

REPORT VOLUME - 1

September 12th, 2017

Basmati survey report APEDA, New Delhi



Basmati Survey - Report-1 (Season 2017)

This is the 1st report for Basmati crop across 7 states totalling 81 districts. Detailed microscopic level has been collected and compiled in this report. The report begins with an overview of the entire scenario of Basmati crop for the current season and then goes on to provide details state wise and then district wise. Varietal segregation of crops has also been undertaken in the survey.

Geotrans Technologies Pvt. Ltd.

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Executive Summary

Study districts

The study area covers 81 districts, which includes 22 districts of Punjab, 21 districts of Haryana, 30 districts of Uttar Pradesh, 4 districts of Uttarakhand, 1 district of Himachal Pradesh and 3 districts of Jammu & Kashmir.

Kharif Rice Acreage

This year the total rice transplanted area has decreased in area by 2.99% i.e. from 59,85,500 ha to 58,06,400 ha in the studied area of 7 states and 81 districts. The percentage area occupied by Basmati has reduced in major states of Haryana and Punjab by 8% to 9% as observed during the first survey estimates. In U.P. the area under Basmati has decreased 10,000 h. Overall the Basmati area has decreased by 7.92% in comparison to last year i.e. 2016.

Table: 1 Kharif rice area across major states

<i>Area (in 000 Ha.)</i>				
S.No	State	2016	2017	% Change LY
Rice Area				
1	Haryana	1303.1	1273.7	-2.26%
2	Punjab	3010.0	2865.6	-4.80%
3	Uttar Pradesh	1342.5	1336.2	-0.47%
4	Uttarakhad	129.4	129.6	0.15%
5	J & K	139.0	139.0	0.00%
6	Himachal Pradesh	60.0	60.8	1.25%
7	Delhi	1.5	1.5	4.11%
	Total	5985.5	5806.4	-2.99%

Basmati Acreage

The total Basmati (notified varieties) area in these targeted districts has decreased by 7.93%. The notified Basmati varieties majorly comprises of Basmati-370, Basmati- 386, Type-3 (Dehraduni), Taraori, Ranbir, Pusa-1509, Pusa Basmati-1, CSR-30 and Pusa Basmati-1121

Table: 2 Basmati rice area across major states

<i>Area(in 000 Ha.)</i>				
S.No	State	2016	2017	% Change LY
Basmati Area				
1	Haryana	719.6	652.0	-9.39%
2	Punjab	615.6	561.2	-8.84%
3	Uttar Pradesh	266.2	256.2	-3.76%
4	Uttarakhad	15.6	15.2	-2.43%
5	J & K	62.3	61.0	-2.09%
6	Himachal Pradesh	8.0	7.9	-1.25%
7	Delhi	1.5	1.5	-2.67%
	Total	1688.8	1555.0	-7.92%

Basmati Acreage of Major Varieties

This year PB -1121 has been reduced to 10.53% while Pusa-1509 increased by 8.07%, clearly indicates that farmer replaced PB 1121 with Pusa -1509 due to lesser price differential from last year. Farmer preferred high yielding Pusa-1509 in place of low yielding PB-1121 also on account of its shorter time period and early maturity trait. Pusa basmati - 1 is continuously reducing in acreage over years and now is only preferred by farmers who take it for their self-consumption, however PB -1 still has good market potential in Europe & Saudi Arabia, which is about 1.5-2 lacs ton each.

Table: 3 State wise Basmati Acreage of Major Varieties (Fig in 000 ha.)

States	Pusa Basmati 1121			Pusa-1509			Pusa Basmati -1		
	2016	2017	% Change	2016	2017	% Change	2016	2017	% Change
Haryana	504.9	443.5	-12.16%	26.2	29.9	14.12%	90.7	85.6	-5.62%
Punjab	555.8	499.5	-10.13%	35.2	38.7	9.94%	24.3	23.0	-5.35%
U.P	156.3	144.4	-7.61%	53.7	56.0	4.38%	43.3	42.9	-0.92%
U.K	4.2	4.1	-2.38%	2.5	2.6	2.60%	2.3	2.3	0.00%
J & K	8.4	8.3	-1.19%	0.3	0.3	4.00%	-	-	-
H.P	2.0	2.0	0.00%	2.0	2.0	2.00%	-	-	-
Delhi	1.5	1.5	-3.00%	-	-	-	-	-	-
Total	1233.10	1103.26	-10.53%	119.80	129.47	8.07%	160.60	153.80	-4.23%

Long Grain Non-Basmati Acreage

The acreage under long grain non-basmati varieties (Sharbati and Sugandha) in these targeted districts has increased by 4.30%.

This year Sharbati is the clear preference by the farmers not only over basmati but also over high yielding HYV varieties in Western & Central part of UP / Punjab & Haryana. Primarily this acreage shift towards Sharbati is not only due to lesser price differential between basmati & non-basmati varieties but also its high yields / lesser susceptibility towards diseases / high demand / lesser cost of cultivation etc

Sugandha, which is primarily complimenting PB-1121 has been not grown in big way due to lesser preference on PB -1121 this year. Usually Sugandha is not preferred by farmers as independent choice in long grain rice

Table: 4 State wise Sharbati, Sugandha (Fig in 000 ha.)

States	Sharbati			Sugandha			Total Non-Basmati		
	2016	2017	% Change	2016	2017	% Change	2016	2017	% Change
Haryana	5.75	6.0	4.87%	-	-	-	5.75	6.0	4.87%
Punjab	5.75	5.9	2.61%	-	-	-	5.75	5.9	2.61%
U.P	163.92	173.9	6.12%	90.86	91.9	1.14%	254.78	265.8	4.34%
U.K	14.57	15.2	4.13%	0.49	0.5	0.65%	15.06	15.66	4.02%
Total	189.99	201.1	5.82%	91.35	92.39	1.14%	281.34	293.43	4.30%

The presence of Sharbati and Sugandha is negligible in J&K, Himachal Pradesh and Delhi as compared to other states..

Chapter 2

Project Background

Basmati rice is an important export commodity among the food grains exported from India. During the past few years, the Basmati export has been growing steadily, from 7.71 lakh metric tonnes in 2003 to an estimated 4.05 million metric tonnes in 2015-16 on robust demand from the traditional markets in West Asia. Almost 132 countries have been importing Basmati from India every year. Out of which, Iran, Saudi Arabia, UAE and Iraq are the major importers. Apart from India second is Pakistan from where Basmati is exported to many countries.

Work of field survey validation based acreage estimation for all rice for Basmati crop for selected other non-notified varieties), crop health monitoring and yield estimation and production for Basmati rice and non-notified varieties and questionnaire based sample survey of farmers, for 81 districts in the selected seven states i.e. Punjab, Haryana, Uttar Pradesh, Uttarakhand, Himachal Pradesh, and Jammu & Kashmir apart from Delhi. The field survey based approach has been being applied to collect the information at block level to improve the accuracy further to a desired level.

