

**Kharif-
2014**

**Basmati Acreage & Yield Estimation in
Punjab, Haryana, Delhi, Uttarakhand,
Himachal Pradesh, Western Uttar Pradesh
and Parts of Jammu & Kashmir**

Report Volume - 1

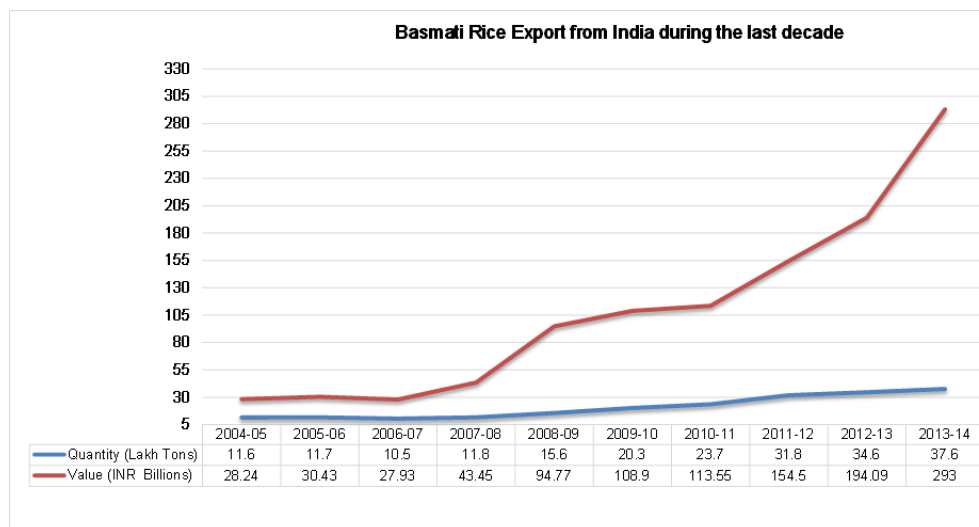
Submitted to
***Basmati Export
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EXECUTIVE SUMMARY

Scope of the Report

The present report being the first cycle of report for Kharif 2014 covers the results of field survey based acreage report of total rice and rice area transplanted in the different districts of Punjab, Haryana, Delhi, Uttar Pradesh, Uttarakhand, Himachal Pradesh and Jammu & Kashmir.

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.

Rice Acreage

In **Punjab**, the rice transplanting has been 27,94,000 ha in 22 districts this year. Sangrur district has the largest area under rice (2,70,000 ha), followed by Ferozpur district (2,56,000 ha). The target area under Basmati is 7,30,000 ha out of which the largest area is in Amritsar (1,28,000 ha), followed by Taran Taran district (1,12,000 ha). The area under Basmati variety Pusa -

1121 has increased this year. Pusa-1509 seed was also distributed and transplanted by the farmers, in which 'Foot Rot' is being reported in many areas, particularly where the farmers didn't treat the seed well before raising nursery. The ratio between Pusa-1121 and Pusa-1509 is observed 75:25. In almost 5% area under Pusa-1509, the mother shoot bearded the earing indicating panicle initiation, which is likely to inhibit achieving the potential yield of the variety. Due to delayed and scanty rains in the state during the months of June and July and lack of awareness, the farmers transplanted the aged seedlings (25-30 days) which has caused early earing in 30-35% area under Pusa-1509.

In **Haryana**, the total rice acreage based on field survey has been estimated at 11,31,700 ha in 20 districts as on 11 August 2014. >98% rice area has been transplanted till date out of the total target of 11.5 lakh ha. Karnal district has the highest target area under total rice (1,65,000 ha), followed by Kaithal district (1,57,600 ha). The transplanting is still continuing and will end by 15 August.



In **Uttar Pradesh**, timely onset of monsoon, rice transplanting was started in time and continued in full swing during July. A total of 15,72,700 ha rice acreage based on field survey has been estimated as transplanted in the 26 districts of the state as on 07 August 2014. Shahjehanpur district has the largest total rice area (2,21,200 ha), followed by Pilibhit (1,58,000 ha).

