

Clustered Frontline Demonstration on *rabi* Pulses (2015-16)

Rabi Pulse is the most important crop in majority of the states Bihar, Jharkhand and West Bengal. It is a predominately rainfed crop grown in different land situation like rice- fallows, upland. Pulses hot duration leguminous crop, enriches soil fertility. Major pulses in the eastern states are grown in *rabi* season. Chickpea, lentil, green gram, field pea and blackgram are the major *rabi* pulses in the states of Bihar, Jharkhand and West Bengal. Among these three states, West Bengal produced black gram in large areas. Out of 4486 ha allotted demonstrations, coverage was made in 4466 ha area involving 15430 farmers.

Lentil is the most important pulse crop in eastern states. The coverage area in Bihar was 1008 ha whole coverage in West Bengal was 306 ha. Total area under lentil was 1314 ha and farmers involved were 3285. Variety demonstrated were *PM 5 (L-4594)*, *HUL-57*, *DPL-62*, *WBL-77*, *Moitree* etc. Technology like seed management, micronutrient management, zero tillage, weed management, plant protection etc. were also demonstrated in Chickpea a major *rabi* pulse in Bihar, Jharkhand and West Bengal. Demonstration was put in 3050 ha involving 1200 farmers. Chickpea varieties like *GNG 1581*, *JG-11*, *JG-16*, *P-547*, *DGM-547*, *JAKI 9218* and *Pusa 362* were demonstrated in relatively less areas. Demonstration in seed treatment and bio-fertilizer alone contributed 13.9 % increase in yield. Green gram is grown in all the three states especially in *rabi*. The state of Bihar demonstration was made in 448.4 ha and number of demonstrations was 1121. Major varieties like *PDM-84-139*, *SML 668*, *Samrat* were demonstrated and technologies like seed treatment, INM, Bio-fertilizer application (*Trichoderma viride* and *Pseudomonas fluorescense* 1.2 kg/ha) resulted in 24.9% increase in yield. In field pea large area was covered under demonstration in Bihar which was about 693.6 ha. *HUDP- 15* and *Prakash* were the major varieties which were demonstrated in these states. Technologies like seed treatment, INM, IPM, Bio-fertilizer etc. which as the part of the demonstration. Black gram was also demonstrated in 154 ha involving 385 farmers mainly in West Bengal. Variety *WBU-108* was the major varieties which were demonstrated in these states. Results showed, percentage yield increase was 29.6 to 59.5 in chickpea, 33.4 to 37.5 in lentil, 30.3 to 60.3 in fieldpea, 36 to 44.7 green gram, 41.8 black gram. Economics of *rabi* pulse showed that chickpea gave 2.2-3.9, lentil 2.9-3.2, green gram 2.8-3.4, field pea 2.1-2.5, black gram 3.2 BCR in *rabi* pulses.

Cluster Frontline Demonstrations conducted on *rabi* Pulses during 2015-16

<i>State</i>	<i>Rabi Pulses</i>	
	<i>No. of Farmers</i>	<i>Area (ha)</i>
Bihar	8037	2648
Jharkhand	4132	948
West Bengal	3261	870
Total	15430	4466

Demonstration on *rabi* pulses during 2015-16

Sl. No.	Crop	State	No. of Farmers	Area (ha)	Yield (q/ha)		%	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
					Demo	Check	Increase	Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
1	Lentil	Bihar	2901	1008	14.14	10.4	37.5	19243	47196	28220	2.6	21258	65474	43588	3.2
		West Bengal	1343	306	9.5	7.2	33.4	17978	40967	22989	2.4	21192	57533	36341	2.9
		Total	4244	1314	11.8	8.8	35.5	18611	44082	25605	2.5	21225	61504	39965	3.1
2	Chickpea	Bihar	1550	498	14.2	10.8	34.4	21505	53061	31645	2.5	23038	70285	47174	3.1
		Jharkhand	1990	502	14.6	9.5	59.5	17889	39213	21481	2.3	20677	77842	41341	3.9
		West Bengal	918	200	12.3	9.6	29.6	20744	48096	27353	2.3	23321	51769	32168	2.2
		Total	4458	1200	13.7	10	41.2	20046	46790	26826	2.4	22345	66632	40228	3.1
3	Pea	Bihar	2427	693.6	14.3	10.4	40.2	21069	39374	18289	1.9	23103	54940	31838	2.5
		Jharkhand	440	86	14.04	8.9	62.3	20394	33708	13311	1.7	23007	50782	27642	2.3
		West Bengal	355	80	9	7.3	30.4	18841	31817	12976	1.7	19800	39645	19845	2.1
		Total	3222	859.6	12.4	8.9	44.3	20101	34966	14859	1.8	21970	48456	26442	2.3
4	Greengram	Bihar	1159	448.4	10.3	7.4	44.7	16988	41389	24401	2.3	19325	64164	44839	3.1
		Jharkhand	831	282	9.5	6.7	43.8	16956	41240	24284	2.6	19943	64624	44681	3.4
		West Bengal	1014	208	8.4	7.1	36.7	26231	68971	42740	2.9	21407	49754	28347	2.4
		Total	3004	938.4	9.3	7	39.4	18719	44336	25617	2.4	22266	66241	43976	3.1
5	Blackgram	West Bengal	502	154	10.3	7.26	41.8	24210	57225	32390	2.7	30795	80250	49955	3.2
		Total	502	154	10.3	7.26	41.8	24210	57225	32390	2.7	30795	80250	49955	3.2
Total rabi pulses			15430	4466											