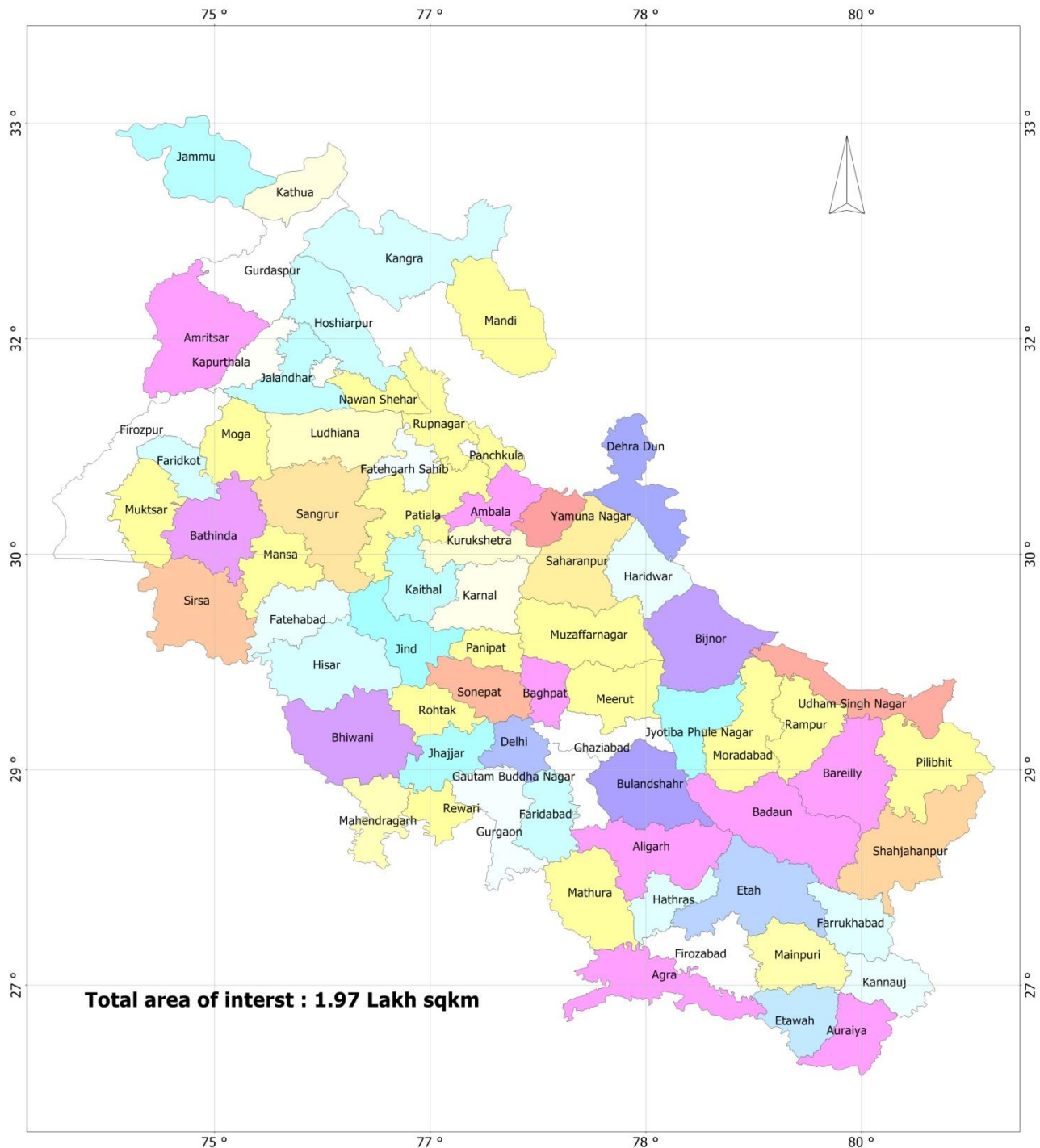
Table describing the districts of study under each state.

UTTAR PRADESH	PUNJAB	HARYANA	UTTARAKHAND	J & K	HIMACHAL PRADESH
Agra	Amritsar	Ambala	Dehradun	Jammu	Kangra
Aligarh	Barnala	Bhiwani	Haridwar	Kathua	Mandi
Auraiya	Bhatinda	Faridabad + Palwal	Nainital	Samba	DELHI
Baghpat	Faridkot	Gurgaon	U S Nagar		
Bareilly	Fatehgarh Sahib	Fatehabad			
Bijnore	Fazilka	Hisar			
Budaun	Firozpur	Jajjhar			
Bulandshahr	Gurdaspur	Jind			
Etah+Kasganj	Pathankot	Kaithal			
Farukhabad	Hoshiarpur	Karnal			
Firozabad	Jalandhar	Kurukshetra			
Etawah	Kapurthala	Mewat			
Gautam Buddha Ngr	Ludhiana	MahendraGarh			
Ghaziabad+Hapur	Mansa	Panchkula			
Hathras	Moga	Panipat			
Mathura	Mohali	Rewari			
Mainpuri	Muktsar	Rohtak			
Meerut	Nawanshahar	Sirsa			
Moradabad	Patiala	Sonepat			
J.P.Nagar	Rupnagar	Yamunanagar			
Kannauj	Sangrur				
Muzaffarnagar+Shamli	Tarantaran				
Pilibhit					
Rampur					
Saharanpur					
Shahjahanpur					
Sambhal					

The Basmati varieties for which information is provided include Basmati-370, Basmati-386, Type-3 (Dehraduni), Taraori, Ranbir), Pusa-1509, Pusa Basmati-1, CSR-30 and Pusa Basmati-1121 and non-notified, non-Basmati (Sharbati, and Permal).

Map of current scope of study and report

The present report being the first cycle of report for Kharif-(2017-2018) covers the results of field survey based total rice and total Basmati acreage in different states.



Validation using satellite mapping: We also used advanced satellite mapping technology to verify the findings of the survey and the same have been found to be accurate. Satellite mapping uses various bands of remote sensing to segregate crops.

Based on this and using several filters we have segregated the crops and crops to verify the data.

State Level Details

This year Total rice in the studied 81 districts has been reduced to 3.0% while basmati acreage has been reduced to 7.93%. This year in India total kharif rice has been reduced 1.4% from 379,12,000 to 374,02,000.

In targeted 81 districts farmers preferred sugarcane and cotton crop over rice due to higher returns on these crops. The basmati acreage share in total rice has been also reduced from 28.21% to 26.78% in the studied areas.

Table: 5 State wise rice transplanted area and Basmati area in Kharif 2017

State-wise Rice Transplanted Area and Basmati Area in kharif-2017-18					
Area '000 ha					
S.No.	State	Area Transplanted			
		2016		2017	
		Total rice	Basmati	Total rice	Basmati
1	Haryana	1303.1	719.6	1273.7	652.0
2	Punjab	3010.0	615.6	2865.6	561.2
3	Uttar Pradesh	1342.5	266.2	1336.2	256.2
4	Uttarakhand	129.4	15.62	129.6	15.2
5	Jammu & Kashmir	139.0	62.3	139.0	61.0
6	Himachal Pradesh	60.0	8.0	60.8	7.9
7	Delhi	1.5	1.5	1.5	1.46
Total		5985.5	1688.8	5806.4	1555.0

Haryana

In Haryana, the total rice acreage based on field survey has been estimated at 1,273,750 ha in 20 districts as on 10 Sept 2017.

Karnal district has the highest target area under total rice (1,59,697 ha), followed by Kaithal district (1,57,707 ha).

The transplanting is almost completed in the state. Basmati area has reduced by 9.4% in comparison to last year.

Table: 6 Basmati rice acreages in Haryana Kharif 2017

S. No.	District	Total rice acreage			Total basmati acreage		
		2016	2017	% Change LY	2016	2017	% Change LY
Acreage in '000 hac							
1	Ambala	82.0	80.0	-2.5%	16.9	15.4	-8.7%
2	Bhiwani	21.7	20.9	-3.5%	22.1	18.7	-15.0%
3	Faridabad + Palwal	33.3	32.5	-2.5%	28.8	25.5	-11.3%
4	Gurgaon	4.9	4.7	-4.1%	2.6	2.2	-14.2%
5	Fatehabad	113.0	107.9	-4.5%	49.7	44.7	-10.0%
6	Hisar	64.4	61.5	-4.5%	44.8	38.4	-14.2%
7	Jajjhar	43.6	42.5	-2.5%	43.6	38.6	-11.4%
8	Jind	130.0	126.8	-2.5%	81.2	70.6	-13.1%
9	Kaithal	158.5	157.7	-0.5%	64.6	60.9	-5.7%
10	Karnal	160.5	159.7	-0.5%	78.6	75.0	-4.6%
11	Kurukshetra	120.0	118.2	-1.5%	30.8	29.1	-5.6%
12	Mewat	8.0	7.9	-1.5%	7.5	6.6	-12.0%
13	MahendraGarh	-	-	-	-	-	-
14	Panchkula	9.5	9.3	-2.5%	-	-	-
15	Panipat	72.0	70.9	-1.5%	68.1	63.5	-6.8%
16	Rewari	1.8	1.7	-3.5%	1.2	1.1	-12.0%
17	Rohtak	44.0	42.0	-4.5%	36.3	30.8	-14.9%
18	Sirsa	74.4	71.1	-4.5%	60.6	57.0	-6.0%
19	Sonepat	90.0	88.7	-1.5%	73.5	65.2	-11.3%
20	Yamunanagar	71.5	69.9	-2.3%	9.0	8.7	-3.9%
	Total	1303.1	1273.7	-2.3%	719.7	652.0	-9.4%

Punjab

In Punjab, the rice transplanting has been 2,865,600 ha in 22 districts this year, which is about 4.8% lower than last year. Sangrur district has the largest area under rice (266,005 ha), followed by Ludhiana district (248,005ha). Farmer shifted in cotton crop due to its higher return

The total basmati acreage in Punjab has been reduced to 8.9%. The districts like Muktsar/ Mansa / Rupnagar/ Sangrur/ Bhatinda has seen basmati acreage reduce in the tune of 13-15%