In **Uttarakhand**, A total of 1,29,500 ha rice acreage based on field survey has been estimated as transplanted in the 13 districts of the state as on 7 August 2014. Udham Singh Nagar district has the largest area under rice (98,600 ha).

In **Jammu & Kashmir**, two districts have been taken up for the study. The total rice area is estimated to be 1,37,000 ha. in these districts. Jammu & Samba have an area of 1,00,000 ha. and Kathua only 37,000 ha. Transplanting is completed despite of scanty rainfall.

In **Himachal Pradesh**, A total of 98,000 ha rice acreage based on field survey has been estimated as transplanted in 11 districts. Kangra district has the highest area (59,000 ha). The Basmati varieties are grown mostly in Kangra.

State wise total rice, Basmati varieties area has been given in table below:

State-wise Area Targets and Transplanting (Kharif 2014) as on 11th August					
Area '000 ha					
Sl. No.	State	Area Transplanted			
		2013		2014	
		Total rice	Basmati	Total rice	Basmati
1	Punjab	2741.0	590.0	2794.3	730.0
2	Haryana	1161.6	711.1	1131.7	782.0
3	W. Uttar Pradesh*	1556.9	318.8	1572.7	600.0
4	Uttarakhand	132.0	18.3	129.5	22.3
5	Himachal Pradesh	80.0	1.0	56.0	0.9
6	Jammu & Kashmir	119.0	37.3	121.0	35.0
Total		5790.5	1676.5	5805.2	2170.2

* In Western Uttar Pradesh the area figure given includes basmati, Sugandha-5 and Sharbati. Which will be separated in next report Volume.



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 35.0 lakh metric tonnes in 2013-14 on robust demand from the traditional markets in West Asia. Iran alone has been importing >40% of the total Basmati export from India. Now China has taken a decision to import Indian Basmati rice which is likely to further increase the Indian Basmati demand.

Timely information on the area and likely production of the crop before the harvest helps exporters and other decision makers involved in Basmati trade to take decisions about the quantum and time of export. The export of Basmati is on continuous rise year by year from India and has reached to >3.76 million by 2013-14. Realizing this potential, the Basmati Export Development Foundation (BEDF), New Delhi contracted M/s. Agri Net Solutions (A division of BPPL – a UPL Group Company) the 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 75 selected districts of Punjab, Haryana, Uttar Pradesh, Uttarakhand, Himachal Pradesh and Jammu & Kashmir, apart from Delhi, during Kharif 2011. During the year 2013, the number of districts has been increased to 81 in the selected seven states i.e. Punjab, Haryana, Uttar Pradesh, Uttarakhand, Himachal Pradesh, and Jammu & Kashmir apart from Delhi. This year the field survey based approach is being applied to collect the information at block level to improve the accuracy further to a desired level.

The Basmati varieties for which information is required 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).

Scope of the current report

The present report being the first cycle of report for Kharif-2014 covers the results of



field survey based total rice and total Basmati acreage in different states.

Study Area Details

The study is confined to 81 districts, which includes 22 districts of Punjab (Amritsar, Barnala, Bathinda, Faridkot, Fatehgarh Sahib, Firozpur, Fazilka, Gurdaspur, Pathankot, Hoshiarpur, Jalandhar, Kapurthala, Ludhiana, Mansa, Moga, Mohali, Muktsar, Nawanshahar, Patiala, Ropar, Sangrur and Tarantaran), 21 districts of Haryana (Ambala, Faridabad, Bhiwani, Fatehabad, Gurgaon, Hissar, Jhajjar, Jind, Kaithal, Karnal, Kurukshetra, Mahendragarh, Mewat, Palwal, Panchkula, Panipat, Rewari, Rohtak, Sirsa, Sonapat, Yamunanagar), 3 Districts of Jammu & Kashmir (Jammu, Samba and Kathua), 30 districts of Uttar Pradesh (Agra, Aligarh, Auraiya, Baghpat, Bareilly, Bijnore, Budaun, Bulandshahr, Etah, Kasganj, Etawah, Ferozabad, Gautam Buddha Nagar, Ghaziabad, Hapur, Hathras,

