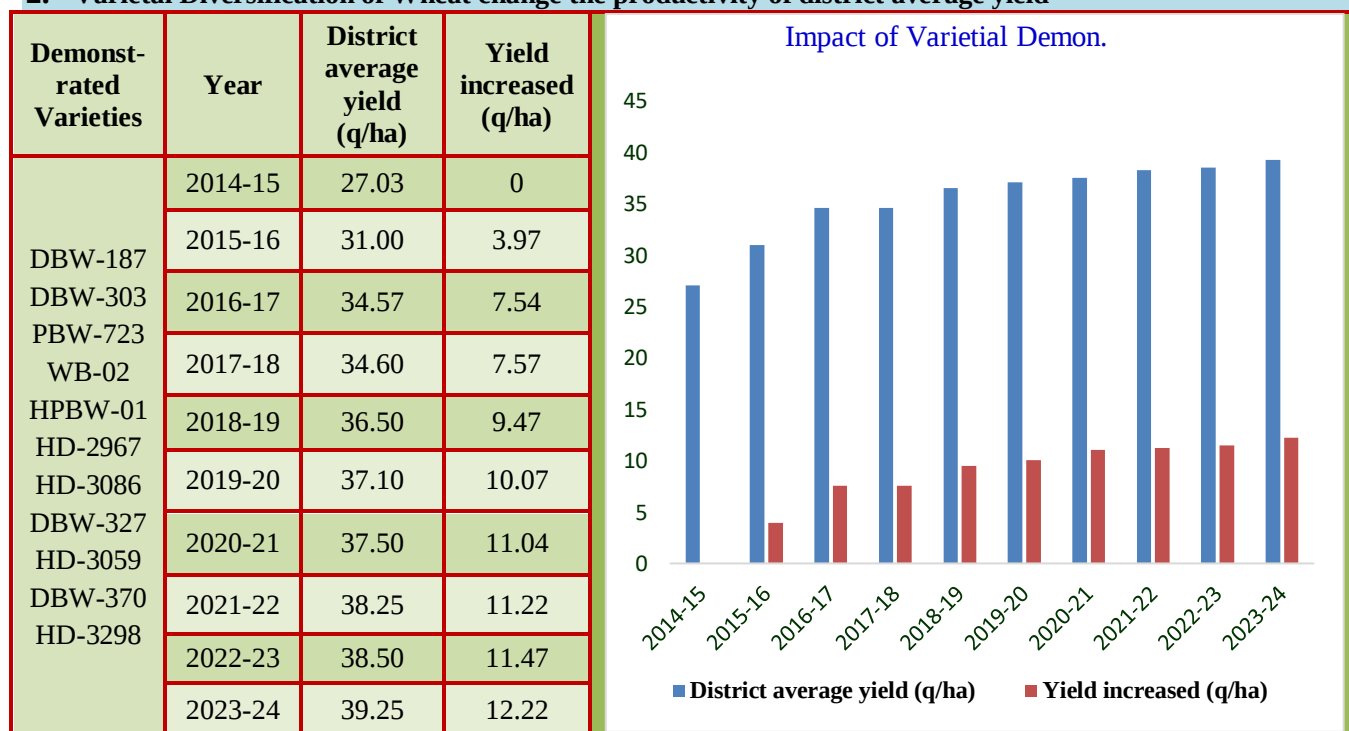


Impact of evaluated, demonstrated and introduced technologies in district Bijnor

1. Varietal Adoption and Expansion in District

Crop	Current Technology	Introduction Year	Potential of Current Tech. (q/ha)	Demo. Yield of current technology (q/ha)	Net Return (Rs/ha)	Technological Gap (q/ha)	Area Covered by Tech. (ha)
Wheat	DBW-187	2019	96.66	71.00	119825.00	25.66	80500
	HD-3226	2019	79.60	57.00	91125.00	22.60	3200
	DBW-303	2021	96.80	50.60	96990.00	46.20	8500
	WB-02	2017	58.80	53.87	84354.74	4.93	4000
	HPBW-01	2017	64.80	52.50	81240.00	12.30	4800
	DBW-327	2022	87.70	52.00	97280.00	35.70	3500
	DBW-332	2022	78.30	50.00	89500.00	28.30	1800
	DBW-173	2017	57.00	46.62	72500.00	10.38	14700
	HD-3298	2021	47.50	42.75	74542.00	4.75	4200
Rice	PB-1637	2018	65.00	57.50	155632.00	7.50	3650
	PB-1718	2019	60.00	52.50	138480.00	7.50	2500
	PB-1692	2021	62.00	50.70	133478.10	11.30	4200
	PB-1885	2021	62.00	52.70	135000.00	9.30	3800
Mustard	PM-31	2018	23.00	17.33	112000.00	5.67	1500
	PM-32	2022	22.00	16.50	105000.00	5.50	750
	PM-33	2022	27.00	20.00	128000.00	7.00	2200
Lentil	L-4717	2018	20.00	14.86	38528.00	5.14	850