Table: 7 Basmati rice acreages in Punjab Kharif 2017

S. No.	District	Total rice acreage			Total basmati acreage		
		2016	2017	% Change LY	2016	2017	% Change LY
Acreage in '000 hac							
1	Amritsar	180.0	177.3	-1.5%	113.9	103.6	-9.1%
2	Barnala	110.0	105.1	-4.5%	2.6	2.3	-9.6%
3	Bhatinda	160.0	148.0	-7.5%	11.3	9.6	-15.0%
4	Faridkot	114.0	108.9	-4.5%	22.8	20.5	-10.0%
5	Fatehgarh Sahib	86.0	82.1	-4.5%	10.4	9.5	-9.0%
6	Fazilka	187.0	169.2	-9.5%	70.3	66.8	-5.0%
7	Firozpur	125.0	113.1	-9.5%	50.9	48.3	-5.0%
8	Gurdaspur	174.0	166.2	-4.5%	44.2	42.0	-5.0%
9	Pathankot	27.0	25.8	-4.5%	3.0	2.7	-10.0%
10	Hoshiarpur	65.0	62.1	-4.5%	7.3	6.6	-10.0%
11	Jalandhar	164.0	156.6	-4.5%	11.4	10.4	-8.9%
12	Kapurthala	118.0	116.2	-1.5%	8.5	7.7	-10.0%
13	Ludhiana	257.0	248.0	-3.5%	24.5	22.7	-7.5%
14	Mansa	99.0	89.6	-9.5%	1.0	0.9	-15.0%
15	Moga	182.0	173.8	-4.5%	20.1	18.1	-10.0%
16	Mohali	31.0	29.6	-4.5%	4.3	3.9	-10.0%
17	Muktsar	160.0	148.0	-7.5%	58.9	50.7	-13.9%
18	Nawanshahar	54.0	53.2	-1.5%	5.4	4.9	-9.3%
19	Patiala	230.0	219.7	-4.5%	21.6	19.8	-8.5%
20	Rupnagar	34.0	32.5	-4.5%	3.2	2.8	-11.9%
21	Sangrur	276.0	266.3	-3.5%	36.6	32.0	-12.7%
22	Tarantaran	177.0	174.3	-1.5%	83.3	75.6	-9.2%
	Total	3010.0	2865.6	-4.8%	615.6	561.2	-8.8%

Uttar Pradesh

In Uttar Pradesh, timely onset of monsoon, rice transplanting was started in time and continued in full swing during July. A total of 13,36,190 ha rice acreage based on field survey has been estimated as transplanted in the 27 districts of the state as on 10 Sept 2017.

Shahjehanpur district has the largest total rice area (1,97,051 ha), followed by Pilibhit (1,52,500 ha).

The area under Basmati rice has decreased in Uttar Pradesh in comparison to last year. And in districts like Muzaffarnagar, Bagpat, Meerut, many farmers have sown sugarcane replacing Basmati speculating quick returns from the sugar mills. Moreover, this year basmati has been related with Sharbati & high Yielding varieties which gave high returns to farmers last year.

Table: 8 Basmati rice acreages in Uttar Pradesh Kharif 2017

S. No.	District	Total rice acreage			Total basmati acreage		
		2016	2017	% Change LY	2016	2017	% Change LY
Acreage in '000 hac							
1	Agra	4.1	4.0	-3.5%	0.9	0.9	-2.9%
2	Aligarh	58.3	58.3	0.0%	27.6	26.1	-5.4%
3	Auraiya	44.5	44.9	1.0%	2.0	1.9	-4.6%
4	Bagpat	5.1	4.9	-3.5%	3.9	3.7	-4.3%
5	Bareilly	151.6	150.1	-1.0%	3.1	3.0	-1.7%
6	Bijnore	45.3	43.7	-3.5%	6.9	6.9	-1.0%
7	Budaun	47.8	47.8	0.0%	14.2	14.1	-0.9%
8	Bulandshahr	52.5	52.0	-1.0%	30.7	28.7	-6.6%
9	Etah+Kasganj	32.5	33.2	2.0%	8.6	8.7	0.5%
10	Farukhabad	11.1	11.3	2.0%	2.7	2.7	-1.1%
11	Firozabad	12.4	12.5	1.0%	3.9	3.8	-1.2%
12	Etawah	40.2	40.6	1.0%	9.0	8.9	-1.1%
13	Gautam Buddha Ngr	27.1	26.8	-1.0%	21.4	20.3	-5.2%
14	Ghaziabad+Hapur	27.8	27.0	-3.0%	10.0	9.7	-2.7%
15	Hathras	14.2	13.6	-4.5%	7.3	7.1	-3.4%
16	Mathura	38.2	35.7	-6.5%	29.4	27.3	-7.2%
17	Mainpuri	47.1	48.0	2.0%	18.7	18.1	-2.9%
18	Meerut	17.6	16.3	-7.5%	7.3	7.1	-2.9%
19	Moradabad	65.2	66.5	2.0%	3.4	3.4	1.3%
20	J.P.Nagar	16.3	16.0	-2.0%	4.1	4.1	0.3%
21	Kannauj	12.2	12.3	1.0%	2.2	2.2	0.3%
22	Muzaffarnagar+Shamli	32.2	29.8	-7.5%	11.1	10.6	-4.6%
23	Pilibhit	152.5	152.5	0.0%	4.4	4.4	1.0%
24	Rampur	110.2	112.4	2.0%	2.0	2.0	0.9%
25	Saharanpur	53.5	50.5	-5.6%	23.1	22.3	-3.4%
26	Shahjehanpur	195.1	197.1	1.0%	4.4	4.3	-1.8%
27	Sambhal	27.9	28.5	2.0%	3.7	3.6	-0.4%
	Total	1342.5	1336.2	-0.5%	266.2	256.2	-3.7%

Uttarakhand

In Uttarakhand, A total of 1,29,628 ha rice acreage based on first field survey has been estimated as transplanted in the 4 districts as on 10 Sept 2017. Udham Singh Nagar district has the largest area under rice (99,468 ha). The total Basmati area is estimated to be 158,20 ha out of which 2,565 ha. is under Pusa Basmati-1509.

Table: 9 Basmati rice acreages in Uttarakhand Kharif 2017

S. No.	District	Total Rice Acreage			Total Basmati Acreage		
		2016	2017	% Change	2016	2017	% Change
		Acreage in '000 hac					
1	Dehradun	7.4	7.4	0.2%	3.1	3.0	-2.4%
2	Haridwar	14.2	14.2	0.2%	6.7	6.5	-2.3%
3	Nainital	8.5	8.5	0.2%	1.5	1.5	-1.0%
4	U S Nagar	99.3	99.5	0.2%	4.3	4.2	-3.1%
	Total	129.4	129.6	0.2%	15.6	15.2	-2.4%

Jammu & Kashmir

In Jammu & Kashmir, three districts have been taken up for the study. The total rice area is estimated to be 1,39,000 ha. in these districts. Jammu & Samba have an area of 97,000 ha. and Kathua only 42,000 ha. The state has received excess rainfall this year and the transplanting is complete.

Table: 10 Basmati rice acreages in Jammu & Kashmit Kharif 2017

S.No	District	Total Rice 2017	Total Basmati Rice 2017	% Share of Basmati Rice
1	Jammu	85.0	48.1	57.2%
2	Kathua	42.0	10.2	24.5%
3	Samba	12.0	2.7	22.5%
	Total	139.0	61.0	44.3%

Himachal Pradesh

In Himachal Pradesh, A total of 76,550 ha rice acreage based on field survey has been estimated as transplanted in 11 districts. Kangra district has the highest area (60,750 ha). The Basmati varieties are grown mostly in Kangra. The farmers opted Permal varieties including PR-123 in the increased paddy area and the area under Pusa Basmati- 1509.