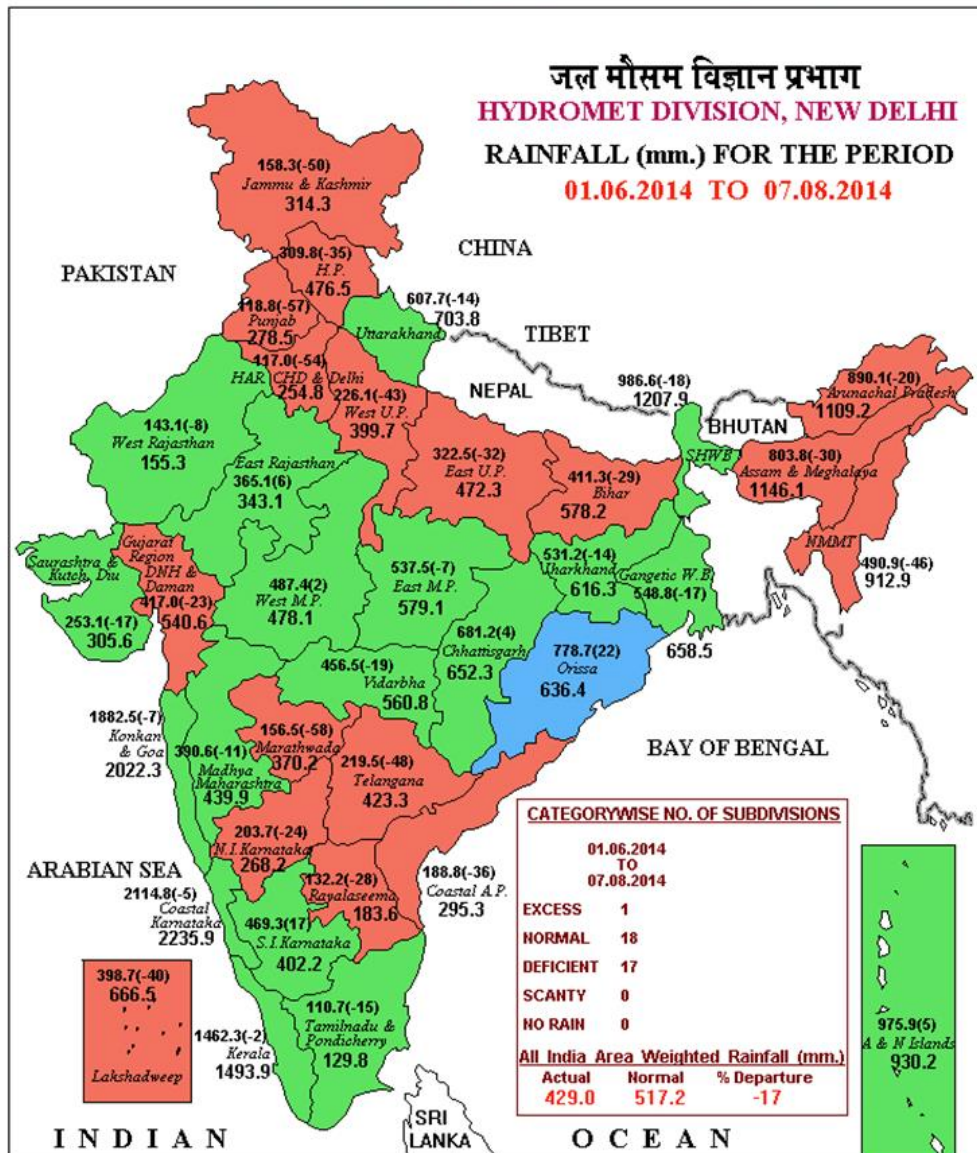
J. P. Nagar, Kannauj, Mainpuri, Mathura, Meerut, Moradabad, Sambhal, Muzaffarnagar, Shamli, Pilibhit, Rampur, Saharanpur, Shahjehanpur), 4 districts of Uttarakhand, 1 district of Himachal Pradesh and one of Delhi. The map of the study districts is given as Fig. The study districts form a part of the Himalayas and the Indo-Gangeic Plains.

