

DIMENSIONS OF BASMATI RICE IN UTTAR PRADESH & UTTRANCHAL

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ABSTRACT

A study on dimensions of basmati rice cultivation in 13 districts of Agri - Export Zone (AEZ) of Uttar Pradesh and 4 districts of Uttranchal was conducted for three consecutive years (2003 to 2005). The study covered 76 blocks and 275 farmers were interviewed in each year. Study covered traditional varieties of basmati rice like Pakistani basmati, B.C. 370, T-3 and Taraori cultivated only in few pockets of AEZ & selected districts of Uttranchal. Non-traditional varieties like P.B.-1 covered 85-90 % of the area under basmati rice in the AEZ of Uttar Pradesh. Non-traditional varieties have higher productivity and given higher profit to the farmer inspite of lower price and farmers are increasing area under non-traditional varieties of basmati rice. The promotional efforts of government have been very limited and farmers expected for minimum support price (MSP), purchase guarantee and distribution of good quality seed from department of agriculture (DOA). Private companies exporting Basmati rice purchase the produce at lower price. The farmers desire government interventions for proper organisation of contract farming in the zone.

Key words : Basmati Rice; Agri -Export Zone;

INTRODUCTION

In Uttar Pradesh and Uttranchal there are number of aromatic Rice varieties acclimatized in different agro ecological conditions. Aromatic rice varieties like *Badshah Pasand* (Raebareli), *Kala namak* (Basti & Gorakhpur), *Ram Bhog* (Eastern U.P.) and *Vishnu Parag* (Kanpur & Central U.P.) are some of the traditional aromatic rice varieties preferred for local consumption in different parts of Uttar Pradesh. Basmati rice is cultivated in north west area especially in Dehradun, Haridwar, Nanital & Udham Singh Nagar of Uttranchal and Saharanpur, Muzaffarnagar and five districts of Meerut division in western part of Uttar Pradesh Moradabad, Rampur, Bijnor, Bareilly, Badaun, Pilibhit & Shahjahanpur are also important districts growing recently evolved varieties of basmati rice. Analyzing the importance of basmati rice in the farm economy and also in its export as an exchange-earning commodity, U.P. Govt. organised an Agri - Export - Zone for basmati rice promotion in the north-west districts of U.P. Uttranchal government encouraged by AEZ of Uttar Pradesh also promoted cultivation of basmati rice in the plain & Tarai zone of the state.

METHODOLOGY

Agri - Export zone of Uttar Pradesh was selected for the study in the year 2003 and 13 districts out of 14 districts were included. Gautambudh Nagar all though falling in AEZ of basmati rice was not included because of its small area in basmati rice. Dehradun, Haridwar, Udamsingh Nagar and Nainital districts were also included in the study. The following table gives the details of the districts:

In each district 3-4 prominent blocks, growing basmati rice were selected for detailed study and a large number of basmati farmers were purposively interviewed on different parameters of study.

Table 1. Number of districts selected for the study

S.No.	State	Names of the districts
1.	Uttar Pradesh	Saharanpur, Muzaffarnagar, Meerut, Bagpat, Gaziabad, Bulandshaher, Mooradabad, Rampur, Bijnor, Barailly, Pilibhit, Badaun & Shahjahanpur.
2.	Uttranchal	Deheradun, Udamsingh Nagar, Haridwar and Nainital.

RESULTS AND DISCUSSION :

Findings & discussions of the study have been arranged in seven segments covering acreage, productivity, disease & pest surveillance, technological gaps, marketing issues, variety wise productivity (q/ha) and perception of farmers.

(i) *Acreage* : The total acreage of basmati rice in 13 districts of Uttar Pradesh was 2.64 lakh ha. in 2003, which reduced to 1.93 lakh ha. in 2004 and increased to 2.45 lakh ha. in 2005. The decrease in area in 2004 is attributed to drought conditions and lashing rains in the month of Oct. 2004. The drought conditions decreased the area under basmati rice and lashing rains created lodging and reduced the productivity. Area under basmati rice in Udamsingh Nagar of Uttranchal has reduced drastically due to misusing area of Sarbati rice from basmati rice in 2003.

(ii) *Productivity* : The basmati rice varieties have been classified into two groups i.e. traditional and non-traditional. Traditional varieties included BC 370, Pakistani basmati, T-3 and Taraori etc. cultivated in Uttar Pradesh and Uttranchal and non-traditional basmati rice varieties are newly evolved varieties like P B-1, Pusa Sugandha-2 & 3 and Pusa- 1121. Under nontraditional varieties, only PB-1 is approved for export. The productivity of these varieties is given in the following Table 3.

