Varietal Evaluation in Bottle Gourd(*Lagenariasiceraria*)

Comment [SC1]: Title is not appropriate.

ABSTRACT

The experiment was conducted in Horticulture department field in SHUATS ,under the agroclimatic zone of prayagraj in Uttar Pradesh. The experiment is done on bottle gourd entitle " varietal evaluation in bottle gourd" having 12 variety 2021/BOGVAR -1 TO BOGVAR-12 ,MAHASHAKTI,andfaizabadhi long with the combination of treatments. The main findings wereof vine length the maximum growth is seen in MAHASHAKTI and minimum was observed in the 2021/BOGVAR-03, In terms of nodes the maximum growth is seen in 2021/BOGVAR-06 and minimum was observed in the 2021/BOGVAR-10,In terms of fruit weight the maximum weight was seen in 2021/BOGVAR-07(1200g) and the minimum weight was observed in 2021/BOGVAR-02(492.5g),In terms of fruit yield per ha the maximum yield was seen in 2021/BOGVAR-07, 2021/BOGVAR-08 and the minimum weight was observed in 2021/BOGVAR-02 , 2021/BOGVAR-03.

Comment [SC2]: Please check the grammar and abstract should be informative.

KEYWORDS; Varietal, fruit weight , vine length, fruit yield ,bottle gourd.

INTRODUCTION.

Bottle gourd (*Lagenearíasiceraria*) or most popularly knowns as 'lauki', it is belonging to family Cucurbitaceae having chromosome number 2n- 22.

It one of the most important vegetables which is grown in almost every state across India. Moreover, its one of the most profitable and demanding vegetables in India markets. Many farmers failed to get good yield and profit from bottle gourd cultivation due to traditional method.

It has a good amount of vitamins and minerals. Its fruit contains 95.54%moisture, vitamin C (10.1 g), vitamin A (16 IU), thiamine (0.029 g), riboflavin (0.022 g), niacin (0.320 g), carbohydrates (3.39 g), fats (0.02 g) and potassium (150 mg)/100g (USDA, 2018)

It is ideal for human food or for incorporation into livestock feed (Ogunbusola et al., 2010). It is easily digestible and is therefore recommended during convalescence. The dietary fiber present in the bottle gourd makes it a very useful vegetable in preventing digestive disorders such as constipation. A positive correlation has been found between fiber consumption and reduction.

The importance of vegetables in human nutrition is well known. Vegetables are rich and comparatively cheaper source of vitamins and minerals, which constitute an important component in human nutrition.

Besides the nutritional value of vegetables, increased interest is being bestowed on the functional and therapeutic benefits of vegetables in human health. Vegetable consumption in sufficient quantities provides taste, palatability and increases appetite and provides fair amount of fibers.

Cucurbit vegetables are fair source of thiamine and riboflavin. Bottle gourd is the leading vegetable crop of India, the higher yield and maximum returns make it the most preferred vegetable crop of Indian farmers

Comment [SC3]: Justify the introduction as per title and the objectives of the research.

MATERIALS AND METHODS

The present investigation entitled as "Varietal Evaluation in Bottle gourd (*Lagenariasiceraria*) was carried out Dept. of Horticulture, Naini, SHUATS, Prayagraj.The experiment is conducted in randomized block design having 12 varieties .Spacing was 150cm *60cm .total no of plots is 36 plants per treatment was 12 plants /treatment .length of and width of irrigation and subirrigation is 1.0m and 0.5m.The experiment was conducted during the season zaid.

Comment [SC4]: It is not informative. Where is soil data?
What nutrients have been provided with how many doses?

RESULT AND DISCUSSION

Comment [SC5]: Not satisfied with the result and discussion. More discussion needed.

1.EMERGENCE OF MALE FLOWER

In terms of days to emergence first male flowers the maximum growth seen in FAIZABADI LONG (S-1) and minimum was observed in 2021/BOGVAR-02 .

Table 1 . Days to emergence first Male flowers in Bottle gourd

Comment [SC6]: Merge the all the table presented.

TREATMENT	TREATMENT COMBINATION	Daystofirstmaleflowerемergence
T1	2021/BOGVAR-1	41.72
T2	2021/BOGVAR-2	40.90
T3	2021/BOGVAR-3	42.77
T4	2021/BOGVAR-4	43.03
T5	2021/BOGVAR-5	43.12
T6	2021/BOGVAR-6	43.47
T7	2021/BOGVAR-7	43.99
T8	2021/BOGVAR-8	45.23
T9	2021/BOGVAR-9	46.85
T10	2021/BOGVAR-10	48.67
T11	Mahashakti	49.93
T12	Faizabadi long S-1	53.74
F-Test		S
S. Ed.		1.47
CD at 5%		4.32
CV%		5.6

2.EMERGENCE OF FEMALE FLOWER

In terms of days to emergence first female flowers the maximum growth seen in 2021/BOGVAR-07 and minimum was observed in 2021/BOGVAR-01

Table 2. Days to emergence first Female flowers in Bottle gourd

TREATMENT	TREATMENT COMBINATION	Daystofirst femaleflowerемergence
T1	2021/BOGVAR-1	46.78
T2	2021/BOGVAR-2	53.13
T3	2021/BOGVAR-3	53.33
T4	2021/BOGVAR-4	53.88
T5	2021/BOGVAR-5	53.90
T6	2021/BOGVAR-6	54.77
T7	2021/BOGVAR-7	54.80
T8	2021/BOGVAR-8	55.97
T9	2021/BOGVAR-9	58.76
T10	2021/BOGVAR-10	59.86
T11	Mahashakti	61.98
T12	Faizabadi long S-1	64.67
F-Test		S
S. Ed.		1.64
CD at 5%		4.80
CV%		5.1

3.VINE LENGTH

- In terms of vine length the maximum growth is seen in MAHASHAKTI and minimum was observed in the 2021/BOGVAR-03.