Rainfall

The Basmati growing belt in all the states has witnessed deficient to scanty rainfall in the months of June and July this year leading to delayed transplanting and early earing of Pusa-1509. In Haryana, the transplanting is still continue. The new variety Pusa-1509 has occupied the area from other non-Basmati early maturing rice and sharbati. The lesser rains during the months of August & September may further reduce the productivity.



भारत मौसम विज्ञान विभाग INDIA METEOROLOGICAL DEPARTMENT



LEGEND: ■ EXCESS (+20% OR MORE) ■ NORMAL (+19% TO -19%) ■ DEFICIENT (-20% TO -59%)
■ SCANTY (-60% TO -99%) ■ NO RAIN (-100%) NO DATA



Table 1: Rainfall (mm) in the Meteorological Divisions in different states (1.6.2014 to 06.08.2014)

Met. Division	Normal	Actual	Remarks
Punjab	272.3	110.5 (-59)	Deficient
Haryana, Delhi	249.2	115.3 (-54)	Deficient
Western UP	388.6	222.4 (-43)	Deficient
Himachal Pradesh	465.8	297.3 (-36)	Deficient
Uttarakhand	690.5	595.4 (-14)	Normal
Jammu & Kashmir	305.3	152.0 (-50)	Deficient

Note: Figures in parantheses show percent deviation from normal.

Table 2: Rainfall in the monsoon season at important locations (1 June to 06 August 2014)

Location / District	Total Rainfall (mm)	Normal Rainfall	% Departure from normal	Status
Ambala	267.0	475.6	-44	Deficient
Hissar	73.7	179.4	-59	Deficient
Karnal	129.9	296.5	-56	Deficient
Jammu	274.1	508.6	-46	Deficient
Kathua	270.2	573.8	-53	Deficient
Amritsar	77.7	300.5	-74	Scanty
Patiala	76.1	340.9	-78	Scanty
Sangrur	53.1	240.2	-78	Scanty
Nainital	966.1	819.4	18	Normal
Dehradun	678.0	1029.0	34	Deficient
Kangra	626.8	873.9	-28	Deficient
Bareilly	271.4	453.4	-40	Deficient
Meerut	167.0	390.7	-57	Deficient
Saharanpur	216.7	434.5	-50	Deficient
Bulandshaher	116.3	330.3	-65	Scanty

Source: IMD



Fig. 1: Map Showing the Districts of the Study Area





BASMATI Seed Distribution

Only private seed agencies have produced >41,400 quintals seed of various Basmati varieties. Out of which 23,657 quintals has been sold in U.P., 10,100 quintals in Uttarakhand and remaining in Punjab and Haryana. Apart from the Basmati varieties 25,000 quintals of Suandha-5 and 12,500 quintals sharbati seed has also been sold by the private agencies. Pusa -1509 seed was

sold almost 9,500 quintals out of which the farmers used only 50% to raise the nursery due to deficient & delayed rains despite of a huge sale. However, 20,527 quintals seed of Pusa-1121 has been packed under seed certification agency in U.P. Whereas in case of Pusa Sugandha- 5, 21,794 quintals seed has been packed. However, about 50% has been sold in other states including non-GI areas.