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Table 2. District wise acreage under basmati rice (ooo' ha). in agri-export zone of Uttar Pradesh & Uttranchal in different years.

State/District	Area Under basmati rice (000'ha)		
	2003	2004	2005
<i>Uttar Pradesh</i>			
Ghaziabad	6.80	8.00	12.0
Bulandshahar	24.41	11.76	23.5
Baghat	1.67	2.09	2.0
Meerut	5.49	5.20	8.4
Saharanpur	36.90	19.76	20.2
Muzaffarnagar	15.10	8.15	15.2
Muradabad & J.P. Nagar	39.50	26.30	32.5
Bijnor	20.00	16.00	21.0
Rampur	40.00	8.50	11.2
Bareilly	40.00	31.98	35.0
Shahjahanpur	3.00	23.00	31.0
Pilibhit	2.00	14.00	13.0
Badaun	30.00	16.00	20.0
Total	264.87	193.7	245.0
<i>Uttranchal</i>			
Dehradun	0.94	0.60	2.0
Haridwar	3.33	2.50	2.5
Udham Singh Nagar	40.0	5.85	4.5
Nainital	0.25	0.83	1.0
Total	44.53	9.81	9.0
Grand Total	309.40	203.51	254.00

Table 3. Variety wise productivity of traditional & non-traditional basmati rice.

S.No.	Variety	Productivity (Tons/ha)
A.	Traditional	
1.	B. C. - 370	2.0 - 3.0
2.	Pakistani Basmati	2.0 - 3.0
3.	T - 3	2.0 - 3.0
4.	Taraori	2.0 - 3.0
B.	Non - traditional	
1.	Pusa basmati - 1	3.5 - 4.0
2.	Pusa Sugandha - 2 & 3	3.5 - 4.0
3.	Pusa - 1121	3.5 - 4.0

Productivity of non-traditional varieties ranged between 3.5 - 4.0 tons/ha. and productivity of traditional varieties ranged between 2.0 - 3.0 tons/ha.

(iii) *Disease and Pest Surveillance*: The disease and pest infestation was also recorded and results are given in Table 4.

Table 4. Intensity of disease & pests in basmati rice in agri-export zone of Uttar Pradesh & Uttranchal.

S. No.	Intensity	No. of districts	Disease/pest identify
A.	Disease		
	Non Significant	14	Blast
	Moderate	03	Sheath blight & Sheath rot
B.	Pest		
	Below Economic Threshold Level (ETL)	17	Leaf folder, Stem borer, Hispa & Hoppers

It is evident from Table - 4 that blast has been observed in all the districts at non-significant level, however sheath blight and sheath rot was found in moderate intensity in Bulandshahar, Shaharanpur & M. Nagar. Infestation of pest in all the districts was below ETL, however stem borer, leaf folder, Hispa & Hoppers were recorded in few districts of the study.

(iv) *Profitability*: The average price of traditional and non-traditional varieties of basmati rice were also recorded and are given in the Table-5

Table 5. Estimated average price of traditional and non-traditional varieties of Basmati rice in 17 districts in Uttar Pradesh & Uttranchal (Rs./q.)

State/Districts	Average price Rs./qt.	
	Non-Traditional	Traditional
Uttar Pradesh		
1-Saharanpur	800-1000	1100-1300
2-Muzaffarnagar	800-850	1100-1300
3-Meerut	900-1100	1400-1600
4-Bagpat	800-1000	1200-1400
5-Bulandshahar	900-1100	1400-1600
6-Ghazibad	900-1100	1300-1400
7-Bareilly	750-950	1100-1300
8-Badaun	800-1000	1200-1400
9-Sahajahanpur	800-1000	1100-1300
10-Pilibhit	700-900	1100-1400
11-Moradabad & J.P. Nagar	900-1000	1100-1300
12-Bijnor	900-1000	1200-1400
13-Rampur	900-1000	1100-1300
<i>Uttranchal</i>		
14-Udamsingh Nagar	850-950	1200-1400
15-Deharadun	-	1400-1600
16-Haridwar	800-900	1100-1300
17-Nainital	900-1000	1100-1300

The average price of traditional varieties as well as non-traditional varieties differed from district to district. The price of traditional varieties has always been higher by 25-30 per cent than the price of non-traditional varieties. It has been experienced that price is always dictated by the market & trade and basmati rice growers has no voice in the fixation of price however, the supply and quality of basmati rice to some extent, influences the price.

