

## Evaluation of Bottle Gourd [*Lagenaria siceraria* (Molina) Standl.] Hybrids for Fruit Yield and Economics in Prayagraj Agro-Climatic Conditions

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**ABSTRACT:** A field experiment was conducted during the period from February 13 to May 15 in the year 2020 at Vegetable Research Farm, Department of Horticulture, Sam Higginbottom University of Agriculture Technology and Sciences, Allahabad, (U.P.). The experiment was comprised of 17 hybrids of bottle gourd are studied and replicated thrice in a Randomized Block Design in 7.5 × 3 m<sup>2</sup> plot size. It was observed that the hybrid BG-HYB-18-2 gives best performance in terms of growth, yield and economics of the experiment. The minimum days required to first appearance of male flower (47.33). The minimum days required to first appearance of female flower (56.66). The minimum number of nodes to first appearance of male flower appearance (9.22). The minimum number of nodes to first appearance of female flower appearance (11.33). The maximum number of branches vine<sup>-1</sup> was recorded (17.88), the maximum vine length was recorded (5.64 m). The maximum fruit weight was recorded (829.44 gm), the maximum length of fruit was recorded (36.88 cm), the maximum fruit diameter was recorded (17.44 cm), the earliest days for first fruit harvest was recorded (67.11 days), the maximum number of fruits vine<sup>-1</sup> was recorded (9.77). The maximum yield plant<sup>-1</sup> was recorded (8.10 kg), the maximum yield hectare<sup>-1</sup> was recorded (360.15 quintal). Among the different hybrids the highest benefit cost ratio was recorded (1:3.50) followed by (1:3.22).

**Keywords:** Growth, Yield, Bottle gourd.

### INTRODUCTION

Bottle gourd [*Lagenaria siceraria* (Mol.) Standl.] belongs to the Cucurbitaceae family with chromosome number 2n = 22, originated from Southern Africa. Bottle gourd is commonly known as Lauki and white flowered gourd. It is one of the important cucurbitaceous vegetable crop cultivated in India. The names “lagenaria” and “siceraria” are derived from Latin words “lagena” for bottle and “sicera” for drinking utensil (Deepti, 2013).

It is a diploid, monoecious, climbing or prostrate plant, solitary flowers and it is cross pollinated due to its monoecious nature, the plants bear more male flowers and less female flowers separately on the same plant (Sahu, 2016). Major pollinators in bottle gourd are bees. Bottle gourd plants are day neutral in nature and it is grown as a summer and rainy season crop. It is widely cultivated in tropics and subtropics, mostly grown for its fruit, which are different size and shape viz; globular, cylindrical, bottle-shaped or club-shaped. The fruits are fleshy and multi seeded and also fruits are either sweet or bitter in taste. The sweet fruits are edible and also useful for medicinal purposes. Economically it is an important crop which is cultivated worldwide for vegetable purpose.

There are numerous health benefits reported in bottle

gourd including its anti-cancerous, general tonic, cardio protective, diuretic, aphrodisiac and also antidote to certain poisons and scorpion stings, alternative purgative and cooling effects (Badmanaban and Patel, 2010). Bottle gourds are known to lower cholesterol, triglyceride, low density lipoproteins, pain and inflammation and free radicals. The fruits are used for variety of purposes, tender fruits used as vegetable and for preparing sweet dishes, rayta and pickle.

It can also be used to cure pain, ulcers and fever and is used for pectoral cough, asthma and other bronchial disorders using prepared syrup from the tender fruits (Upananlawar and Balaraman, 2010).

The total area under bottle gourd in India is 116939 ha and total production is 1428296 tonnes and productivity being 12.21 t ha. Productivity of bottle gourd is very low which needs immediate attention to increase (Indian Horticulture Database, 2019). Bottle gourd is cultivated on a large scale in our country that produces a lower yield compared to many exotic varieties. Several factors are responsible for this lower yield such as biotic and abiotic stresses and loss of yield potential of Louki variety with the passage of time. Lack of high yielding varieties is one of the most important factors that limit bottle gourd productivity. All the cultivars cannot be grown successfully in each region. Some cultivars are successfully adapted to a region while others show poor

performance in the same region. Therefore, very high yielding exotic varieties need careful investigation before growing on a large scale for lack of knowledge of their adaptation with local conditions.