Table: 11 Basmati rice acreages in Himachal Pradesh Kharif 2017

S.No	District	Total Rice 2017	Total Basmati Rice 2017	% Share of Basmati Rice
1	Kangra	60.8	4.0	6.6%
2	Mandi	-	3.9	-
	Total	60.8	7.9	13.0%

Chapter 4

Percentage share of Basmati over total rice (District wise)

Haryana

Table: 12 District-wise acreage under total rice and Basmati area transplanted in Haryana during Kharif-(2017)

S.No	District	Total Rice	Basmati Rice	% Share of Basmati Rice
1	Ambala	80.0	15.4	19.3%
2	Bhiwani	20.9	18.7	89.5%
3	Faridabad + Palwal	32.5	25.5	78.6%
4	Gurgaon	4.7	2.2	47.2%
5	Fatehabad	107.9	44.7	41.5%
6	Hisar	61.5	38.4	62.5%
7	Jajjhar	42.5	38.6	90.9%
8	Jind	126.8	70.6	55.7%
9	Kaithal	157.7	60.9	38.6%
10	Karnal	159.7	75.0	46.9%
11	Kurukshetra	118.2	29.1	24.6%
12	Mewat	7.9	6.6	83.8%
13	MahendraGarh	-	-	-
14	Panchkula	9.3	0.0	0.0%
15	Panipat	70.9	63.5	89.5%
16	Rewari	1.7	1.1	60.8%
17	Rohtak	42.0	30.8	73.4%
18	Sirsa	71.1	57.0	80.2%
19	Sonepat	88.7	65.2	73.5%
20	Yamunanagar	69.9	8.7	12.4%
	TOTAL	1273.7	652.0	51.2%

Punjab

Table: 13 District-wise acreage under total rice and Basmati area transplanted in Punjab during Kharif-(2017)

S.No	District	Total Rice	Basmati Rice	% Share of Basmati Rice
1	Amritsar	177.3	103.6	58.4%
2	Barnala	105.1	2.3	2.2%
3	Bhatinda	148.0	9.6	6.5%
4	Faridkot	108.9	20.5	18.8%
5	Fatehgarh Sahib	82.1	9.5	11.6%
6	Fazilka	169.2	66.8	39.5%
7	Firozpur	113.1	48.3	42.7%
8	Gurdaspur	166.2	42.0	25.3%
9	Pathankot	25.8	2.7	10.5%
10	Hoshiarpur	62.1	6.6	10.6%
11	Jalandhar	156.6	10.4	6.6%
12	Kapurthala	116.2	7.7	6.6%
13	Ludhiana	248.0	22.7	9.1%
14	Mansa	89.6	0.9	0.9%
15	Moga	173.8	18.1	10.4%
16	Mohali	29.6	3.9	13.1%
17	Muktsar	148.0	50.7	34.3%
18	Nawanshahar	53.2	4.9	9.2%
19	Patiala	219.7	19.8	9.0%
20	Rupnagar	32.5	2.8	8.7%
21	Sangrur	266.3	32.0	12.0%
22	Tarantaran	174.3	75.6	43.4%
	Total	2865.6	561.2	19.6%

Uttar Pradesh

Table: 14 District-wise acreage under total rice and Basmati area transplanted in U.P during Kharif-(2017)

S.No	District	Total Rice	Basmati Rice	% Share of Basmati Rice
1	Agra	4.0	0.9	22.7%
2	Aligarh	58.3	26.1	44.8%
3	Auraiya	45.0	1.9	4.2%
4	Baghpat	4.9	3.7	75.2%
5	Bareilly	150.1	3.0	2.0%
6	Bijnore	43.7	6.9	15.8%
7	Budaun	47.8	14.1	29.5%
8	Bulandshahr	52.0	28.7	55.2%
9	Etah+Kasganj	33.2	8.7	26.2%
10	Farukhabad	11.3	2.7	23.9%
11	Firozabad	12.5	3.8	30.4%
12	Etawah	40.6	8.9	21.9%
13	Gautam Buddha Ngr	26.8	20.3	75.7%
14	Ghaziabad+Hapur	27.0	9.7	36.0%
15	Hathras	13.6	7.1	52.4%
16	Mathura	35.7	27.3	76.4%
17	Mainpuri	48.0	18.1	37.7%
18	Meerut	16.3	7.1	43.6%
19	Moradabad	66.5	3.4	5.1%
20	J.P.Nagar	16.0	4.1	25.7%
21	Kannauj	12.3	2.2	17.9%
22	Muzaffarnagar+Shamli	29.8	10.6	35.6%
23	Pilibhit	152.5	4.4	2.9%
24	Rampur	112.4	2.0	1.8%
25	Saharanpur	50.5	22.3	44.2%
26	Shahjehanpur	197.1	4.3	2.2%
27	Sambhal	28.5	3.6	12.6%
	Total	1336.2	256.2	19.2%

Uttarakhand

Table: 15 District-wise acreage under total rice and Basmati area transplanted in U.K during Kharif-(2017)

S.No	District	Total Rice	Basmati Rice	% Share of Basmati Rice
1	Dehradun	7.4	0.6	8.1%
2	Haridwar	14.2	4.3	30.2%
3	Nainital	8.5	0.6	7.1%
4	U S Nagar	99.5	3.5	3.5%
	Total	129.6	9.0	6.9%

Jammu & Kashmir

Table: 16 District-wise acreage under total rice and Basmati area transplanted in J & K during Kharif-(2017)

S.No	District	Total Rice	Basmati Rice	% Share of Basmati Rice
1	Jammu	85.0	48.6	57.2%
2	Kathua	42.0	10.3	24.5%
3	Samba	12.0	2.7	22.5%
	Total	139.0	61.6	44.3%

Himachal Pradesh

Table: 17 District-wise acreage under total rice and Basmati area transplanted in H & P during Kharif-(2017)

S.No	District	Total Rice 2017	Total Basmati Rice 2017	% Share of Basmati Rice
1	Kangra*	60.8	4.0	6.6%
2	Mandi*		3.9	40.0%
	Total	60.8	7.9	11.2%

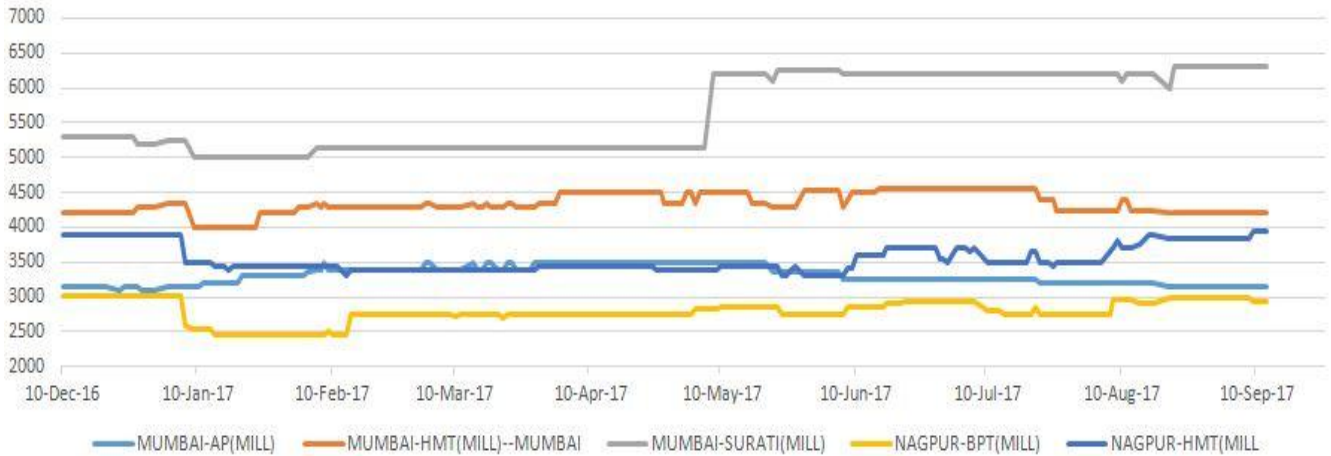
Chapter 5

Price Charts

We tried to compare the price charts for the different competing variants of basmati & non-basmati rice, so that facts can be established over period in time that how market was not supporting the anticipated price and that's why farmer shifted to other crops. The data-sets on prices are from market pooling exercise done independently by the agency.



KOLAM RAW-Price in Rs./Qtl.



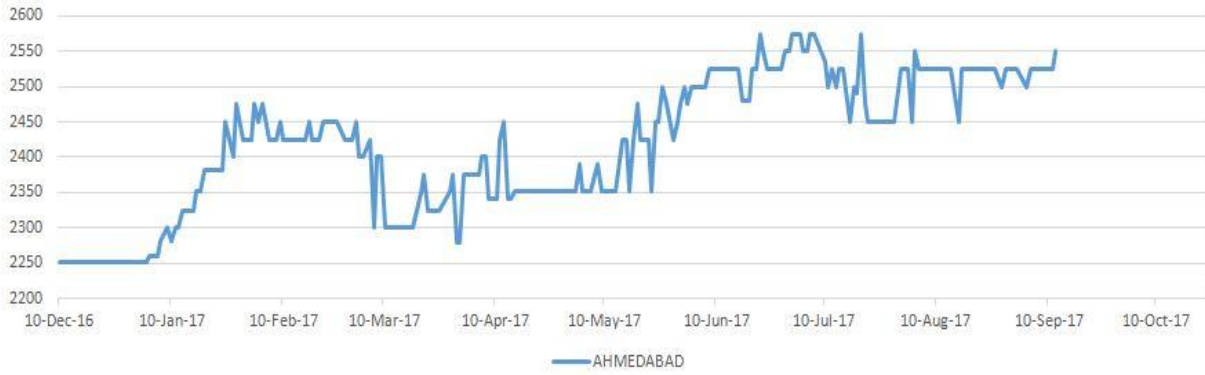
Permal Raw (Mill)-Price in Rs./Qtl.