The average cost of cultivation of basmati rice comes to approximately Rs. 5800 per acre against the cost of cultivation of local varieties of rice ranging from 5000 to 6000. However, the gross income from basmati rice due to its higher price comes to Rs. 14400 against the gross income from local varieties of rice ranging Rs. 12000 to 13000. Thus, basmati rice cultivation is more profitable than the cultivation of local varieties of rice. This is the major reason for increasing area of basmati rice in western Uttar Pradesh.

(v) *Technological Gaps* : Technological gaps between the recommended and prevalent practices were observed. The significant technological gaps were observed in the transplanting of seedlings per hill. Farmers were planting one seedling per hill against two seedlings per hill recommended. Nitrogen and Phosphorus fertilizers were applied but more

than 90% basmati rice growers did not apply potash. Weed control was done by use of butachlore and disease & pests were also kept below ETL by most of the basmati rice growers.

(vi) *Marketing Issues:* Contract farming - In real term it is not operative any where in the basmati export zone. Contract marketing is also not successful, but in some districts like M. Nagar & Haridwar some companies like Sun Star from Amritsar & L.T. from Sonipat are purchasing the basmati rice from growers under buy-back guarantee.

(vii) *Farmers' Perceptions:* Basmati rice is considered more profitable than the local varieties of same quality and duration. Farmers expect at least 25% higher price at the present level of price of Basmati rice. Basmati rice growers expect minimum support price (M.S.P.) and purchase guarantee. Contract farming in Basmati rice has not been implemented in its true term by some of the private companies. Private companies purchase Basmati rice largely through trade and not directly from farmers with the result farmers profit is reduced. In Muzaffarnagar, Haridwar, Bulandshahar, Ghaziabad, G.B. Nagar and Aligarh, some private companies like KRBL from G.B. Nagar, Sunstar from Amritsar and LT from Sonipath are purchasing Basmati rice from some growers and traders. Govt. efforts in distribution of seed as well as in motivation of farmers have been very limited. Dept. of Agriculture, U.P. is not distributing seeds of traditional varieties of basmati rice at all. Except KRBL, no other private Basmati rice export company is fully involved in the extension activities for promotion of seed production, extension and purchase. Govt. of Uttar Pradesh has no database for acreage of Basmati rice in Uttar Pradesh, nor efforts are visible in this direction. Extension of Basmati rice cultivation has not much influenced the cropping pattern. It is just replacement of local rice mid duration varieties by basmati rice. However, in district Bulandshahar Basmati rice has substituted maize in some areas. Some progressive Basmati rice growers have introduced summer Chari for fodder, vegetables and maize for cobs in the Rice-Wheat rotation.

The important diseases in the Basmati rice have been blast and blight (sheath) but below ETL. Khaira has also been noticed. The important pests infesting Basmati rice are shoot borers, Hispa, hoppers and Gandhi but all below ETL. Farmers are fully conscious of diseases and pests and adopt effective chemical control measures. Weeds are controlled by use of Butachlor by majority of Basmati rice growers. N. P. fertilizer use is adequate but no use of K₂O. Plant population is low due to low seed rate in nursery and planting only one seedling per hill. Major constraints in increasing area under Basmati rice are non-availability of good quality seeds specifically of traditional varieties and Government's lack of adequate efforts in this direction. KRBL has done excellent work in extension of acreage under Basmati rice PB-1121 in western districts by initiating seeds production, extension and purchase programme. Such efforts in some districts need to be launched by other companies engaged in Basmati rice business. Area under traditional varieties of Basmati rice (Pakistani Basmati, Taraori, T-3, BC-370) can be increased under better conditions of availability of seeds and guaranteed price and purchase memorandum.

CONCLUSION

Basmati rice cultivation in 13 districts of AEZ of Uttar Pradesh & 4 districts of Uttranchal has been well adopted by the farm community and it is profitable over local rice varieties of same duration. The contract farming in basmati rice has not been fully operative in the AEZ. Farmers perceive the price of basmati rice quite low in comparison to the export price and the profit earned by the trade. There is no minimum support price of basmati rice, hence the govt. equates the price of basmati rice with the fine non-aromatic varieties, which is not logical. There are certain constraints like non-availability of good quality seed of basmati rice especially of traditional varieties of basmati rice and adequate promotional activities. It is expected the future of basmati rice cultivation is very bright in view of its export demand.