At present, urgent need of the farmers is to develop early maturing and high yielding variety/hybrid. Preliminary identification of early maturing hybrids can be done based on characters like days to opening of female flowers, node number to first female flowering and days to fruit picking. Collection and evaluation of hybrids is a pre-requisite for their utilization and detailed evaluation determines the potential of an accession in specific crop improvement program. Therefore, a trial for characterization and evaluation of presently available bottle gourd hybrid was carried out in order to identify the potential cultivar for different horticultural characters.

## MATERIALS AND METHODS

A field experiment was conducted to study the "Evaluation of Bottle Gourd (*Lagenaria siceraria*) Hybrids for Fruit Yield And Quality Traits In Prayagraj

Agro-Climatic Conditions" was conducted during period from February 13 to May 15 to evaluate the performance of bottle gourd Hybrids in the Vegetable Research Farm, Department of Horticulture, Naini Agricultural Institute, Sam Higginbottom University of Agriculture, Technology and Sciences, Prayagraj which is located at an elevation of 78 meters' above sea level at 25.87° North latitude and 81.15° East longitude. The experimental soil contained 0.72% organic carbon, 114.8 kg ha<sup>-1</sup> nitrogen, 17.14 kg ha<sup>-1</sup> available phosphorus with pH 7.4. Seventeen bottle gourd hybrids were used on the experiment. Seeds were sown in 3 m × 0.75 m spacing and 7.5 m × 3 m of plot size. Data were collected on days to appearance of first male and female flower, number of nodes to first appearance of male and female flower, number of branches vine<sup>-1</sup>, vine length (m), fruit weight (gm), fruit length(cm), fruit diameter(cm), days to first harvest, number of fruits vine<sup>-1</sup>, fruit yield plant<sup>-1</sup>(kg), fruit yield hybrid<sup>-1</sup>(q/ha).

**Table 1: List of Hybrids.**

Sr. No.	Hybrids	Symbols	Sources
1.	BG HYB 18-1	T <sub>1</sub>	IIVR, Varanasi
2.	BG HYB 18-2	T <sub>2</sub>	IIVR, Varanasi
3.	BG HYB 18-3	T <sub>3</sub>	IIVR, Varanasi
4.	BG HYB 18-4	T <sub>4</sub>	IIVR, Varanasi
5.	BG HYB 18-5	T <sub>5</sub>	IIVR, Varanasi
6.	BG HYB 18-6	T <sub>6</sub>	IIVR, Varanasi
7.	BG HYB 18-7	T <sub>7</sub>	IIVR, Varanasi
8.	BG HYB 19-1	T <sub>8</sub>	IIVR, Varanasi
9.	BG HYB 19-2	T <sub>9</sub>	IIVR, Varanasi
10.	BG HYB 19-3	T <sub>10</sub>	IIVR, Varanasi
11.	BG HYB 19-4	T <sub>11</sub>	IIVR, Varanasi
12.	BG HYB 19-5	T <sub>12</sub>	IIVR, Varanasi
13.	BG HYB 19-6	T <sub>13</sub>	IIVR, Varanasi
14.	BG HYB 19-7	T <sub>14</sub>	IIVR, Varanasi
15.	Chandan	T <sub>15</sub>	Local Market
16.	Queen hyb	T <sub>16</sub>	Local Market
17.	Varun	T <sub>17</sub>	Local Market

## RESULTS AND DISCUSSION

### A. Growth Parameters

The results of the experiment conducted on the topic "Evaluation of Bottle Gourd (*Lagenaria siceraria*) Hybrids for Fruit Yield and Quality Traits in Prayagraj Agro-Climatic Conditions" during *Zaid* season at Prayagraj. Growth parameters of Bottle gourd, viz. Days to appearance of first male flower, Days to appearance of first female flower, Number of nodes to first appearance of male flower, Number of nodes to first appearance of female flower, Number of branches vine<sup>-1</sup>, Vine length (m).

It was found that the hybrid T<sub>2</sub> is significantly shows

higher results than other hybrids. The minimum days required to first appearance of male flower was T<sub>2</sub> (47.33), minimum days required to first appearance of female flower was T<sub>2</sub> (56.66), minimum number of nodes to first male flower appearance T<sub>2</sub> (9.22). minimum number of nodes to first female flower appearance was hybrids T<sub>2</sub> (11.33). The maximum number of branches vine<sup>-1</sup> T<sub>2</sub> (17.88) followed by T<sub>15</sub> (17.55), Vine length (5.64 m) followed by T<sub>15</sub> (5.28 m) as shown in Table 2.