Table 3: Basmati rice varieties certified seed sold in U.P. during kharif-2014 (Quintals)							
Sl. No.	Source	Pusa- 1121	PB-1/PB6	PB1509	Traditional	Sharbati	Sugandha -5
A	Govt. Agencies/ Universities	1167	240	44	27	0	1341
1	SBPUA & T	175	127	44	16	0	487
2	Agriculture Deptt.	762	50	0	0	0	854
3	BEDF	230	63	0	11	0	0
B	Private Agencies	12140	3217	6000	300	8181	18755
1	KRBL	8000	1990	1500	40	3471	4800
2	Balaji Seeds	60	0		0	500	385
3	Nuzividu	530	0	0	0	0	0
4	Others	3550	1227	4500	260	4210	13570
Total		13307	3457	6044	327	8181	20096

Table 4: Basmati rice varieties certified seed sold in Uttarakhand during kharif-2014 (Quintals)							
Sl. No.	Source	Pusa- 1121	PB-1	PB1509	Traditional	Sugandha -5	Sharbati
A	Govt. Agencies/ Universities	2750	1160	2500	60	320	0
1	GBPUA & T	1000	480	2500	60	320	0
2	TDC	1750	680	0	0	0	0
B	Private Agencies	3250	700	6150	0	0	1050
1	Bhatiya Quality Seed	1600	400	1700	0	0	550
2	Hemkud Seed Gadarapur	1500	0	2500	0	0	500
3	Nuziveedu Seeds	150	0	450	0	0	0
4	Narola Seed, Rudrapur	0	300	1500	0	0	0
Total		6000	1860	8650	60	320	1050



Table 5: Basmati rice varieties certified seed sold in Punjab during kharif-2014 (Quintals)

Sl. No.	Variety	PAU	PUNSEED	NSC	Total
1	Pusa-1121	896.94	418	2000	3314.94
2	Basmati-386	6.4	0.0	0.0	6.4
3	PB-2	5.04	0.0	0.0	5.04
4	PB-3	383.84	0.0	0.0	383.84
5	Pusa - 1509	1360.91	463.2	1250	3074.11

Table 6: Basmati rice varieties certified seed sold in Haryana during kharif-2014 (Quintals)

Sl. No.	Source	Pusa- 1121	PB-1	CSR-30	Pusa-1509	Sugandha -5	HBC-19
A	Govt. Agencies	3901.1	0	348.9	1250	0	0
	NSC	2000			1250		0
	HSDC	1901.1		348.9			0
B	Private Agencies*	79339.6	17307	7433	NA	6196	220.4
	Total	83240.7	17307	7781.86	1250	6196	220.4

* Seed processed by HSCCA (Data on sale is not available as on today)

Table 6a: Basmati seed sold in J & K during kharif-2014 (Quintals)

Sl. No.	Source	Basmati- 370	Pusa-1121	CSR-30	Pusa-1509
A	Govt. Agencies	1100	900	0.0	100
B	Private Agencies	400	60	520	0.00
1	Sunstar Seeds	0.0	0.0	200	0.0
2	Sarveshwar Seeds	400	60	320	0.0
	Total	1500	960	520	100

Ground Survey based Rice Acreage

HARYANA

In **Haryana**, the total rice acreage based on field survey has been estimated at 11,31,700 ha in 20 districts. Karnal district has the highest target area under total rice (1,65,000 ha), followed by Kaithal district (1,57,600 ha). Despite of delayed transplanting and deficient rainfall in weeks of July, transplanting is almost near to the targeted area. The district-wise total rice area and rice area transplanted up to 11th August has been given in Table-5 and seed distributed in Table 7.

1. Almost all the districts have received scanty to deficient rainfall during last two months. Out of the total Basmati area, in 84% the farmers have opted for Pusa-1121 and only 16 % has been opted for Pusa-1509, CSR – 30, Pusa Basmati -1.

PUNJAB

1. A total of 28 lakh ha. area has been transplanted this year. Whereas last year 27.5 lakh ha. area was transplanted. Basmati is likely to occupy 7.30 lakh ha.
2. After Pusa-1121, the other variety transplanted in the major area state under

Basmati is Pusa-1509. The ratio between area under the two varieties has been 75:25. In a few areas early panicle initiation in Pusa- 1509 is reported due to over mature seedling transplanting. Which is going to reduce the yield of the variety this year. Much of the area under Rice-potato has been transplanted with Pusa-1509. However, Pusa-1121 is likely to occupy more than 75% area out of total Basmati.

