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Success Cases of Rice Farmers under RKVY Scheme at DAATTC, Ranga Reddy District India

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A B S T R A C T

Rashtriya Krishi Vikas Yojana is a State Plan Scheme of Additional Central Assistance launched in August 2007 as a part of the 11th Five Year Plan by the Government of India under National Development Council, to achieve 4% annual growth in agriculture through development of Agriculture and its allied sectors. A fund of Rs 4,09090/- was allocated to DAATTC, Ranga Reddy PJTSAU during 2012-2014 for organizing onfarm testing, Farmers training programmes and exposure visits. Farmers of Ranga Reddy District cultivate rice in a larger area as major food crop. To enhance the yields by adopting five improved technologies. i.e. Direct sowing with 8 row drum seeder resulted on 9.5% increased yields 6451 kg/ha are normal sowing 5890 kg/ha. JGL 1118 variety has recorded 6698 kg/ha of yield when compared to 6147 kg/ha when normally sown. Line planting of Rice seedlings, given an average yield of 6343 kg/ha as against normal planting (5416 kg/ha).The intervention gave 14.6% increase in yield when compared to normal planting.(SRI) System of Rice Intensification, SRI cultivation recorded an average yield of 6266 kg/ha where has normal planting has recorded 5226 kg/ha. Biointensive pest management, BIPM has also recorded 2351 kg per acre against 1944 kg/arced in farmers practice, showing that the BIPM will be useful to the farmers in reducing pest incidence and getting higher yields in Rice. Use of Liquid biofertilizers, resulted effective tillers per hill (33.4/hill), more percent of filled grain per panicle (86%) and more yield 2480 kg/ac with 1.55 CB ratio.

Introduction

Rashtriya Krishi Vikas Yojana is a State Plan Scheme of Additional Central Assistance launched in August 2007 as a part of the 11th Five Year Plan by the Government of India under National Development Council, to achieve 4% annual growth in agriculture through development of Agriculture and its allied sectors. A fund of Rs 4,09090/- was allocated to DAATTC, Ranga Reddy PJTSAU during 2012-2014 for organizing onfarm testing, Farmers training programmes and exposure visits. As farmers of Ranga Reddy District cultivate rice in a larger area as major food crop. To enhance the yields by adopting five improved technologies. i.e. Direct sowing with 8 row drum seeder, Line planting of Rice seedlings, (SRI) System of Rice Intensification, Biointensive pest management and Liquid biofertilizers. as on farm testing were grounded in the district i.e. were

grounded in 25 beneficiaries of 11 mandals at Ranga Reddy District.

The impact of few success cases under RKVY scheme is presented below

Direct sowing with 8 row drum seeder

In Ranga Reddy district labour availability during transplanting season is a major constraint. Not only for transplanting the other operations like weeding, harvesting etc also require more labours. In order to overcome the major limiting factor of labour in Paddy cultivation, the drum seeder sowing was introduced to Ranga Reddy district farmers by DAATTC, Gudimalkapur under RKVY programme (Table 1).

"8" row drum seeder was used for sowing of two Paddy varieties JGL -17004 and JGL-1118 in 8 locations. For sowing with 8 row drum seeder, the seed was pre soaked for 24 hours followed by incubation for12 hours to just germinate the seed. The seed drum of the drum seeder will be filled up to ¾ th capacity and the drum seeder is dragged on uniformly leveled per watered field for the management of weeds, pre and post emergence weedicides were recommended. Pre emergence weedicides like Oxadiarzyl was applied to control the weeds. But phytotoxic symptoms were noticed when field was not properly tilled.

Due to severe cold and low temperatures, germination was delayed by 7-10 days resulting in early emergence of weed. In the management of these weeds post emergence weedicides like Nominee gold @ 80-100gr/Ac was recommended.

Sowing with "8" row drum seeder resulted on 9.5% increased yields 6451 kg/ha are normal sowing5890 kg/ha. JGL -1118 variety has recorded 6698 kg/ha of yield when compared to 6147 kg/ha when normally sown. The varieties recorded 22 average tillers/hill with 265 grains /panicle. JGL 17004 variety has recorded an average yield of 6204 kg/ha when sown with 8 row drum seeder and 5686 kg/ha with normal sowing. This variety has recorded 18 tillers/hill and 275 grains/panicle (Table 2).