- **TABLE 3 Vine length at harvesting**

S.no.	Variety symbol	Name of the Variety	Vine length(m)
1	V1	2021/BOGVAR-1	3.81
2	V2	2021/BOGVAR-2	2.91
3	V3	2021/BOGVAR-3	3.76
4	V4	2021/BOGVAR-4	3.72
5	V5	2021/BOGVAR-5	3.06
6	V6	2021/BOGVAR-6	3.34
7	V7	2021/BOGVAR-7	4.00
8	V8	2021/BOGVAR-8	3.71
9	V9	2021/BOGVAR-9	2.66
10	V10	2021/BOGVAR-10	2.49
11	V11	MAHASHAKTI	5.32
12	V12	FAIZABADI LONG	3.75
		t value	2.07
		SEm±	0.20
		CD or LSD	1.94
		Test of significance (p=0.05)	S
		Cv%	6.1

4.FRUIT LENGTH

In the terms of fruit length the maximum length was seen in 2021/BOGVAR-09 (52cm) and the minimum length was observed in 2021/BOGVAR-01 (28cm

TABLE 4 FRUIT LENGTH OF BOTTLE GOURD(CM)

S.no.	Variety symbol	Name of the Variety	Fruit Length in cm
1	V1	2021/BOGVAR-1	26.1
2	V2	2021/BOGVAR-2	25.86
3	V3	2021/BOGVAR-3	18.0
4	V4	2021/BOGVAR-4	23.26
5	V5	2021/BOGVAR-5	15.8
6	V6	2021/BOGVAR-6	27.96
7	V7	2021/BOGVAR-7	23.5
8	V8	2021/BOGVAR-8	24.53
9	V9	2021/BOGVAR-9	28.53
10	V10	2021/BOGVAR-10	23.6
11	V11	MAHASHAKTI	26.23
12	V12	FAIZABADI LONG	27.9
		t value	2.07
		SEm±	1.28
		CD or LSD	3.76
		Test of significance (p=0.05)	S
		Cv%	6.1

5.FRUIT WEIGHT

- In terms of fruit weight the maximum weight was seen in 2021/BOGVAR-07(1200g) and the minimum weight was observed in 2021/BOGVAR-02(492.5g).

TABLE 5 FRUIT WEIGHT OF BOTTLE GOURD

S.no.	Variety symbol	Name of the Variety	Average Fruit weight
1	V1	2021/BOGVAR-1	633.80
2	V2	2021/BOGVAR-2	726.2
3	V3	2021/BOGVAR-3	420.40
4	V4	2021/BOGVAR-4	470..43
5	V5	2021/BOGVAR-5	654.81
6	V6	2021/BOGVAR-6	614.40
7	V7	2021/BOGVAR-7	892.87
8	V8	2021/BOGVAR-8	.814.03
9	V9	2021/BOGVAR-9	707.36
10	V10	2021/BOGVAR-10	552.03
11	V11	MAHASHAKTI	569.5
12	V12	FAIZABADI LONG	610.2
		t value	2.07
		SEm±	22.73
		CD or LSD	1.96
		Test of significance (p=0.05)	S

		Cv%	13.7

6 .FRUIT YIELD

In terms of fruit yield per ha the maximum yield was seen in 2021/BOGVAR-07, 2021/BOGVAR-08 and the minimum weight was observed in 2021/BOGVAR-02

TABLE 6 .FRUIT YIELD OF BOTTLE GOURD

S.no.	Variety symbol	Name of the Variety	Fruit yield/ plot (ton)
1	V1	2021/BOGVAR-1	45.83
2	V2	2021/BOGVAR-2	58.08
3	V3	2021/BOGVAR-3	66.35
4	V4	2021/BOGVAR-4	77.75
5	V5	2021/BOGVAR-5	87.89
6	V6	2021/BOGVAR-6	98.85
7	V7	2021/BOGVAR-7	110.77
8	V8	2021/BOGVAR-8	122.03
9	V9	2021/BOGVAR-9	127.15
10	V10	2021/BOGVAR-10	136.96
11	V11	MAHASHAKTI	149.52
12	V12	FAIZABADI LONG	160.32
		t value	2.07
		SEm±	8.89
			26.08

		CD or LSD	S
		Test of significance (p=0.05)	14.9
		Cv%	6.1

CONCLUSION

The result from the investigation ''Varietal evaluation in Bottle gourd (LagenariaSiceraria) under Prayagrajagroclimatic conditions'' concluded that Bottle gourd variety 2021/BOGVAR-07 and FAIZABADI-LONG s-1 was recorded with maximum no of fruits , fruit weight , average fruit yield ,fruit yield per /ha.Powdery and downy mildew were observed in the present experiment , however few insects viz., red bottle guard beetles, fruit fly and aphids were observed during last harvesting of Bottle Gourd.

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