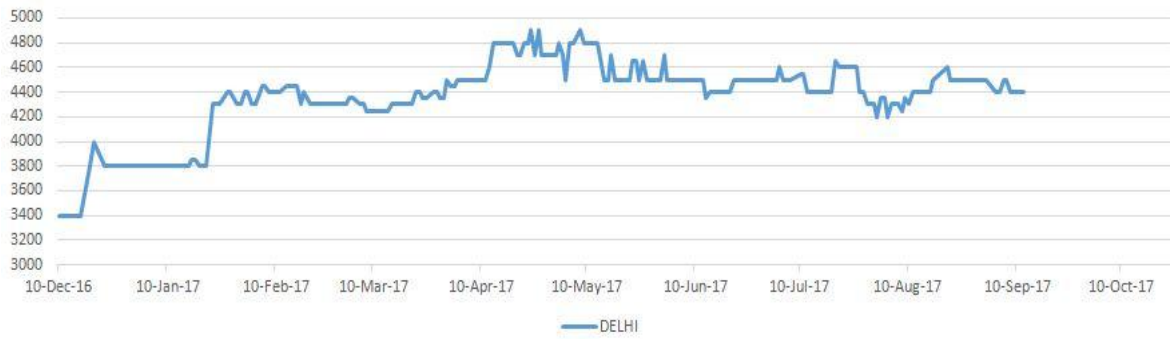
Permal Wand (White)-Price in Rs./Qtl.



Permal Steam (Yellow Sortex)-Price in Rs./Qtl.



SHARBATI RAW(MILL)-Price in Rs./Qtl.



SHARBATI SELLA(MILL)-Price in Rs./Qtl.



SHARBATI STEAM(MILL)-Price in Rs./Qtl.



Chapter 6

State level variety wise details

Table: 18 HARYANA District-wise Variety-wise Basmati Acreage (fig in 000 hc)

S.No	District	2016 Pusa Basmati 1121	2017	2016 Pusa 1509	2017	2016 PB -1(inlcd PB-3/ PB-6/1401)	2017	2016 CSR 30 & other evolved varieties	2017	2016 Total Basmati	2017
1	Ambala	7.2	6.2	0.1	0.1	0.3	0.2	9.3	8.8	16.9	15.4
2	Bhiwani	22.1	18.7		0.0		0.0		0.0	22.1	18.7
3	Faridabad + Palwal	25.1	22.1	0.2	0.2	3.5	3.2		0.0	28.8	25.5
4	Gurgaon	2.4	2.0		0.0	0.2	0.2		0.0	2.6	2.2
5	Fatehabad	27.4	23.3	1.3	1.5	20.0	19.0	1.1	1.0	49.7	44.7
6	Hisar	42.4	36.0	0.5	0.5	0.9	0.8	1.1	1.0	44.8	38.4
7	Jajjhar	42.4	37.3	0.9	1.1		0.0	0.3	0.3	43.6	38.6
8	Jind	65.0	55.3	1.9	2.2	8.3	7.4	6.0	5.7	81.2	70.6
9	Kaithal	37.3	34.3	2.8	3.4	0.1	0.1	24.4	23.2	64.6	60.9
10	Karnal	39.7	36.5	8.9	9.9	0.3	0.2	29.8	28.3	78.6	75.0
11	Kurukshetra	11.0	9.9	2.7	3.0	2.6	2.3	14.5	13.8	30.8	29.1
12	Mewat	7.5	6.6		0.0		0.0		0.0	7.5	6.6
13	MahendraGarh										
14	Panchkula		0.0		0.0		0.0		0.0	0.0	0.0
15	Panipat	56.0	51.5	2.2	2.5	2.1	2.0	7.9	7.5	68.1	63.5
16	Rewari	1.2	1.1		0.0		0.0		0.0	1.2	1.1
17	Rohtak	36.2	30.7	0.1	0.1		0.0	0.1	0.1	36.3	30.8
18	Sirsa	11.9	10.1	3.0	3.4	45.5	43.2	0.3	0.3	60.6	57.0
19	Sonepat	69.3	61.0	1.2	1.4		0.0	2.9	2.8	73.5	65.2
20	Yamunanagar	0.8	0.7	0.6	0.7	7.2	6.9	0.4	0.4	9.0	8.7
	TOTAL	504.9	443.5	26.2	29.9	90.7	85.6	98.0	93.1	719.7	652.0

Table: 19 PUNJAB District-wise Variety-wise Basmati Acreage (fig in 000 hc)

S.No	District	2016	2017	2016	2017	2016	2017	2016	2017
		Pusa Basmati 1121	Pusa Basmati 1121	Pusa 1509	Pusa 1509	PB -1(incld PB-3/ PB-6/ 1401	PB -1(incld PB-3/ PB-6/ 1401	Total Basmati acreage	Total Basmati acreage
1	Amritsar	85.5	72.6	28.1	30.9			113.9	103.6
2	Barnala	2.0	1.8			0.5	0.5	2.6	2.3
3	Bhatinda	11.3	9.6					11.3	9.6
4	Faridkot	22.8	20.5					22.8	20.5
5	Fatehgarh Sahib	8.4	7.6			2.0	1.9	10.4	9.5
6	Fazilka	70.3	66.8					70.3	66.8
7	Firozpur	50.9	48.3					50.9	48.3
8	Gurdaspur	44.1	41.9	0.1	0.1			44.2	42.0
9	Pathankot	3.0	2.7					3.0	2.7
10	Hoshiarpur	7.3	6.6					7.3	6.6
11	Jalandhar	10.7	9.7	0.7	0.8			11.4	10.4
12	Kapurthala	8.5	7.7		0.0			8.5	7.7
13	Ludhiana	19.3	17.4	2.0	2.1	3.3	3.2	24.5	22.7
14	Mansa	1.0	0.9					1.0	0.9
15	Moga	19.9	17.9			0.1	0.1	20.1	18.1
16	Mohali	4.3	3.9					4.3	3.9
17	Muktsar	49.9	42.4			9.0	8.3	58.9	50.7
18	Nawanshahar	5.2	4.7	0.2	0.2			5.4	4.9
19	Patiala	17.9	16.1	1.0	1.1	2.7	2.6	21.6	19.8
20	Rupnagar	3.2	2.8	0.0	0.0			3.2	2.8
21	Sangrur	30.1	25.6			6.6	6.4	36.6	32.0
22	Tarantaran	80.2	72.2	3.1	3.4			83.3	75.6
	Total	555.8	499.5	35.2	38.7	24.3	23.0	615.6	561.2

Table: 20 UTTAR PRADESH District-wise Variety-wise Basmati Acreage (fig in 000 hc)

