

Participatory Mode Bring Prosperity in NICRA Village

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Lowkeshra, Pathergora and Barunia village of Musabani block in East Singhbhum Jharkhand are facing vulnerable to frequent drought, which was the criteria to brought them under NICRA project during 2011. The area is totally dominated by mono-cropping with 90% rainfed farming situation. Two defunct and damage check dam was identified during 2013-14, which was found to be helpful for supplemental irrigation if renovated, for the farmers of that area. Through participatory approach this check dam was renovated temporarily (Bora Bandi) and the farmer of the village get benefited during Kharif 2013-14 but during the same year due to phalin it was again damaged. After Village Climate Risk Management Committee (VCRMC) meeting and with the assurance of respected Dr. A. K. Singh, Zonal Project Director, Zone-II, Kolkata, an effort was taken to make 2 defunct check dam concrete (pakka) during 2014-15 in participatory mode.



During 2015-16 pre-monsoon rainfall was almost negligible (one rainy day) and monsoon onset was also delayed by 7 days which affected nursery preparation for Paddy. In our district nursery preparation was starts between 18th to 30th June after onset of monsoon. But in NICRA village especially Barunia & Lowkeshra it was done in time i.e. between 10th- 15th June. As the capacity of renovated check dam is 60000cft and with its overflow water farmers of the nearby area were able to puddle (150-200 mm water) their land during 1st week of July. In this way they have transplanted rice variety Sahabhazi (112-115



days) in time. Moreover within district, it was possible only after 18th of July. After 3rd of August there occurred more than 27 days of dry spell, that affected tillering stage of rice in whole district except nearby area of renovated check dam in NICRA village.

The tillering of rice crop in NICRA village was therefore not affected and helped to maintain its genetic potentiality. Then, 15 September onward rainfall occurred like showers and this situation prevailed up to 24th of September. Which was favourable for infestation leaf hopper & stem borer in our district during panicle initiation and flowering time of rice there was also insufficient moisture in the soil (rainfall \leq 2.5 mm) in whole district but NICRA village, moisture was maintained through supply of



stored water in check dam. During the month of September, October, November, December & January total dry period (42.7mm rainfall) occurred, which drastically reduced yield potential of mid and long duration varieties of rice, but in NICRA village approximate 50 ha area were irrigated by stored water in two renovated old check dams.

Details are given in table below:

i. Yield of paddy

Interventions	Critical input (Variety, Fertilizer / Chemicals doses,)	No. of farmers	Area (ha)	*Measurable indicators of yield*		% increase
				Demo	Local	
Short Duration varieties	Paddy (Var. Sahabhazi)	13	5	48.75	31.5	54.76
	Paddy (Var. Naveen)	10	5	49.6	31.5	57.46
	Paddy (Var- GB-1)	4	1	45.6	31.5	44.00

ii. Economics of demonstration

Economics of demonstration (Rs./ha)				Economics of Local (Rs./ha)			
Gross Cost	Gross Return	Net Return	BCR	Gross Cost	Gross Return	Net Return	BCR
21500	58500	36000	2.72	20500	37800	17300	1.84
21500	49440	27940	2.29	20500	37800	17300	1.84
21500	54720	33220	2.54	20500	37800	17300	1.84

It is clear from the above table that demonstrated paddy varieties in NICRA village i.e. Sahabhazi, Naveen & GB-1 yielded 48.75, 49.6 & 45.6 q/ha respectively whereas approx 31.5q/ha yield was recorded in other areas where paddy crop faced climatic adversity like moisture stress, dry spell etc. In demonstrated areas the farmers received Rs. 2.72 to 2.29 with

the investment of Rs. 1.00. The above said effort brought happiness & prosperity among farmers of NICRA village and also motivated farmers of nearby villages to work in participatory mode for management of natural resources.

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