The results are in agreement with the finding of Adarsh *et al.* (2017), Ara *et al.* (2012) and Bawkar *et al.* (2015) and Ilyas *et al.* (2017) in Bottle gourd.

**Table 2: Growth parameters of bottle gourd hybrids.**

Treatments	Hybrids	Days to first male flower appearance	Days to first female flower appearance	No. of nodes to first male flower appearance	No. of nodes to first female flower appearance	Number of branches vine <sup>-1</sup>	Vine length (m)
T1	BG HYB 18-1	48.66	57.00	10.22	12.77	16.77	4.77
T2	BG HYB 18-2	47.33	56.66	9.22	11.33	17.88	5.64
T3	BG HYB 18-3	49.55	57.44	10.22	12.88	14.77	4.55
T4	BG HYB 18-4	50.00	58.11	10.44	13.11	14.55	3.35
T5	BG HYB 18-5	49.88	57.88	10.55	11.77	15.33	3.25
T6	BG HYB 18-6	49.44	57.55	11.55	12.22	15.44	4.22
T7	BG HYB 18-7	51.44	58.55	10.66	13.11	15.11	3.65
T8	BG HYB 19-1	49.77	58.88	11.66	13.88	14.88	3.15
T9	BG HYB 19-2	49.88	59.00	11.88	14.11	15.77	4.35
T10	BG HYB 19-3	50.11	59.22	12.55	14.22	15.55	4.11
T11	BG HYB 19-4	49.88	58.55	12.66	14.55	15.66	3.65
T12	BG HYB 19-5	49.77	58.44	12.55	14.77	15.77	3.77
T13	BG HYB 19-6	49.66	58.44	13.22	14.33	15.11	3.50
T14	BG HYB 19-7	50.33	59.33	13.33	14.22	15.77	4.23
T15	Chandan	47.66	57.00	9.33	12.22	17.55	5.28
T16	Queen hyb	50.11	59.00	12.55	13.88	15.55	3.98
T17	Varun	49.11	58.88	12.88	13.55	15.88	4.38
<b>S.Ed (±)</b>		<b>0.45</b>	<b>0.67</b>	<b>0.44</b>	<b>0.68</b>	<b>0.86</b>	<b>0.42</b>
<b>C.D. (P = 0.05)</b>		<b>0.92</b>	<b>1.37</b>	<b>0.91</b>	<b>1.38</b>	<b>1.76</b>	<b>0.86</b>

**B. Yield parameters**

Yield parameters of bottle gourd, viz. fruit weight (gm), fruit length(cm), fruit diameter(cm), days to first harvest, number of fruits vine<sup>-1</sup>, fruit yield plant<sup>-1</sup>(kg), fruit yield hybrid<sup>-1</sup>(q/ha). The maximum fruit weight T<sub>2</sub> (829.44 gm) followed by T<sub>15</sub> (820.33 gm). The maximum fruit length T<sub>2</sub>. (36.88 cm) followed by T<sub>15</sub> (35.77 cm). The maximum fruit diameter T<sub>2</sub> (17.44 cm) followed by T<sub>15</sub> (17.11 cm). Earliest days for first fruit harvest T<sub>2</sub> (67.11 days) followed by T<sub>15</sub> (67.22 days). The maximum number of fruits vine<sup>-1</sup> T<sub>2</sub> (9.77) followed by T<sub>15</sub> (9.22). The maximum yield plant<sup>-1</sup> (kg) T<sub>2</sub> (8.10) followed by T<sub>15</sub> (7.57). The maximum yield hectare<sup>-1</sup> T<sub>2</sub> (360.15 quintal) followed by T<sub>15</sub> (336.62) as shown in Table 3.

The results are in agreement with the finding of Aruna and Swaminathan (2012), Harika *et al.* (2012) and Husna *et al.* (2011) in Bottle gourd.