S.No	District	2016	2017	2016	2017	2016	2017	2016	2017
		Pusa Basmati 1121		Pusa 1509		PB -1(incld PB-3/ PB-6/ 1401		Total Basmati incl others basmati varieties	
1	Agra	0.4	0.3	0.5	0.5	0.1	0.1	0.9	0.9
2	Aligarh	18.6	16.9	4.2	4.3	4.9	4.9	27.6	26.1
3	Auraiya	1.1	1.0	0.2	0.2	0.1	0.0	2.0	1.9
4	Baghpat	2.1	1.9	0.5	0.5	1.2	1.2	3.9	3.7
5	Bareilly	1.3	1.2	0.6	0.7	0.5	0.5	3.1	3.0
6	Bijnore	1.6	1.5	2.2	2.3	3.2	3.1	6.9	6.9
7	Budaun	2.0	1.9	2.0	2.1	0.8	0.7	14.2	14.1
8	Bulandshahr	20.7	18.5	4.2	4.5	5.8	5.8	30.7	28.7
9	Etah+Kasganj	5.2	5.0	2.9	3.1	0.5	0.5	8.6	8.7
10	Farukhabad	1.8	1.8	0.8	0.9	0.1	0.1	2.7	2.7
11	Firozabad	2.3	2.3	1.3	1.3	0.2	0.2	3.9	3.8
12	Etawah	6.3	6.2	2.5	2.6	0.2	0.2	9.0	8.9
13	Gautam Buddha Nagar	18.9	17.7	0.8	0.8	1.8	1.8	21.4	20.3
14	Ghaziabad+Hapur	5.8	5.4	2.8	2.9	1.4	1.4	10.0	9.7
15	Hathras	4.2	3.9	2.3	2.4	0.8	0.8	7.3	7.1
16	Mathura	25.1	22.8	3.3	3.4	1.1	1.0	29.4	27.3
17	Mainpuri	16.1	15.5	2.4	2.5	0.2	0.2	18.7	18.1
18	Meerut	2.6	2.2	2.4	2.5	2.4	2.3	7.3	7.1
19	Moradabad	1.0	0.9	2.1	2.2	0.3	0.3	3.4	3.4
20	J.P.Nagar	1.2	1.2	1.9	2.0	1.0	1.0	4.1	4.1
21	Kannauj	0.7	0.6	1.4	1.4	0.2	0.2	2.2	2.2
22	Muzaffarnagar+Shamli	4.6	4.1	2.4	2.5	4.0	3.9	11.1	10.6
23	Pilibhit	0.9	0.8	3.3	3.4	0.2	0.2	4.4	4.4
24	Rampur	0.7	0.7	1.2	1.2	0.1	0.1	2.0	2.0
25	Saharanpur	7.8	6.9	3.1	3.3	12.0	11.9	23.1	22.3
26	Shahjehanpur	1.6	1.5	0.8	0.8	0.3	0.3	4.4	4.3
27	Sambhal	1.6	1.5	1.7	1.7	0.4	0.4	3.7	3.6
	Total	156.3	144.4	53.7	56.0	43.3	42.9	266.2	256.2

Table: 21 UTTARAKHAND District-wise Variety-wise Basmati Acreage (fig in 000 hc)

S.No	District	2016	2017	2016	2017	2016	2017	2016	2017
		Pusa Basmati 1121		Pusa 1509		PB -1(incld PB-3/ PB-6/ 1401)		Total Basmati incl others basmati varieties	
1	Dehradun	0.4	0.4	0.2	0.2			3.1	3.0
2	Haridwar	1.6	1.5	0.5	0.5	2.2	2.2	6.7	6.5
3	Nainital	0.3	0.3	0.3	0.3			1.5	1.5
4	U S Nagar	1.9	1.7	1.5	1.5	0.1	0.1	4.3	4.2
	Total	4.2	3.9	2.5	2.6	2.3	2.3	15.6	15.2

Table: 22 JAMMU & KASHMIR District-wise Variety-wise Basmati Acreage (fig in 000 hc)

S.No	District	2016	2017	2016	2017	2016	2017	2016	2017
		Pusa Basmati 1121	Pusa Basmati 1121	Pusa 1509	Pusa 1509	BASMATI 370	BASMATI 370	Total Basmati incl others basmati varieties	Total Basmati incl others basmati varieties
1	Jammu	1.4	1.4	0.0	0.0	47.7	46.7	49.1	48.1
2	Kathua	6.4	6.3	0.2	0.2	3.8	3.7	10.4	10.2
3	Samba	0.6	0.6	0.1	0.1	2.1	2.1	2.8	2.7
	Total	8.4	8.2	0.3	0.3	53.6	52.5	62.3	61.0

Table: 23 HIMACHAL PRADESH District-wise Variety-wise Basmati Acreage (fig in 000 hc)

S.No	District	2016	2017	2016	2017	2016	2017	2016	2017
		Pusa Basmati 1121	Pusa Basmati 1121	Pusa 1509	Pusa 1509	Others Basmati Varieties	Others Basmati Varieties	Total Basmati incl others basmati varieties	Total Basmati incl others basmati varieties
1	Kangra*	2.0	1.9	1.0	1.0	1.0	1.0	4.0	3.9
2	Mandi*	2.0	1.9	1.0	1.0	1.0	1.0	4.0	3.9
	Total	4.0	3.8	2.0	2.0	2.0	1.9	8.0	7.8

Rainfall

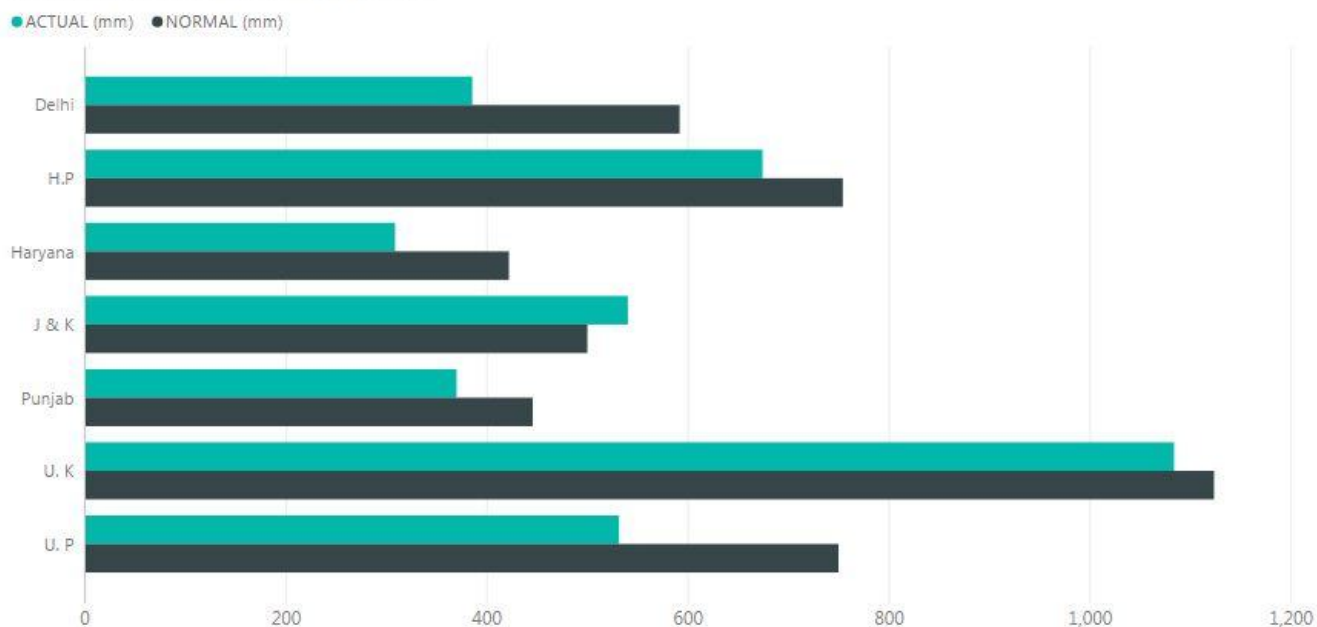
The Basmati growing belt has witnessed normal to deficient rainfall in the months of June and July this year in the states of Punjab, Haryana and Western U.P. But transplanting has been timely due to good distribution of rainfall in the districts.

Table: 24 Rainfall across various states Normal Vs Actual

DISTRICS	ACTUAL (mm)	NORMAL (mm)	% Deficient
Haryana	308.4	421.7	-27%
Punjab	369.6	445.4	-17%
U. P	531.2	749.6	-29%
U. K	1083.4	1123.2	-4%
J & K	540.0	499.7	8%
H.P	674.0	753.9	-14%
Delhi	385.2	591.5	-35%

