeder, Cono weeder, paddy thresher cum harvester, etc. In Thiruvannamalai district the paddy growers are intensively using the above said implements with the subsidies from agriculture and allied departments for the past five years.

Among the implements, the Paddy Drum Seeder plays a vital role in bringing the true mechanization in paddy cultivation. As there is no need for nursery preparation, the farmers can save the costs on nursery raising, transplanting and weeding. It also reduces the seed cost when compared to the traditional method as the seed required is less(12kgs/acre).



The KVK had introduced the low cost and manually operated KSNM Direct Paddy Seeder to paddy growers of Kaliyur village during Kharif 2012 & kharif 2013 as On Farm Testing (OFT) and Front line Demonstration (FLD). Paddy Drum Seeder is one of the revolutionary equipments that changed the face of sowing paddy seeds in wetland field. Direct paddy drum seeder has eliminated the need of transplantation and hours of manual work nursery raising.

At one stretch with single operator effort, it covers 8 rows with 20 cm row to row spacing at a time. Made up of plastic material which makes the operation easy.

By seeing its benefits, the demand for the paddy drum seeder increased slowly and the KVK help the farmers to procure the Direct Paddy Seeder on demands. The KVK extent the demonstrations of paddy drum seeder with the help of state department of agriculture to other parts of the district. The The KVK has sold out a total quantity of 328 drum seeders so for based on the requirement.

### Output

- Farmers stated that the sowing with Paddy Drum Seeder drastically reduced the man power in raising the nursery and transplanting. The labour required for direct seeding in one acre area is only 2 against 30 manpower required in normal transplanting method of cultivation.
- The method proved to be one of the most important costs saving technologies in the district by reducing required quantity of seeds to the minimum. The average seed cost (12.5 kg) involved in drum seeder per acre is about Rs.500.00 against 30 kg of seed worth of Rs. 1200.00 in the traditional method of cultivation.
- The crop duration reduced by 6-7 days when compared to the traditional cultivation methods.
- The cost of cultivation was also reduced by 20% and the net income increased by 30%
- It is the effective method of cultivating paddy during drought periods as it required less quantity of water when compared to normal cultivation practices.



### Outcome

- The direct sowing of paddy using drum seeder technology has spread over an area of 13050 hectares in Thiruvannamalai district due to the effort taken by KVK in collaboration with State Department of Agriculture.
- The technology has given good relief to the paddy growers from labour shortage during the peak seasons.

### **Labour savings & Yield improvement in paddy by direct sowing with drum seeder**

Technology	Crop Duration (CO 51)	Labour requirements			% saving on labour costs	Average yield (q/ha)	% increase in yield
		Nursery	Transplanting	Weeding			
Direct sown paddy using Drum Seeder	94 days	–	2	8	20.83	54.2	8.18
Conventional Method	110 days	2	30	16		50.1	

