

## Paired Row in Planting in Maize- A Farmer Success Story

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Krishivigyan Kendra in Khammam District serves as store house of Scientific knowledge, disseminating need based technology to the farmers to improve their livelihoods. The surreptitious of success in agriculture is associated closely to wide scale adoption of improved practices by the farmers since it inception of Krishi Vigyan Kendra, Wyra in 2010, It has disseminated many technologies. The main role of KVK in the context of agricultural extension is more of informative than emancipator extension and performs the duty of front line extension .the KVK's technology have on farm testiny to identify the location specificity of agricultural technologies under various farming systems and FLD's to establish its production potentials on the farmers fields and training of farmers and external personnel's to update their knowledge and skills on modern agricultural technologies. In this milieu it is important for a farmer to adopt a sustainable technology that not only incurs good profit but also to utilize the resources effectively and efficiently.

Likewise, Krishi Vigyan Kendra promoted Paired row method of cultivation in Maize. Maize is an important cereal crop widely grown for food and feed and is one of the most versatile emerging crops having wider adaptability under varied agro climatic conditions. It is mainly cultivated as rainfed crop in *Kharif* and as irrigated crop during *Rabi*. In Khammam district the normal area of maize is 13073 ha. and one of the major crops best suited for *Rabi* which gives good yield with good management practices. Unfortunately, much of the expected yields are not realized because of traditional method of planting and cultivation.

Farmers were facing problems such as Low plant population, poor and uneven development of cobs and increased cost of cultivation in view of fertilizers and seed population. Competition between weeds with main crop for water, nutrients and other inputs affects the crop growth because of weed dominance for nutrients. Incidence of pests & diseases also affects the yields. All these factors together contribute for the lower yields and

increased cost of cultivation and same with Sri D Venu Gopal Reddy Garu from Marlapadu Village Vemsoormandal and Khammam District.

### Technology interventions

During the Farmer Scientist Interactions SriVenu Gopal Reddy Garu has expressed his willing over paired maize and asked for guidance from KrishiVigyan Kendra, Wyra. The farmer took the guidance from the KVK, Wyra scientists and practiced in his field of 6 acres.

In paired row method of planting maize, spacing between plant to plant is 20-25 cm, row to row spacing is 30 cm and spacing between one pair to another pair is 90 cm. For irrigation and fertigation to the plants, a drip lateral is spread in between the two rows which helps in giving uniform water and fertilizer to both the rows thus decreasing the no of lateral requirement per acre. Application of pre-emergence herbicide like Atrazine @ 1.0 Kg/ acre immediately after sowing. In this technology, the fertilizers are applied through fertigation method within the rows thus reducing the amount of fertilizers compared to conventional method and avoiding labour cost for application. As the nutrients are available at the root zone this gets directly absorbed by the roots thus uniform plant growth was observed. Increased organic carbon percentage and less weed infestation was also noticed.

### Comparison of cost of cultivation of paired row and traditional method (Rs./acre)

S. No.	Name of the practice	Paired row	Traditional method
1	Land preparation cost in Rs.	3800.00	3800.00
2	Seed in Rs.	2240.00	2240.00
3	Sowing cost in Rs.	1200.00	1200.00
4	Weed management cost in Rs.	850.00	1060.00
5	Fertilizers cost in Rs.	2793.00	3900.00
6	Inter-cultivation cost in Rs.	0.00	1795.00
7	Pesticides cost in Rs.	4600.00	4600.00
8	Irrigation cost in Rs.	500.00	2400.00
9	Harvesting and Bagging cost in Rs.	7840.00	7025.00

10	Total cost of cultivation in Rs.	23823.00	28020.00
11	Yield (q/acre)	43.00	36.00
12	Gross income in Rs.	75680.00	63360.00
13	Net income in Rs.	51857.00	35340.00
14	CB ratio	3.17	2.26

Cost of cultivation reduced by Rs. 4197/ acre.

### Benefit

Cost ratio was higher in the paired row method with 3.17 compared to 2.26 in conventional method of maize. Additional benefits easy to harvest, uniform cob size, peer farmers have also adopted paired row technology without drip system and in zero tillage. This method of planting remarkably effected the yield attributes of maize. Paired row system of planting allows better inception of light and there by contributes for higher yields. The farmer also claimed that as this method has wide gap of 90 cms between the pairs is huge gap between row to row the harvesting gets easy and farmers without being hurt in the field. By the virtue of these attributes the farmer shifted from conventional method to Paired row method of planting in Maize.