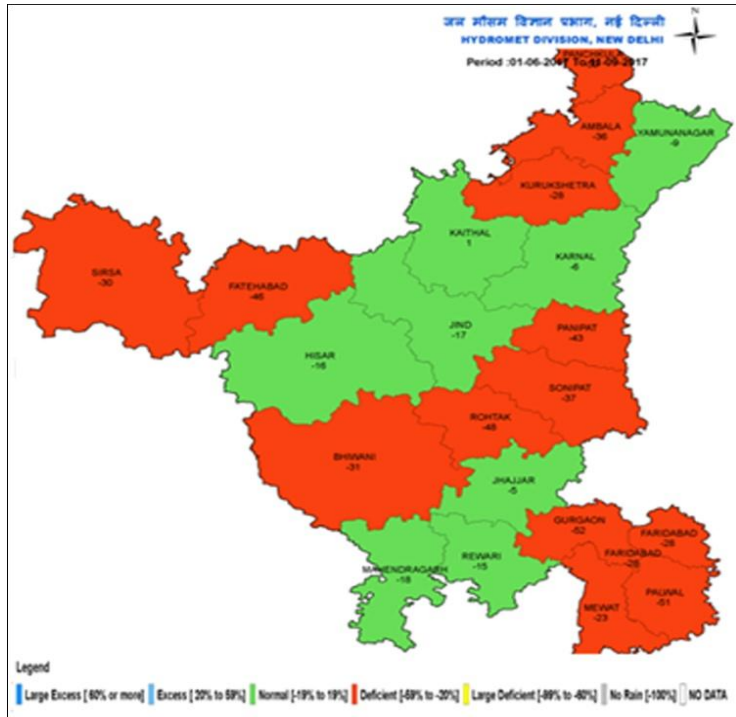
Rain fall graph

ACTUAL (mm) and NORMAL (mm) by DISTRICS



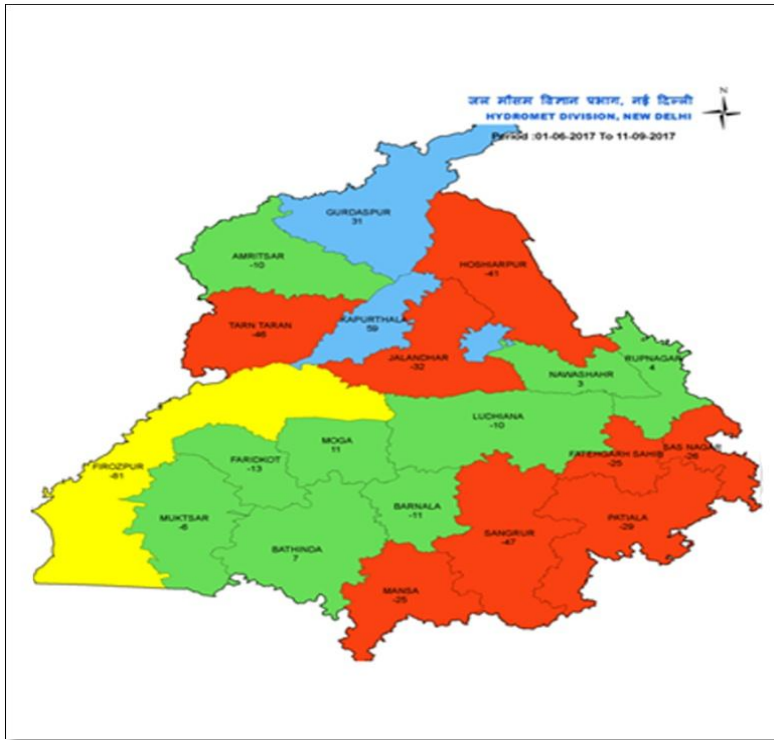
Rainfall of the area, Maps

Haryana



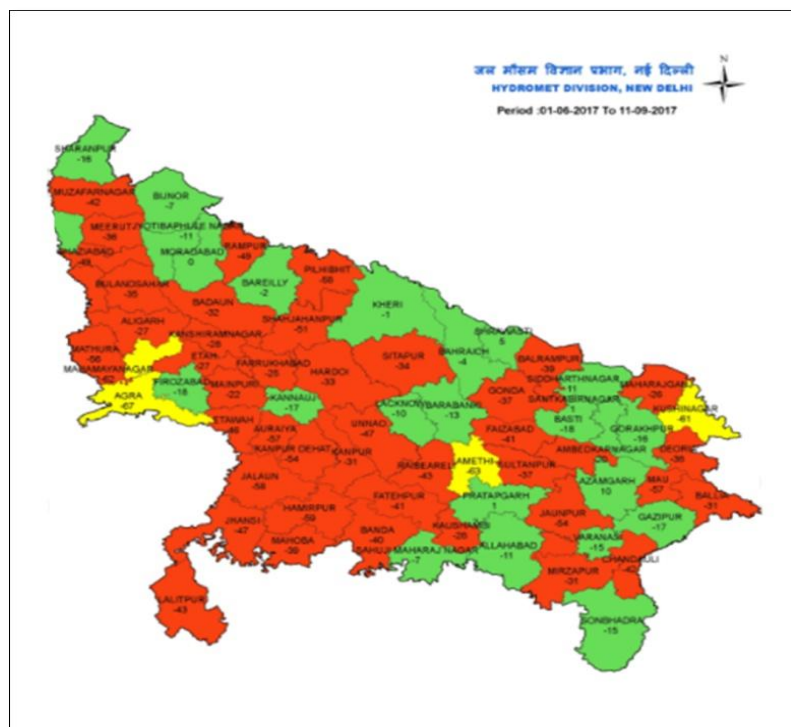
DISTRICTS	ACTUAL (mm)	NORMAL (mm)	% Deficient
Ambala	523.6	818.2	-36%
Bhiwani	223.4	321.7	-31%
Faridabad	398.7	551.8	-28%
Fatehabad	137.8	256.5	-46%
Gurgaon	212.2	442	-52%
Hisar	247.2	296	-16%
Jhajjar	369.7	390.1	-5%
Jind	309.5	372.5	-17%
Kaithal	351.2	348.5	1%
Karnal	495.5	524.5	-6%
Kurukshetra	367.9	511.7	-28%
Mahendragarh	306.6	374	-18%
Mewat	355	462.5	-23%
Palwal	197.4	401.4	-51%
Panchkula	358.6	867.5	-59%
Panipat	275.2	480.1	-43%
Rewari	345.8	407.2	-15%
Rohtak	252	480.7	-48%
Sirsa	152.3	218.7	-30%
Sonapat	312.8	495.9	-37%
Yamunanagar	752.6	829.4	-9%
Total State	308.4	421.7	-27%

Punjab



DISTRICTS	ACTUAL (mm)	NORMAL (mm)	% Deficient
Amritsar	444.3	494.7	-10%
Barnala	276.3	310.5	-11%
Bathinda	306.2	286.2	7%
Faridkot	258.6	296.3	-13%
Fatehgarh sahib	364.5	484.9	-25%
Ferozpur	59.8	320.3	-81%
Gurdaspur	1003.5	765.2	31%
Hoshiarpur	386.4	650.9	-41%
Jalandhar	0.3	499.3	-32%
Kapurthala	0	378.4	59%
Ludhiana	0	480.8	-10%
Mansa	0	294.2	-25%
Moga	2.8	322	11%
Muktsar	0	291.7	-6%
Nawashahr	0	712	3%
Patiala	0	550.7	-29%
Rupnagar	0.1	668	4%
Sangrur	0	393.4	-47%
Sas nagar	0	588.4	-26%
Tarn taran	0	307.7	-46%
Total State	369.6	445.4	-17%

Uttar Pradesh



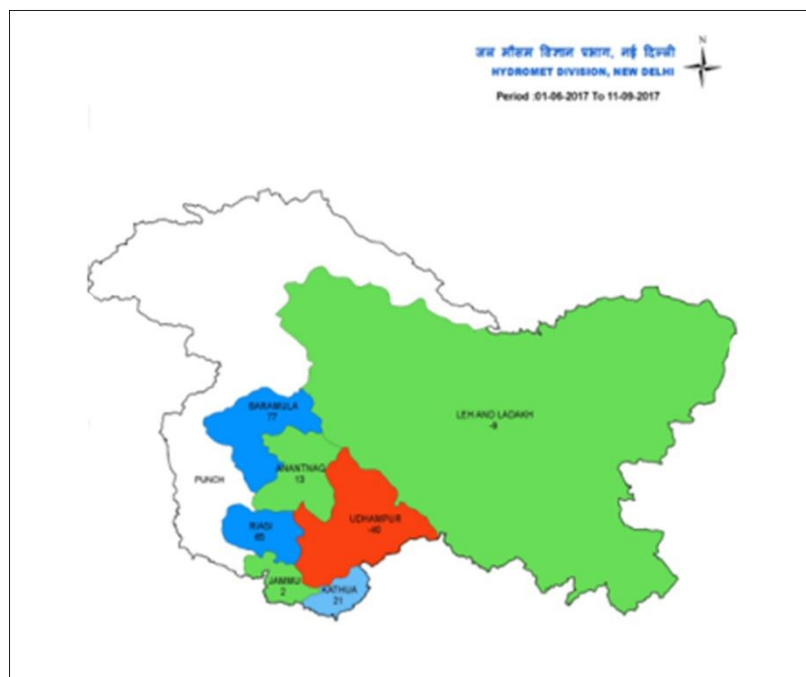
DISTRICTS	ACTUAL (mm)	NORMAL (mm)	% Deficient
Agra	204.3	618.1	-67%
Aligarh	422.5	581.1	-27%
Auraiya	268.3	623.8	-57%
Baghpat	472.8	494.2	-4%
Bareilly	748.8	766.9	-2%
Bijnore	766.7	828.8	-7%
Budaun	465.2	681.4	-32%
Bulandshahr	382.9	591.4	-35%
Etah+kasganj	400.7	549.5	-27%
Farukhabad	504.8	671.3	-25%
Firozabad	484.4	590.4	-18%
Etawah	350.7	651	-46%
Gautam buddha ngr	484.4	590.4	-18%
Ghaziabad+hapur	231	492.8	-53%
Mathura	229.5	522.1	-0.56
Mainpuri	456.3	581.3	-22%
Meerut	446.7	701	-36%
Moradabad	771.8	770.8	0%
J.p. nagar	620.5	697.6	-11%
Kannauj	573.3	692	-17%
Muzaffarnagar+shamli	385.4	663.8	-42%
Pilibhit	371.1	875	-58%
Rampur	417.9	825.3	-49%
Saharanpur	614.4	732.8	-16%
Shahjehanpur	382.4	772.7	-51%
Total State	531.2	749.6	-29%