**C. Economic parameters**

Economic paramiters viz, Gorss return (INR), Net return (INR) and Benefit Cost Ratio. The maximum gross return hectare<sup>-1</sup> T<sub>2</sub> (INR 3,60,147) followed by T<sub>15</sub> (INR 3,36,621). The maximum net return hectare<sup>-1</sup> was obtained by T<sub>2</sub> (INR 2,80,047) followed by the T<sub>15</sub> (INR 2,56,771). The maximum benefit cost ratio was observed in T<sub>2</sub> (1:3.50) followed by T<sub>15</sub> (1:3.22) as shown in Table 4.

The results are in agreement with the finding of Aruna and Swaminathan (2012), Ilyas *et al.* (2017) in Bottle gourd.



Table 3: Yield parameters in bottle gourd.

Treatments	Hybrids	Fruit weight (gm)	Fruit length (cm)	Fruit diameter (cm)	Days to first harvest	Number of fruits vine <sup>-1</sup>	Fruit yield plant <sup>-1</sup> (Kg)	Fruit yield hybrid <sup>-1</sup> (q/ha)
T <sub>1</sub>	BG HYB 18-1	717.66	29.66	14.11	67.33	8.44	6.10	271.20
T <sub>2</sub>	BG HYB 18-2	829.44	36.88	17.44	67.11	9.77	8.10	360.15
T <sub>3</sub>	BG HYB 18-3	573.44	28.22	13.88	69.88	7.11	4.08	181.15
T <sub>4</sub>	BG HYB 18-4	602.77	27.11	15.11	68.33	8.22	4.97	220.85
T <sub>5</sub>	BG HYB 18-5	561.33	25.44	13.11	69.44	7.33	4.13	183.57
T <sub>6</sub>	BG HYB 18-6	654.22	33.33	14.44	69.11	7.22	4.72	209.87
T <sub>7</sub>	BG HYB 18-7	709.77	31.55	14.66	70.55	6.55	4.68	208.11
T <sub>8</sub>	BG HYB 19-1	720.66	32.77	15.22	68.11	6.88	4.97	220.74
T <sub>9</sub>	BG HYB 19-2	574.11	31.55	15.66	67.44	6.33	3.66	162.49
T <sub>10</sub>	BG HYB 19-3	704.88	27.11	15.11	69.88	5.66	4.00	177.58
T <sub>11</sub>	BG HYB 19-4	722.55	33.22	14.33	70.22	5.22	3.78	167.84
T <sub>12</sub>	BG HYB 19-5	655.55	28.22	15.77	70.55	5.77	3.78	168.00
T <sub>13</sub>	BG HYB 19-6	584.44	32.66	13.77	72.66	5.44	3.18	141.51
T <sub>14</sub>	BG HYB 19-7	687.77	31.66	16.33	72.22	5.11	3.51	156.07
T <sub>15</sub>	Chandan	820.33	35.77	17.11	67.22	9.22	7.57	336.62
T <sub>16</sub>	Queen hyb	786.88	32.11	16.22	68.11	8.33	6.56	291.51
T <sub>17</sub>	Varun	713.55	31.22	16.11	69.11	7.77	5.54	246.27
<b>S.Ed (±)</b>		<b>28.60</b>	<b>0.98</b>	<b>0.87</b>	<b>0.84</b>	<b>0.65</b>	<b>0.52</b>	<b>23.20</b>
<b>C.D. (P = 0.05)</b>		<b>58.26</b>	<b>1.99</b>	<b>1.78</b>	<b>1.70</b>	<b>1.32</b>	<b>1.06</b>	<b>47.26</b>

