

## Performance of Ashgourd genotype under Hyderabad conditions of Andhra Pradesh

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Ashgourd [*Benincasa hispida* (Thumb) Cogn.] is an important warm vegetable grown for its fruit used in confectionery and ayurvedic medicinal preparations (Indira and Peter, 1987). Among the cucurbitaceous vegetable, where as ripe fruit is boiled in sugar to make a confectionery known as petha (Joydip Mandal *et. al.* 2002). In spite of its economic importance, very little attempts has been made so far to improve the crop production. The genotypes under cultivation are nondescript ones. Poor genetic stock, inadequate and improper management practices and incidence of many parasitic diseases are main constraints for low yield. To overcome this, development of early maturing and high yielding varieties/hybrid is most urgent need for the farmers. Hence, this experiment was conducted to identify the suitable varieties to this area. Since, there is a continuous demand for new high yielding varieties, genotypes developed at various centers under All India Coordinated Research Project (AICRP) and at vegetable Breeding Station, Agricultural Research Institute, Rajendranagar, Hyderabad were evaluated to identify the suitable genotypes for this area.

The experiment was conducted at Vegetable Breeding Station, Agricultural Research Institute, Rajendranagar, Hyderabad during Kharif 2005-2007 in clay loam soil to evaluate the material developed at ICAR stations, State Agricultural Universities for their suitability in Andhra Pradesh. The agro climate of Hyderabad is characterized by minimum temperature 20.3°C, maximum temperature 32.6°C, average rainfall 733 mm and humidity of 63.3%. The experiment was laid out in Randomized Block Design with 4 replications having plot of 5 m x 2.5 m with adopted spacing 5 m x 0.5 m. observations were recorded on vine growth, number of lateral/vine, node number at which first female flowers appeared, number of fruits /vine, average fruit weight, fruit length, diameter and yield per hectare. The crop was raised as per the recommended cultivation practices during the season. The data was statistically analyzed as described by Panse and Sukhatme (1987).

**Table 1.** Preliminary information on five genotypes in Ashgourd under study.

S.No	Name of the Entry	Source
1	HYBH-24	ANGRAU, Hyderabad
2	HYBH-24	ANGRAU, Hyderabad
3	BH-21	Vellanikkara
4	Pusa Ujjawal	IARI
5	Shakti	ANGRAU, Hyderabad

The preliminary information on five genotypes of Ashgourd under study is given in table 1. The results revealed that the mean node number to first female flower appeared ranged from 9.8 to 11.5 (Table-2). It was found that the appearance of first female flower was on the lowest node in HYBH-25 (9.8) followed by local Check Shakti (10.2). The trait such as days to appearance of first female flowering and node number at which first female flower appears are most useful parameters indicating earliness of genotype (Samadia, 2002). Number of female flowers and fruit per plant are the major deciding factors to assess the yield potential of genotypes. The genotypes with more number of female flowers at earlier nodes along with early fruit setting and picking should result in higher and early production. In the present study, the number of fruits/vine ranged from 1.0 to 1.4. The check Shakti recorded significantly highest fruit number than all the genotypes under study. The average fruit weight at maturity stage varied from number than all the genotype under study. The average fruit weight at maturity stage varied from 2.7 kg to 4.4 kg. Genotype HYBH-25 recorded significantly highest average fruit weight (4.4 kg) followed by HYBH-24 (4.2 kg) than other genotypes. In Ashgourd medium sized fruits are preferred for domestic purpose than large sized fruits. Marketable yield ranged from 3.2 kg to 5.2 kg/vine. Among the genotypes, HYBH-24 recorded significantly highest fruit yield/vine (5.2 kg) which is on par with Shakti (4.6 kg) and HYBH-25 (4.4 kg). Low yield was observed in Bh-21 (3.2 kg) per vine. Similar results were reported at Indian Institute of Vegetable Research, Varanasi (Anonymous 2006-2007). Performance of growth and plant vigour revealed that there was no significant difference in terms of vine length and number of laterals/vine.

These results suggested that genotypes HYBH-24 and HYBH-25 developed at Vegetable Breeding Station,

**Table 2.** Morphometric and yield characters of ash gourd genotypes.

Genotypes	Vine Length (m)	No. of laterals/vine	Node at 1 <sup>st</sup> female flower	Average fruit wt. (kg)	No. of fruits /vine	Fruit length (cm)	Fruit diameter (cm)	Yield kg/vine	Yield t/ha
HYBH-24	6.0	2.3	11.5	4.5	1.5	56.5	60.5	6.5	25.9
HYBH-25	5.9	2.3	9.8	4.2	1.2	58.7	61.9	4.8	19.1
Pusa Ujjwal	6.6	2.2	10.6	3.3	1.1	53.2	50.7	3.5	14.1
Bh-21	6.4	2.3	10.5	3.0	1.3	56.4	51.5	3.8	15.0
Shakti(c)	5.6	2.3	10.2	3.3	1.5	54.0	55.9	5.1	20.2
SFm±	0.2	0.1	0.3	0.2	0.1	2.7	2.9	0.4	1.6
C.D. at 5%	0.6	NS	0.9	0.6	0.2	NS	NS	1.2	4.9

Agricultural Research Institute, Rajendranagar, Hyderabad can be grown in and around Hyderabad, Andhra Pradesh as they are performed better compared to other genotypes.

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