Uttarakhand



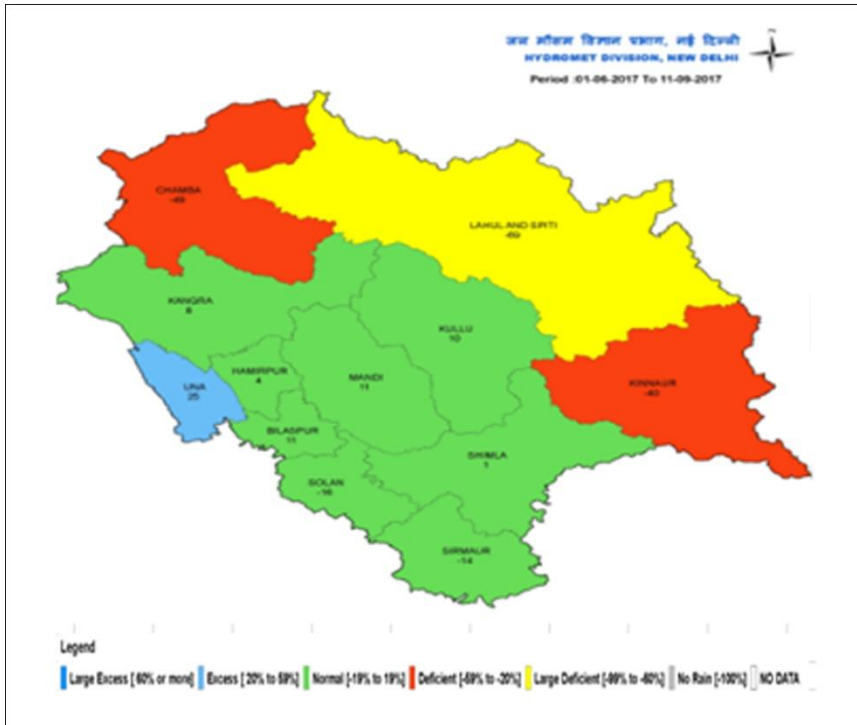
DISTRICTS	ACTUAL (mm)	NORMAL (mm)	% Deficient
Almora	854.7	771.4	11%
Bageshwar	1035.3	771.4	34%
Chamoli	1124.1	796.7	41%
Champawat	1162.9	1191.9	-2%
Dehradun	1613	1676.5	-4%
Haridwar	730.5	889.9	-18%
Nanital	1523.8	1296.2	18%
Pauri garhwal	795.7	1120.2	-29%
Pithoragarh	1419.4	1542.4	-8%
Rudraprayag	1318.4	1565.7	-16%
Tehri garwal	673.6	965.4	-30%
Udham singh ngr	832.1	1003	-17%
Uttarkashi	891.9	1030.9	-13%
Total State	1083.4	1123.2	-4%

Jammu & Kashmir



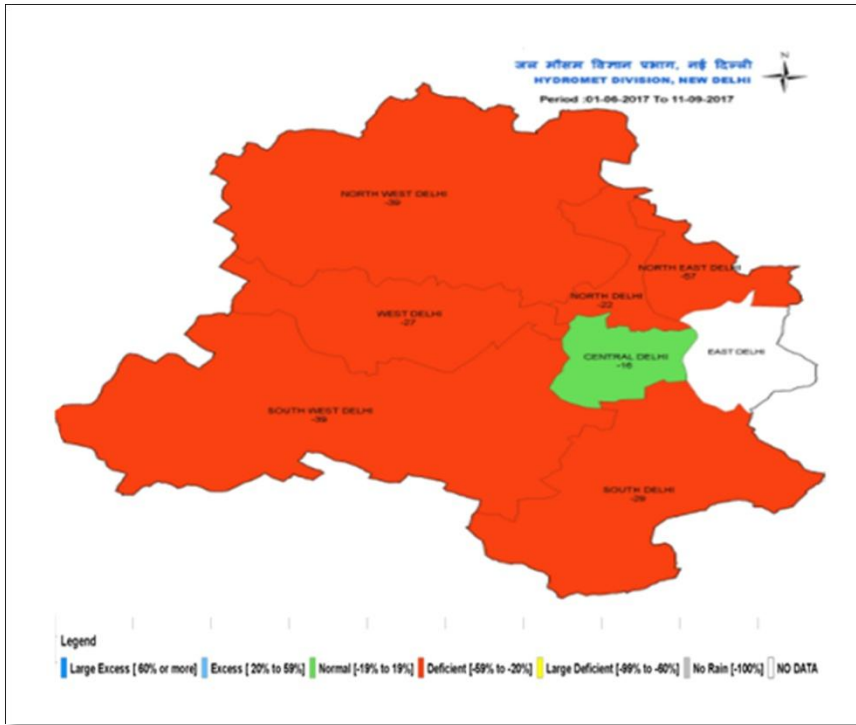
DISTRICS	ACTUAL (mm)	NORMAL (mm)	% Deficient
Jammu	0	807	2%
Kathua	4.2	908.7	21%
Samba	0	807	-38%
Total State	540.0	499.7	8%

Himachal Pradesh



DISTRICTS	ACTUAL (mm)	NORMAL (mm)	% Deficient
Bilaspur	0	797.7	11%
Chamba	2.2	1300.4	-49%
Hamirpur	1.3	997.6	4%
Kangra	2.7	1477.3	8%
Kinnaur	1.4	220.8	-40%
Kullu	0.5	473.4	10%
Mandi	3.2	1020.7	11%
Shimla	4.2	575.2	1%
Sirmaur	0	1233.6	-14%
Solan	0	912.5	-16%
Una	7.5	786	25%
Total State	674.0	753.9	-14%

Delhi



DISTRICTS	ACTUAL (mm)	NORMAL (mm)	% Deficient
Central Delhi	497.8	591.5	-16%
New Delhi	620.6	591.5	5%
North Delhi	464.3	591.5	-22%
North East Delhi	256.5	591.5	-57%
North West Delhi	358	591.5	-39%
South Delhi	418.7	591.5	-29%
South West Delhi	360.8	591.5	-39%
West Delhi	430.5	591.5	-27%
Total State	385.2	591.5	-35%

Methodology

- We have done the complete study based on field based survey
- We have deputed the field teams in targeted 7 states which conducted the farmer interviews in around 78 districts of total 81 districts
- We have done questionnaires' based farmer survey and taken farmers pictures along with actual survey days newspapers. We tagged the farmer pictures through geo-tagging wherever possible by the field team
- To vet the complete study, we have also taken assistance from satellite images and tele-calling so that complete perspective can be taken into considerations while arriving the results of the study
- To further validate the results, we have also taken the last year's figures from the previous reports, so that survey results error has to be minimized and actual figures can be achieved in the study

Way Forward

- Survey teams will be continuously in the field throughout the survey and report on crop progress, so that subsequent reports will be presented in the more meaning & timely manner
- Next report will be presented during first week of Oct, which will actually highlight the crop yields / crop health / crop progress / monsoon impact / and any deviation from the first report if it is highlighted from the field
- We will also try to highlight the crop arrival pace / prices and quality of rice which is coming in the different studied markets
- During the survey we will highlight any important crop updates which may impact on the overall crop progress

Data Source

- All figures based on farmer interview and feedback for current year
- Last year dataset from previously submitted reports
- Prices are taken from independent price pooling exercise from last Dec 2016 onwards
- Monsoon data was collected from IMD & other meteorological departments