**Table 4: Economics of different hybrids of bottle gourd.**

Treatments	Hybrids	Total cost of cultivation/ha	Yield q/ha	Selling Rate INR/q	Gross return @ INR/ha	Net Return INR/ha	Benefit Cost Ratio
T <sub>1</sub>	BG HYB 18-1	80,100	271.20	1000	2,71,205	1,91,105	<b>2.39</b>
T <sub>2</sub>	BG HYB 18-2	80,100	360.15	1000	3,60,147	2,80,047	<b>3.50</b>
T <sub>3</sub>	BG HYB 18-3	80,100	181.15	1000	1,81,151	1,01,051	<b>1.26</b>
T <sub>4</sub>	BG HYB 18-4	80,100	220.85	1000	2,20,846	1,40,746	<b>1.76</b>
T <sub>5</sub>	BG HYB 18-5	80,100	183.57	1000	1,83,565	1,03,465	<b>1.29</b>
T <sub>6</sub>	BG HYB 18-6	80,100	209.87	1000	2,09,867	1,29,767	<b>1.62</b>
T <sub>7</sub>	BG HYB 18-7	80,100	208.11	1000	2,08,105	1,28,005	<b>1.60</b>
T <sub>8</sub>	BG HYB 19-1	78,800	220.74	1000	2,20,741	1,41,941	<b>1.80</b>
T <sub>9</sub>	BG HYB 19-2	78,800	162.49	1000	1,62,492	83,692	<b>1.06</b>
T <sub>10</sub>	BG HYB 19-3	78,800	177.58	1000	1,77,579	98,779	<b>1.25</b>
T <sub>11</sub>	BG HYB 19-4	78,800	167.84	1000	1,67,840	89,040	<b>1.13</b>
T <sub>12</sub>	BG HYB 19-5	78,800	168.00	1000	1,68,000	89,200	<b>1.13</b>
T <sub>13</sub>	BG HYB 19-6	78,800	141.51	1000	1,41,506	62,706	<b>0.80</b>
T <sub>14</sub>	BG HYB 19-7	78,800	156.07	1000	1,56,069	77,269	<b>0.98</b>
T <sub>15</sub>	Chandan	79,850	336.62	1000	3,36,621	2,56,771	<b>3.22</b>
T <sub>16</sub>	Queen hyb	79,850	291.51	1000	2,91,509	2,11,659	<b>2.65</b>
T <sub>17</sub>	Varun	79,850	246.27	1000	2,46,273	1,66,423	<b>2.08</b>



## CONCLUSION

It is concluded from the investigation that the treatment T<sub>2</sub> (BG HYB 18-2) was found superior followed by T<sub>15</sub> (Chandan) in growth and higher yield with quality factors. In this investigation the treatment T<sub>2</sub> (2018/BOGHYB-2) was found suitable for cultivation in Zaid season for better yield hectare<sup>-1</sup> (360.15 Quintals/ha). Among the economics of different hybrids the T<sub>2</sub> (BG HYB 18-2) has the highest cost benefit ratio (1:3.50) followed by T<sub>15</sub> (Chandan) (1:3.22).