Advantages

Crop comes to harvest 7-10 days when compared to transplanted rice.
Sowing of labours and reduction in cost of cultivation on nursery management is skipped.
Labour cost is further reduced with the usage of pre and post emergence weedicides.
Average yields (kg/ha) also increased by 9.5%

Disadvantages

Severe cold and low temperature conditions may enhance the time for germination.
If rains occur within 12hours after sowing, the seed gets disturbed.
Farmers are facing marketing problem as the millers are objecting that the grains are breaking during milling.

Line planting of rice seedlings

Evaluation of line planting was done in four locations in Doma mandal and village of Ranga Reddy district with variety JGL 1118 during 2012-13 Rabi season.15-20 deep old Paddy seedlings were transplanted with a spacing of 20cm between the line.1-2 seedlings were planted per hill. In this method also Cono weeder was used on one side to reduce for weeds. Recommended N, P, K fertilizers were applied as per university recommendations. Line planting intervention has given an average yield of 6343 kg/ha as against normal planting (5416 kg/ha).The intervention gave 14.6% increase in yield when compared to normal planting (Table 3).

System of Rice Intensification (SRI)

Evaluating of SRI method of Paddy cultivation with 15-17 days old seedling instead of 8-10 days old seedling was done in 4 locations of Doma and Parigi mandals. MTU 1010 variety was used as test variety which is of 120 days duration (Table 5).

Trans planting was done with 15-17 days old seedlings, at a spacing of 20cm and 1-2 seedlings per hill. Cono weeder was used to suppress the weeds for 3-4 times. Recommended N,P,K was applied as per university recommendations.

The variety MTU 1010 gave 6.5% more yield with SRI transplanting when compared to normal planting. SRI cultivation recorded an average yield of 6266 kg/ha where has normal planting has recorded 5226 kg/ha. SRI transplanted Paddy came to harvest 7-10 days early than normal planted Paddy.

Advantages

Crop came to harvest 5-7 days early than normal planting.
Less seed rate (2-3 kg/ac) when compared to normal planting.
Management of weed is easy as cono weeder is used in SRI transplanting.
Gave more yield than normal planting.

SRI cultivation is being adopted by number of farmers in Ranga Reddy district in Doma mandal.

Disadvantages

Labour cost is more.
Availability of labours for line planting is the major constraint.

Table.1 Details of 8 row drum seeder in rice

S. No	Name of the farmer	Village and address	Variety	Duration	Date of sowing	Date of Harvesting	Yield, kg/ha	
							Demo	Control
1	V. Ramesh	Doma (m & V)	JGL-1118	100	17-1-13	7-5-13	6180	5846
2	M.Ramchandra Reddy	Doma (m & V)	JGL-1118	100	7-1-13	17-4-13	7050	6428
3	M.Chandra Reddy	Doma (m & V)	JGL-1118	120	5-1-13	27-4-13	6775	5887
4	M.Krishna Reddy	Parepally(v) Doma (m)	JGL-1118	120	17-1-13	6-5-13	6548	6120
5	Nageshwara Rao	Haridaspally, Keesara (m)	JGL-1118	120	18-1-13	7-5-13	6940	6454
		Total average					**6698**	**6147**
6	Md.Kursheed	Haridaspally, Keesara (m)	JGL-17004	120	17-1-13	10-5-13	6140	5570
7	R.Satti Reddy	Cheryal, Keesara (m)	JGL-17004	120	5-1-13	28-5-13	6387	5645
8	G.Vijay Rao	Doma (m & V)	JGL-17004	100	20-1-13	3-5-13	6085	5686
			Total average				**6204**	**5633**

Table.2 Growth and yield attributes of JGL-1118 and JGL-17004

	JGL-1118	JGL-17004
Tillers / hill	22	18
Plant height (cm)	93	95
Panicle length (cm)	24	23
Grains/panicle	265	275

Table.3 Details of line planting of rice seedlings

S. No	Name of the farmer	Village and address	Variety	Duratio	Date of sowing	Date of Harvesting	Yield, kg/ha	
							Demo	**Control**
1	S.Sanjeev	Parepally(v) Doma (m)	JGL-1118	120	14-1-13	5-5-13	6015	5435
2	K Rami Reddy	Doma (m & V)	JGL-1118	120	15-1-13	7-5-13	6425	5185
3	K. Krishna Reddy	Doma (m & V)	JGL-1118	120	15-1-13	8-5-13	6656	5285
4	K. Dasthaiah	Doma (m & V)	JGL-1118	100	15-1-13	10-5-13	6275	5760
	Avg						**6342.75**	**5416.25**