2. Varietal Diversification of Wheat change the productivity of district average yield



3. Wheat variety DBW-187 is Big way for District

The area under wheat is about 1, 55,000 ha in Bijnor district commonly grown wheat varieties PBW-550, PBW-723, HD-2967, HD-3086 and WH-1105. DBW-187 variety was released in 2019. Variety **DBW-187** was introduced and demonstrated by KVK Bijnor during Rabi-2019-20 through On Farm Testing & 2020-21 to 2022-23 at 91 farmer's field through FLD. The average yield at farmers field was recorded 71.00 q/ha. The average net profit per ha was recorded Rs. 119825/-. Due to disease free, high yield and give better yield in adverse condition the area under this variety has now spread to more than 90500 ha in just five years.

Year	Yield (q/ha)	Area Coverage (ha)
2019-20	71.00	Starting year
2020-21	68.00	18500
2021-22	65.00	37500
2022-23	55.00	62500
2023-24	58.00	80500
2024-25	58.50	90500



4. Basmati Rice for Higher Economic Gain in District Bijnor (U.P):

The area under paddy is about 55,000 ha in district Bijnor, out of that 35,000 ha is under scented rice. Commonly grown scented rice varieties Pusa Basmati – 1, Pusa Basmati-1121 and Sarbati (Local, non-identified and having 40% area in scented rice). The KVK, Bijnor demonstrated newly released high yielding basmati rice varieties for getting extra income from in comparison to other varieties. The successful farmer is Sri Pankaj Rana, Village- Sarifpur Khoraj, Block-Kotwali, District- Bijnor. Presently More than 150 farmers are growing the high yielding newly Basmati Rice varieties (Pusa Basmati-1509, Pusa Basmati-1637 and Pusa Basmati-1718) for marketing in form of rice instead of paddy.

Economics of Basmati Rice

Varieties	Grain Yield (qt/ha)	Cost of cultivation (Rs/ha)	Gross Return (Rs/ha)	Net Return (Rs/ha)	BCR	% of Yield over, local check (qt/ha)	Additional Net Return (Rs/ha)	Technol-ogical Expansion (ha)
PB-1509	54.50	43000.00	175500.00	132500.00	4.08	26.74	59000.00	7800
PB-1637	57.50	43428.00	193060.00	149632.00	4.44	33.72	76132.00	3550
PB-1718	52.50	43870.00	180850.00	136980.00	4.12	22.09	63480.00	3200
PB-1692	50.70	46386.00	179864.00	133478.10	3.81	22.09	63480.00	2200



Horizontal Spread of Basmati Rice in District Bijnor

Year	Initial Interventions			Lateral Spread in new areas		
	Area (ha)	No. of villages	No. of Farmers	Area (ha)	No. of villages	No. of farmers
2019	5.0	13	25	6575.00	185	350
2020	5.0	14	25	8250.00	315	840
2021	5.0	15	25	11245.00	585	1250
2022	5.0	16	25	19250.00	810	1550
2023	5.0	15	25	22500.00	1150	1840

Varietal Adoption (ha) of Basmati Rice Varieties in District

Name of Variety	Adoption (ha)	Basmati Variety in District 				
PB-1509	6500					
PB-1637	3650					
PB-1718	4500					
PB-1	3000					
PB-1692	3200					
PB-1121	3500					
Others	5200					

5. Bio-fortified Varieties of crops for nutritional security and getting extra income:

Malnutrition has emerged as one of the most serious health issues worldwide. The consumption of unbalanced diet poor in nutritional quality causes malnutrition. Deficiency of proteins, essential amino acids, vitamins and minerals leads to poor health and increased susceptibility to various diseases, which in turn lead to significant loss in farm family income and affect the socio-economic structure. The newly developed biofortified crop varieties besides serving as an important source for livelihood to poor people assume great significance in nutritional security and gaining extra income.

