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Short Communication

Peformance of Selected Ber Cultivars Under Rainfed Conditions

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Ber is one of the most important fruit crops grown in arid and semi-arid regions. It is a remunerative crop even for marginal soils. Many *ber* cultivars have been found suitable for cultivation in Haryana. The cultivars Kaithli, Gola, Mudia Murhara and Umran are preferred because of high yield potential, large, attractive, good quality fruits and better marketing prospects. Therefore, comparative performance of these *ber* cultivars under rainfed conditions at Bawal was studied.

Present investigations were carried out on Experimental Orchard, Haryana Agricultural University, Regional Research Station, Bawal. Thirteen year old uniformly growing trees were selected. A randomised block design with three replications was followed and observations on growth, yield and fruit quality parameters were recorded. The annual mean rainfall of the region is 300 mm spread over May to October. The upper 30 cm layer of the soil is sandy.

The tree height and spread was maximum in cultivar Kaithli and it was minimum in Mudia Murhara (Table 1). Number of pickings were maximum in Kaithli and minimum in Umran, which could be due to the difference in crop-load. Umran produced heaviest fruits and the fruit weight was lowest in Mudia Murhara in both the years. Similar results have been reported by Dhingra *et al.* (1973), Sharma & Bawa (1977) and Randhawa & Biswas (1966) under irrigated conditions. Cultivar Kaithli produced maximum fruit yield per tree and was followed by Gola in 1990-91 and Mudia Murhara in 1991-92 which was due to difference in the availability of moisture during the period. Under very low moisture conditions cultivars Mudia Murhara performed better than Gola. The yield was significantly low during 1991-92 due to poor availability of soil moisture.

There were significant differences in fruit quality (Table 2). The total soluble solids in cultivar Gola were maximum and significantly higher than all the other cultivars in both the years. These observations are in close conformity with those of Dhingra *et al.* (1973) and Singh & Khanna (1968). Titratable acidity was lowest in Mudia Murhara which was at par with Kaithli and maximum acidity was recorded in cultivar Gola in both the years. Similar results have also been reported by Dhingra *et al.* (1973) under irrigated conditions. Pulp stone ratio was higher

Table 1 *Growth and yield of ber cultivars at Bawal*

Cultivar	Tree height (m)		Tree Spread (m)				Fruit wt. (g fruit^{-1})		Yield (kg plant^{-1})	
	1990-91	1991-92	East-West		North-South		1990-91	1991-92	1990-91	1991-92
			1990-91	1991-92	1990-91	1991-92				
Gola	3.6	3.5	5.4	4.7	5.7	4.8	20.0	17.3	69.1	42.7
Kaithli	4.3	4.3	6.4	6.0	6.8	5.9	20.6	19.6	119.9	88.3
Umran	3.6	3.4	4.3	4.0	5.2	5.1	22.5	20.6	46.6	38.6
Mudia Murhara	3.4	3.3	4.1	4.0	4.2	4.1	19.6	16.9	65.6	51.5
CD 5%	0.3	0.3	0.04	0.4	0.4	0.5	2.6	2.8	13.3	12.7

Table 2 *Fruit quality analysis of ber cultivars*

Cultivar	T.S.S. (%)		Acidity (%)		Pulp stone ratio	
	1990-91	1991-92	1990-91	1991-92	1990-91	1991-92
Gola	19.40	17.60	2.236	0.212	18.90	17.30
Kaithli	15.20	15.30	0.189	0.180	17.90	16.20
Umran	17.00	16.80	0.240	0.233	22.05	19.00
Mudia Murhara	13.75	13.20	0.161	0.172	16.22	14.40
CD 5%	1.53	1.98	NS	NS	2.44	2.05

in Umran and lowest in Mudia Murhara in both the years. Dhingra *et al.* (1973) and Sharma & Bawa (1977) also reported similar results.

On the basis of present study cultivar Gola could be classified as an early cultivar because it ripened between 2nd February and 17th March with peak time of harvest on 22nd February, Kaithli a mid-season cultivar because it ripened from 1st March to 25th March, Mudia Murhara a mid-late cultivar on the basis of ripening from 3rd March to 23rd March and Umran a late cultivar which ripened between 5th March to 28th March with a peak harvest time on 20th March.

References

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