3. The crop health in general is quite satisfactory. There is no specific problem of pest till date except wide spread Bakanae (Foot rot) observations in Pusa-1509.
4. A few of the farmers have uprooted Pusa-1509 and have re-transplanted the fields with Pusa-1121.

The district-wise acreage under total rice and Basmati rice is given in Table-8 and seed through Govt. agencies in Table 6.

UTTAR PRADESH

The delayed and deficient rains during the initial two months, the farmers had no choice other than to transplant over mature Pusa-1509 seedlings, due to which the panicle initiation has taken place. Out of 30 districts sharing Basmati area, only Bijnore



has received normal rainfall and remaining 29 districts received deficient to scanty rainfall during last 8 weeks. The transplanting is completed. The basmati varieties cannot be separated from Sharbati & Sugandha-5 at this stage except Pusa-1509, therefore, the total basmati area includes Sharbati and Sugandha-5 as well. It is observed while interviewing the farmers that almost 20% of the sharbati area last year has been occupied by Pusa-1509.

District wise acreage transplanted rice as on 7th August, 2014 is given Table-9 and Seed Information in Table -4.

UTTARAKHAND

The rainfall was normal during the months of June & July in Hardwar and Nainital, while Dehradun and Udham Singh Nagar have received deficient rain spell. Transplanting has been completed in the state. The district wise acreage & % area transplanted till 7th August is given in Table-10 and Seed distribution in Table 4.

JAMMU & KASHMIR

The rice transplanting in Jammu & Kashmir started late due to late onset of monsoon. The area under rice and Basmati varieties is showing an increase in Jammu as the trade is involved. But the farmers have opted for Pusa-1509 too apart from Pusa-1121 this year in few important blocks of Kathua. Both Jammu Kathua districts have received deficient rainfall during the month of June & July. The estimated total rice & Basmati area in the districts is given in Table 11.

HIMACHAL PRADESH

1. Rice is the second most important cereal, next to maize, in Himachal Pradesh. Rice occupies > 1 lakh ha area, depending upon the start and intensity of rains.
2. Rice is cultivated as irrigated transplanted, rain fed transplanted and rain fed direct sown. Kangra and Mandi are the two major districts, having 70-75% rice area of the state.

The district-wise target for total rice in Himachal Pradesh during Kharif-2014 is given Table-12.



Table 7 : District-wise acreage target under total rice and area transplanted in Haryana during Kharif 2014

Area in '000 ha				
S. No.	District	Total Rice (Basmati + Non- Basmati)	Rice Transplanted as on 11.08.14	% Area Transplanted
1	Ambala	77.0	78.0	101.3
2	Bhiwani	18.0	11.7	65.0
3	Faridabad	10.0	9.2	92.0
4	Fatehabad	82.0	90.0	109.8
5	Gurgaon	3.0	3.0	100.0
6	Hisar	45.0	39.2	87.1
7	Jajjhar	25.0	28.0	112.0
8	Jind	99.0	98.2	99.2
9	Kaithal	151.0	157.6	104.4
10	Karnal	165.0	165.0	100.0
11	Kurukshetra	115.0	115.0	100.0
12	Mewat	5.0	2.5	50.0
13	Palwal	30.0	26.5	88.3
14	Panchkula	8.0	8.5	106.3
15	Panipat	70.0	70.0	100.0
16	Rewari	2.0	0.8	40.0
17	Rohtak	35.0	30.9	88.3
18	Sirsa	60.0	61.6	102.7
19	Sonepat	86.0	70.0	81.4
20	Yamunanagar	64.0	66.0	103.1
Total		1150.0	1131.70	98.41