The KVK, Bijnor demonstrated newly released Biofortified varieties (Wheat- WB-02 & HPBW-01, DBW-187, DBW-173, Mustard: Pusa Double Zero Mustard-31, Lentil: L-4717) from for getting extra income with nutritional security in comparison to other varieties.

Economics and Area Expansion of the Bio fortified varieties

Demonstrated Technologies	Old Technologies	Productivity/Yield of the Crop (q/ha.)		Increase in Net Return (Rs./ha)	Expansion area (ha.)
		Old Tech.	Assessed Tech.		
Wheat (WB-02)	DBW-17	44.90	53.30	89372.50	4000
Wheat (HPBW-01)	DBW-17	44.90	52.50	81240.00	4800
Wheat (DBW-187)	DBW-17	44.90	71.00	119825.00	80500
Wheat (DBW-173)	DBW-16	38.50	46.62	72500.00	14700
Wheat (DBW-303)	HD-2967	47.50	55.00	96990.00	8500
Wheat (HD-3298)	PBW-226	38.00	42.75	74542.00	4200

Mustard (PM-31)	PYS-01	11.37	17.33	108640.00	1500
Mustard (PM-30)	PYS-01	11.37	15.50	94000.00	650
Mustard (PM-32)	PYS-01	11.37	16.50	102000.00	750
Mustard (PM-33)	PYS-01	11.37	20.00	130000.00	2200
Lentil (L-4717)	NL-1	9.03	14.86	28869.00	610



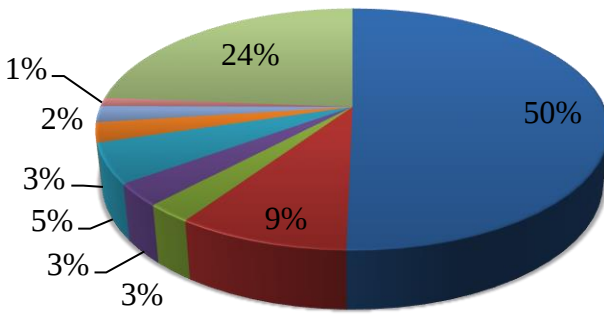

(i) Horizontal Spread of Biofortified Wheat Varieties in District Bijnor

Year	Initial Interventions			Lateral Spread in new areas		
	Area (ha)	No. of villages	No. of farmers	Area (ha)	No. of villages	No. of farmers
2017-18	2.0	5	5	--	--	--
2018-19	5.0	8	25	250	44	80
2019-20	7.0	12	35	2600	110	550
2020-21	9.2	18	72	11350	665	915
2021-22	6.9	21	69	65200	1780	8510
2022-23	4.5	10	30	95080	2500	15500
2023-24	5.0	15	35	122280	3000	45000
2024-25	5.0	15	35	125500	3000	55000

Varietal Adoption (ha) of Biofortified Wheat Varieties in District:

Name of Variety	Adoption (ha)
DBW-187	80500
DBW-173	14700
WB-02	4000
HPBW-01	4800
DBW-303	8500
HD-3298	4200
DBW-327	3500
DBW-332	1800
Non Biofortified	38000

Area Adoption of Biofortified Wheat Varieties



(ii) Horizontal Spread of Biofortified Mustard Varieties in District Bijnor

Year	Initial Interventions			Lateral Spread in new areas		
	Area (ha)	No. of villages	No. of farmers	Area (ha)	No. of villages	No. of farmers
2018-19	6.00	10	30	--	--	--
2019-20	6.00	13	30	580	215	410
2020-21	5.20	10	22	910	735	1100
2021-22	11.20	20	37	3350	1120	3510
2022-23	10.00	15	25	3500	1250	3840
2023-24	30.00	25	75	5100	1800	5200
2024-25	80.00	50	215	5600	1925	7500

Varietal Adoption (ha) of Biofortified Mustard Varieties in District:

Name of Variety	Adoption (ha)	Area Adoption ■ Pusa Mustard-31 ■ Pusa Mustard-30 ■ Pusa Mustard-32 ■ Non Biofortified	
Pusa Mustard-31	1500		
Pusa Mustard-30	650		
Pusa Mustard-32	750		
Pusa Mustard-33	2200		
Non Biofortified	3400		

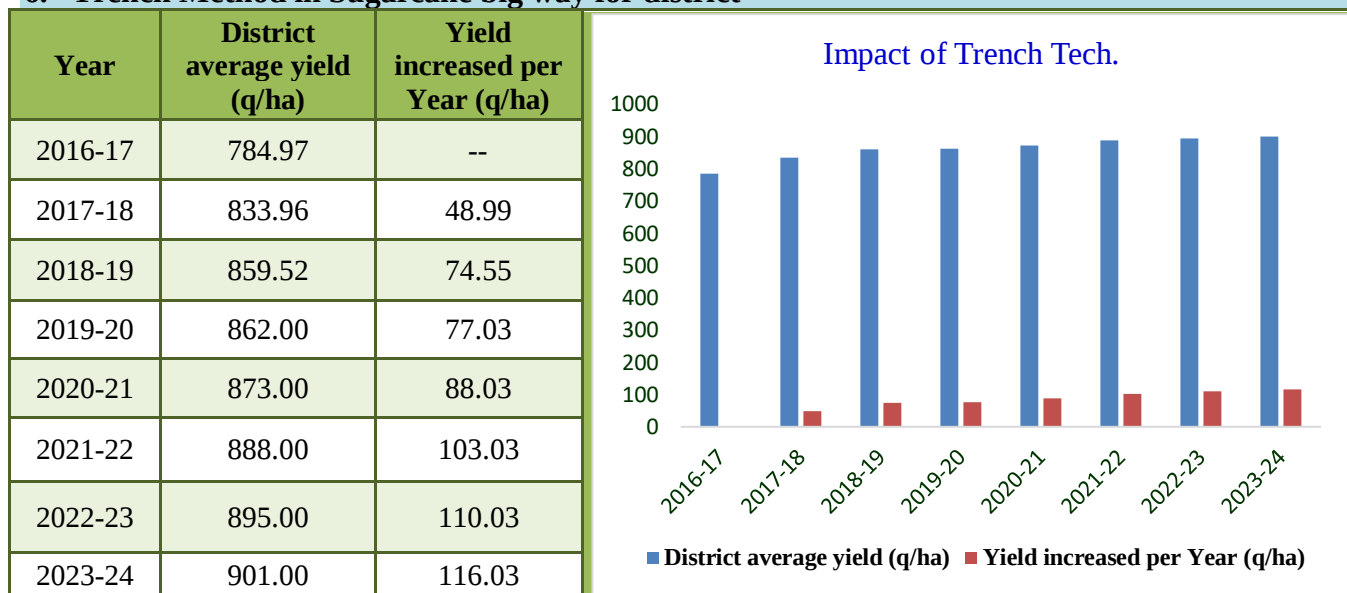
(iii) Horizontal Spread of Biofortified Lentil Varieties in District Bijnor

Year	Initial Interventions			Lateral Spread in new areas		
	Area (ha)	No. of villages	No. of farmers	Area (ha)	No. of villages	No. of farmers
2018-19	1.0	08	10	--	--	--
2019-20	2.0	08	10	210	40	80
2020-21	5.0	12	20	450	85	120
2021-22	10.0	14	25	610	140	213
2022-23	20.0	18	50	625	152	283
2023-24	--	--	--	720	180	325
2024-25	--	--	--	810	225	410

Varietal Adoption (ha) of Biofortified Lentil Varieties in District:

Name of Variety	Adoption (ha)	■ Pusa Massoor Aheti ■ Non Biofortified	
Pusa Massoor Aheti	610		
Non Biofortified	840		

6. Trench Method in Sugarcane big way for district



7. Sugarcane + Mustard Intercropping big way for district

Year	Yield (q/ha)	Area under Intercropping
2019-20	Sugarcane - 1123.75, Mustard -11.50	Starting Year
2020-21	---	1850
2021-22	--	3800
2022-23	--	8500
2023-24	--	18000
2024-25	--	22500