

Hybrid Seed Production of Rice

KVKs : Balaghat

Advantages of hybrid seed

- ▶ Uniformity
- ▶ Higher yield
- ▶ Earliness
- ▶ Resistance



Potential of the district for paddy seed production

- ▶ During rabi season around 20,000 ha. area covered by summer paddy. Area suitable for hybrid seed production
- ▶ Farmers having irrigation facilities
- ▶ Day temperature in between 30°C – 40°C and night temperature not prolong below 18°C
- ▶ Do not receive repeated frost during the growing season
- ▶ During rabi-summer paddy production attack of insect and diseases is very low sometimes stem borer and blast are seen
- ▶ Humidity during reproductive stage is high
- ▶ No rainfall during flowering stage

Description of technology adopted:

Use of hybrid vigour for higher production

Crop - Rice
Season - Rabi-Summer
Variety - JRH-5, JRH-8, JRH-19, Hybrids of Private Companies

Parents - A- line 6 row & R- line 2 row
Duration - 135-140 days
Seed rate - A- line 6 kg & R- line 4 kg.
Seed treatment - Imidachlopid 70WS @ 0.5 g/Kg + Carbendazim 2g/kg seed
Nursery/staggering - 3 times A line at 5 day interval, 1 time R line
NPK - 100:60:40 kg/ha



Promising characteristics of technology:

S. No	Characteristics	Observation
1	No. of tillers/ plant	18.6
2	Seed filling (%)	40
3	Yield (q/ha)	13-14



Horizontal spread of technology:

No. of KVK	No. of village covered	No. of farmers	Area in ha
1	130	3200	500



Name of schemes supported by Central/State Govt. in large scale dissemination under convergence

S. No	Agency	Support
1	ATMA	Seed



Economics of adopted technology:

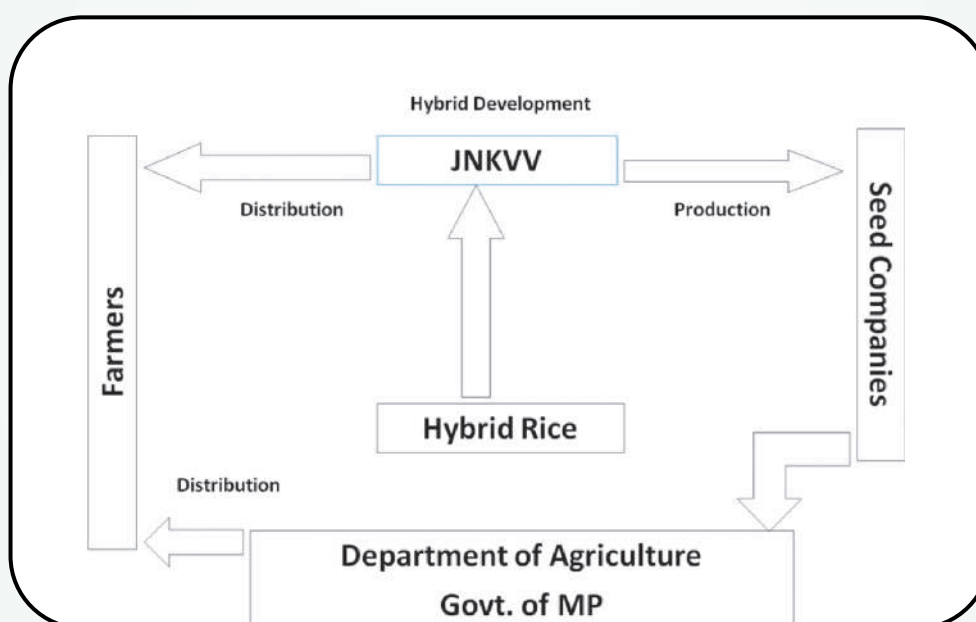
Cost (Rs)	Gross return (Rs)	Net return (Rs)	B:C ratio
30000	112500	82500	3.75



Impact of adopted technology in economic and social terms:

- ▶ High returns of Rs 412 lakh earned by 3200 farmers.
- ▶ Found alternate crop/ activity in summer.
- ▶ Optimum utilization of natural resources.
- ▶ Improve technical, economical & social status – knowledge improvement and direct contact with multinational companies.
- ▶ Increased productivity of main crop paddy due to knowledge improvement .
- ▶ Increased income used for education of children, purchase of vehicles, construction of houses etc.
- ▶ Private seed companies bayer crop science, syngenta, VNR dhanya (Tata) and Mahyco taken seed at Balaghat during rabi 2017-18, around 500 ha.
- ▶ Employment generation of 1,70,000 man/days/year

Commercialization of hybrid technologies by KVK



Training programmes and demonstrations by KVK

S.No.	Season/Years	No. of farmers/demons.	Av. productivity qt/ha	No.of trainings
01.	Rabi 2008-09	06	08.0	15
02.	Rabi 2009-10	50	10.6	52
03.	Kharif 2010-11	11	06.5	12
04.	Rabi 2011-12	23	15.5	21
05.	Rabi 2012-13	25	15.2	18
06.	Rabi 2013-14	25	16.3	22
07.	Rabi 2014-15	25	15.1	16
08.	Rabi 2015-16	25	15.6	8
09.	Rabi 2016-17	15	11.6	9
10.	Rabi 2017-18	12	-	6

Future prospects in marketing in Madhya Pradesh

S. no.	Area (Distt.)	Present Seed Volume (MTs)	Seed Volume reqd.(MTs)
01.	Balaghat, Seoni, Mandla	300	500-900
02.	Anuppur, Shadol, Umariya, Dindori	200	500-1000
03.	Rewa, Satna, Sidhi, Katni, Others	300-350	600-1100

Studies conducted in the Indian states of Andhra Pradesh, Karnataka and West Bengal showed that on average, labor accounted for about 48% of the total cost of hybrid rice seed (Janaiah and Hossain 2000). Hybrid rice seed production requires about 340 mandays/ha, about 50 mandays/ha more than for ordinary rice cultivation. Hybrid seed production requires additional labor for extra arm operations such as thin and row planting, supplementary pollination, filling gaps, rouging, GA3 application, and manual harvesting, threshing and cleaning.



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