Table 8: District-wise acreage under total rice and Basmati rice in Punjab during Kharif 2014				
Area in '000 ha				
S. No.	District	Total Rice (Basmati + Non-Basmati)	<i>Traditional</i> and Evolved Basmati	Other Rice (HYVs)
1	Amritsar	186.9	128.0	58.0
2	Barnala	104.0	6.0	98.0
3	Bhatinda	103.0	11.0	92.0
4	Faridkot	103.0	7.0	96.0
5	Fatehgarh Sahib	86.0	15.0	71.0
6	Firozpur +	256.0	112.0	144.0
7	Fazilka			
8	Gurdaspur +	204.0	85.0	119.0
9	Pathankot			
10	Hoshiarpur	72.0	15.0	57.0
11	Jalandhar	159.0	24.0	135.0
12	Kapurthala	115.0	22.0	93.0
13	Ludhiana	255.0	34.0	221.0
14	Mansa	72.0	15.0	57.0
15	Moga	172.0	26.0	146.0
16	Mohali	30.0	4.0	26.0
17	Muktsar	107.0	30.0	77.0
18	Nawanshahar	55.0	8.0	47.0
19	Patiala	234.0	35.0	199.0
20	Ropar	37.0	6.0	31.0
21	Sangrur	270.0	35.0	235.0
22	Tarantaran	174.0	112.0	62.0
Total		2794.9	730.0	2064.0



Table 9: District-wise acreage under total rice & Basmati in Uttar Pradesh during Kharif 2014

Area in '000 ha					
S. No.	District	Target Total Rice	Other Basmati & scented	Pusa-1509	% area
1	Agra	5.2	2.8	1.0	73.1
2	Aligarh	88.3	55.7	10.1	74.5
3	Auraiya	45.5	4.1	0.6	10.3
4	Baghpat	5.9	2.3	1.5	64.4
5	Bareilly	145.2	32.3	3.2	24.4
6	Bijnore	52.1	17.9	3.2	40.5
7	Budaun	62.5	22.8	3.0	41.3
8	Bulandshahr	75.6	59.7	10.3	92.6
9	Etah + Kasganj	36.5	14.8	1.0	43.3
10	Farukhabad	16.3	2.3	0.5	17.2
11	Firozabad	17.2	3.2	0.8	23.3
12	Etawah	51.5	16.9	1.8	36.3
13	Gautam Buddha Nagar	29.6	20.6	2.9	79.4
14	Ghaziabad + Hapur	32.2	20.3	5.0	78.6
15	Hathras	21.3	12.5	2.0	68.1
16	Mathura	48.9	23.2	4.0	55.6
17	Mainpuri	53.1	16.5	0.8	32.6
18	Meerut	21.3	14.1	2.7	78.9
19	Moradabad	78.8	23.4	1.7	31.9
20	J. P. Nagar	23.1	12.7	2.0	63.6
21	Kannauj	16.5	3.1	0.7	23.0
22	Muzaffarnagar + Shamli	37.2	27.9	2.6	82.0
23	Pilibhit	158.0	13.5	0.7	9.0
24	Rampur	130.5	20.5	2.0	17.2
25	Saharanpur	61.0	36.7	5.5	69.2
26	Shahjehanpur	221.2	33.9	1.2	15.9
27	Sambhal	38.2	13.9	1.6	40.6
Total		1572.7	527.6	72.4	42.7



Table 10: District-wise target under total rice and area transplanted in Uttarakhand during Kharif 2014					
					Area '000 ha
S. No.	District	Total Rice	Basmati & other Scented	Pusa-1509	% Area
1	Dehradun	8.5	2.4	0.1	29
2	Haridwar	15.2	8.6	1.3	65
3	Nainital	7.2	2.1	0.3	33
4	Udham Singh Nagar	98.6	5.5	2.0	8
Total		129.5	18.6	3.7	17.2

Table 11: District-wise acreage under total rice in Jammu & Kashmir during Kharif 2014					
					Area '000 ha
S. No.	District	Basmati-370	Pusa-1121	Pusa-1509	Total Rice
1	Jammu	29	1	0	100.0
2	Kathua	10	7	1	37.0
Total		39.0	8.0	1.0	137.0

Table 12: Acreage under total rice in Kangra, Himachal Pradesh during Kharif 2014		
		Area '000 ha
S. No.	District	Total Rice
1	Kangra	59.00
Total		59.00