Table.4 Details of bio intensive pest management

S.No	Name of Location/ Farmer	White ears (from 20 randomly selected plants)		Yield/acre		CB Ratio	
		BIPM	**FP**	**BIPM**	**FP**	**BIPM**	**FP**
1	G. Narayana Rao Gaddipalli (v)Darur(m)	2	5	6144	4440	2.05	1.27
2	B. Ramulu Gaddipally (v)Darur (m)	2	4	5328	4236	1.78	1.21
3	C.Yadaiah Gaddipally(v) Darur(m)	1	6	5628	4884	1.88	1.40
4	K.Rajender Gollapally(v) Darur(m)	3	7	5268	4668	1.76	1.33
5	K.Bakka Reddy Gaddipally(v) Darur(m)	2	5	5844	5100	1.95	1.46
Average		10	27	5642.4	4665.6	1.88	0.67

Table.5 Details of system of rice intensification

S. No	Name of the farmer	Village and address	Variety	Duration	Date of sowing	Date of Harvesting	Yield, kg/ha	
							Demo	Control
1	Satyanarayan reddy	Doma (m & V)	MTU-1010	100	16-1-13	30-4-13	6145	5685
2	Prabhulingam	Parepally(v) Doma (m)	MTU-1010	100	17-1-13	30-4-13	6585	5945
3	S.Sanjeev	Parepally(v) Doma (m)	MTU-1010	120	14-1-13	6-5-13	5875	5265
4	C.Yadaiah	Gaddipally(v)Darur(m)	MTU-1010	120	15-1-13	7-5-13	6461	5210
		Avg					6266.5	5526.25

Table.6 Details of liquid biofertilizers

Treatments	No. tillers per hill	No. of effective tillers per hill	Percentage of filled grains per panicle	Grain Yield per	Cost Benefit ratio
Farmer's Practice	28	23	86	5040	1:1.21
Liquid Bio-fertilizers with 75% RDF	45	38	85	6360	1:1.62
100% RDF	37	32	75	5616	1:1.30
Avg	36.6	31	87	5672	1:1.37

*RDF: Recommended dose of fertilizer

Biointensive pest management

The trial on Bio intensive pest management along with farmers practice was conducted in '5' location in Dharur Mandal. In bio intensive pest management the components like Tirchocards, Pheromone traps were used where as in farmers practice no components were added (Table 4).

Regarding the pest incidence, low incidence of stem borer (dead hearts), leaf folder, Rice skipper, caseworm and hairy caterpillar were noticed during the crop growth period. No sucking pests were observed. Very low infestations of white ears were noticed at the time of harvest. An average of 0.5 white ears/will were recorded in BIPM where as 1.35 white ears/hill were recorded in farmers practice. BIPM has also recorded 2351 kg per acre against 1944 kg/arced in farmers practice, showing that the BIPM will be useful to the farmers in reducing pest incidence and getting higher yields in Rice.

Liquid biofertilizers

The trial was conducted in 5 locations in villages of Ranga Reddy, Ibrahimpatnam and Doma mandals out of three treatments evaluated, application of liquid bio fertilizer along with 75% of RDF gave more number of tillers/hill (39.6/hill) more number of effective tillers per hill (33.4/hill), more percent of filled grain per panicle (86%) and more yield 2480 kg/ac with 1.55 CB ratio. The treatment with 100% RDF has reduced a CB ratio of 1.30 and farmers practices has given 1.21 CB ratio (Table 6).

The activities taken up and implemented used under RKVY scheme helped the farming

community in many folds. The success stories documented on the impact of Direct sowing with 8 row drum seeder, Line planting of Rice seedlings, (SRI) System of Rice Intensification, Biointensive pest management and Liquid biofertilizers. As on farm testing were grounded in the district i.e. were grounded in 25 beneficiaries of 11 mandals at RangaReddy District. Motivated the other farmers to adopt the same.

References

Rashtriya Krishi Vikas Yojana 2014: Operational guidelines for XII five year plan Department of Agriculture and Cooperation, Ministry of Agriculture, Government of India.

Annual progress reports DAATTC, Ranga Reddy PJTSAU during 2013-2014, 2014-2015 and 2015-2016.

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