## REFERENCES

- Adarsh, A., Kumar, R., Kumar, A., Neetun, S. and Singh, H.K. (2017). Estimation of Gene Action and Heterosis in Bottle Gourd (*Lagenaria siceraria* Mol. Standl.), Kalyani, West Bengal. *Journal of Environment & Ecology*, 35(2A): 936-944.
- Ara N, Bashir MK, Hossain MF and Islam MR. (2012). Characterization and evaluation of hybrid pointed gourd genotypes, Fukuoka, Japan. *Fukuoka Institute of Tropical Agriculture, Kyushu University*, 33: 53-60.
- Aruna, P. and Swaminathan V. (2012). Evaluation of hybrids with high yield and yield attributes in bitter gourd, Chander Nagar, Ghaziabad. *Asian Journal of Horticulture*, 7(2): 624-625.
- Badmanaban, R. and Patel, C.N. (2010). Studies on anthelmintic and antimicrobial activity of the leaf extracts of *Lagenaria siceraria*, Kasprzaka, Warsaw. *Journal of Global Pharma Technology*, 4: 66-70.
- Balat, J.R., Patel, J.B., Delvadiya, I.R. and Ginoya, A.V. (2021). Stability Analysis for Fruit Yield and its Components in Bottle Gourd [*Lagenaria siceraria* (Mol.) Standl.]. *Biological Forum – An International Journal*, 13(1): 409-419.
- Bawkar, S.O., Bhalekar, M.N., Pawar, P.K., and Sonavane, P.N., (2015). Studies in genetic components o bottle gourd, Bhopal, Madhya Pradesh. *Trends in biosciences*, 8(8): 2133-2135.
- Deepti, B. (2013). Studies on genetic variability, heritability, correlation and path coefficient analysis in bottle gourd [*Lagenaria siceraria* (Mol.) Standl.] genotypes. Thesis, Deptt. Vegetable Science, Horticultural College and Research Institute, Venkataramnagudem, West Godavari- 534101.
- Harika, M., Gasti, V.D., Shantappa, T., Mulge, R., Shirol, A.M., Mastiholi, A.B. and Kolkarni, M.S. (2012). Evaluation of bottle gourd genotypes [*Lagenaria siceraria* (Mol.) Standl.] for various horticultural characters, University of Agricultural Sciences, Dharwad, Karnataka. *Karnataka Journal of Agricultural Sciences*, 25(2): 241-244.
- Husna, A., Mahmud, F., Islam, M.R., Mahmud, M.A.A. and Ratna, M. (2011). Genetic Variability, Correlation and Path Co-Efficient Analysis in Bottle Gourd [*Lagenaria siceraria* (Molina) Standl.]. *Advances in Biological Research*, 5(6): 323-327.
- Ilyas, M., Nabi, G., Ali, S., Mehran, Anjum, M.M., Ali, N., Zaman, W., Jan, S., Samar, I.F., Sadiq, M., and Akber, S. (2017). Evaluation of Bottle Guard Varieties in Agro Climatic Condition of Peshawar Valley, California, United States. *International Journal of Environmental Science and Natural Resources*, 3(1), ISSN: 2572-1119.
- Indian Horticulture Database, (2019). National Horticulture Board, Ministry of Agriculture, Government of India, Gurugram, Haryana. (Website: www.nhb.gov.in) 8-12.
- Kumar, A., Singh, B., Kumar, V., Singh, M.K. and Singh K.V. (2012). Correlation and path coefficient analysis for certain metric traits in bottle gourd (*Lagenaria siceraria* (Molina) Standl.) using line x tester analysis, Naraina Vihar, New Delhi. *Annals of Horticulture*, 5(1): 90-94.
- Kumar, R. and Prasad, V.M. (2011). Hybrid evaluation trial in bottle gourd gourd [*Lagenaria siceraria* (Mol.) Standl.], Kalyani, West Bengal. *Journal of Environment and Ecology*, 29(1): 74-77.
- Mahato, B., Pandit, M.K. and Sarkar, A. (2010). Evaluation of some indigenous bottle gourd [*Lagenaria siceraria* (Mol.) Standl.] genotypes in the new alluvial zone of West Bengal. *Journal of Interacademia*, 14(4): 440-443.
- Sahu, L. (2016). Genetic diversity, heritability and agromorphological characterization in bottle gourd [*Lagenaria siceraria* (Molina) Standl.]. *M.Sc. (Hort.) Thesis*, Department of Vegetable Science, IGKV, Raipur (Chhattisgarh).
- Shinde, R.D., Vadodaria, J.R., Savale, S.V. and Vasava, H.V. (2014). Effect of nature of cultivation and different varieties on flowering, yield attributes and yield of bottle gourd (*Lagenaria siceraria* Mol. Standl.), Bhopal, Madhya Pradesh. *Trends in Biosciences*, 7(24): 4340-4345.
- Thakur, P., Sharma, D., Visen, V.K. and Dash, S.P. (2013). Evaluation of bottle gourd [*Lagenaria siceraria* (molina) standl.] genotypes, Etawah, Utter Pradesh. *Plant Archives*, 15(2): 1037-1040.
- Uddin, A.F.M., Tahidul, M.I., Chowdhury, M.S.N., Shiam, I.H. (2014). Evaluation of bottle gourd (*Lagenaria siceraria*) to growth and yield. *International Journal of Biological Sciences*, 5(12): 7-11.
- Upaganlawar, A. and Balaraman, R. (2010). Protective effects of *Legenaria siceraria* (Molina) fruit juice in isoproterenol induced myocardial infarction, Dubai, UAE. *International Journal of Pharmacology*, 5: 645–651.
- Vaishali, V. (2016). Studies on genetic variability, divergence and character association in bottle gourd [*Lagenaria siceraria* (Mol.) Standl.] M.Sc. (Ag.) Thesis, Dept. Veget. Sci., University of Agriculture and Technology, Bhubaneswar, Odisha.
- Yadav, Y. C., Kumar, S., Kumar A., Singh, R. and Singh, R. (2010). Path coefficient studies and character association in bottle gourd [*Lagenaria siceraria* (Molina) Standl.], Naraina Vihar, New Delhi. *Annals of Horticulture*, 3(1): 84–88.

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