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Effect of fertility levels and plant growth regulators on growth, yield and quality of hybrid brinjal (*Solanum melongena* L.) under net house conditions

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Abstract

The present experiment was conducted to study the effect of fertility levels and plant growth regulators on growth, yield and quality of hybrid brinjal in net house at polyhouse complex, Department of Horticulture (Vegetable Science), Bihar Agricultural College, Sabour, Bhagalpur during the kharif season of 2023-24. The experiment was carried out with three fertility levels viz., F₁ – (125:75:125 NPK kg/ha), F₂ – (150:100:150 NPK kg/ha) and F₃ – (175:125:175 NPK kg/ha) and four levels of plant growth regulators viz., P₀ – (No PGR), P₁ – (GA₃ @ 100 ppm), P₂ – (NAA @ 50 ppm) and P₃ – (GA₃ @ 100 ppm + NAA @ 50 ppm). The experiment was laid out in Factorial Randomized Block Design replicated thrice. The maximum plant height at final harvest (103.90 cm), number of branches/plant (12.56), number of fruits/plant (13.80), weight of fruits/plant (3.28 kg), average fruit weight (247.43 g), fruit length (11.24 cm), fruit diameter (9.34 cm), fruit yield/plot (68.29 kg), fruit yield (758.85 q/ha) and minimum days to 50% flowering (67.08), minimum days to first harvest (79.38) were obtained with fertility level F₂ – (150:100:150 NPK kg/ha) and plant growth regulator P₃ – (GA₃ @ 100 ppm + NAA @ 50 ppm). The interaction effect was found non-significant for number of fruits/plant, days to 50% flowering and days to first harvest. The results conferred that the application of NPK @ 150:100:150 kg/ha along with the foliar spray of GA₃ @ 100 ppm + NAA @ 50 ppm is more viable for getting higher growth, yield and quality of hybrid brinjal under net house conditions.

Keywords: Net house, brinjal, fertility level, GA₃, NAA, yield

1. Introduction

Brinjal is a popular and principal fruit vegetable grown in tropical and subtropical areas of the country and abroad. It contains 92.70 g moisture, 1.4 g protein, 0.30 g fat, 0.30 g minerals, 0.30 g fibre, 4.0 g carbohydrates, 18.0 mg calcium, 18.0 mg oxalic acid, 47.0 mg phosphorus, 2.0 mg potassium, 124 I.U., Vitamin A, 0.11 mg riboflavin and 12.0 mg vitamin C per 100 g of edible portion. Brinjal has been reported to give good response to different plant nutrients and plant growth regulators. Of the major nutrients, nitrogen being a constituent of chlorophyll, phosphorus being a structural components of nucleic acids, several coenzymes, phosphoproteins, phospholipids (Grant *et al.*, 2001) [10] and involvement of potassium in photolysis of water, play a vital role in the physiology of brinjal and draw a significant impact in photosynthetic processes, fruit quality, metabolic processes, and crop productivity (Bai *et al.*, 2016) [4], resulting in higher yield.

Plant growth regulators like Naphthalene Acetic Acid improves root, fruit growth, plant vigour and stress tolerance by enhancing nutrient and water uptake (Serrano *et al.*, 2013) [17] and Gibberellic Acid is a plant growth regulator involved in stem elongation, seed germination, and flowering induction (Davies *et al.*, 2010) [7]. Its exogenous application has been shown to stimulate cell elongation and division, leading to increased plant height and biomass accumulation. Net house effectively exclude the brinjal fruit and shoot borers resulting in cleaner marketable produce. Besides, it also protects from excessive solar radiation and moderate temperature extremes. In view of the impact of nutrients and plant growth regulators on growth and yield of hybrid brinjal under net house condition and the scanty of literature

available, an experiment was executed to find out the effect of fertility levels and plant growth regulators on growth yield and quality of hybrid brinjal under net house conditions.

2. Materials and Methods

The experiment was carried out during the Kharif season of 2023–2024 in net house at the polyhouse complex, Department of Horticulture (Vegetable Science), Bihar Agricultural University, Sabour, Bhagalpur located at latitude 25° 15' 40" N and longitude 86° 2' 42" E and 46 meters above sea level in the Indo-Gangetic plains of northern India. The soil of the plot's surface was sandy loam well-drained and fertile having pH 7.8. The treatment of three fertility levels F_1 – (125:75:125 NPK kg/ha), F_2 – (150:100:150 NPK kg/ha) and F_3 – (175:125:175 NPK kg/ha) and four levels of plant growth regulators viz., P_0 – (No PGR), P_1 – (GA₃ @ 100 ppm), P_2 – (NAA @ 50 ppm), P_3 – (GA₃ @ 100 ppm + NAA @ 50 ppm). The experiment was laid out in Factorial Randomized Block Design replicated thrice. The entire net house was fumigated with 4% formalin to control soil borne infections and the soil was irrigated twice to get rid of any residue of the chemicals. As per treatment the raised beds of 9 meters in length, 1.5 meters width and 30cm heights along with 50cm path between the plots were prepared and supplemented with well rotten FYM @ 2.5 kg/m² 15days before at the time of last field preparation. Treatment wise nitrogen, phosphorus and potassium were given through Urea, Single super phosphate and Muriate of potash. Half of nitrogen as per treatment and full of phosphorus and potassium were applied at the time of transplanting and remaining half of nitrogen were applied at 60days after transplanting. All the recommended cultural and plant protection measures were adopted for healthy crop. The observations were recorded on plant height, number of branches per plant, days to 50% flowering, days to first harvest, number of fruits per plant, average fruit weight, fruit yield per plant, per plot and per 500m² (Net house area). Among the quality parameters, ascorbic acid and TSS were also estimated following the standard procedure of AOAC (2001) [2] and Vishnyakov *et al.* (2005) [21] respectively. The data were statistically analysed following the standard procedure of Panse and Sukhatme (1967) [14] and critical differences were calculated at 5% probability to draw the valid conclusion.

3. Results and Discussion

3.1 Effect of different fertility levels on growth, yield and quality of hybrid brinjal

Height of plant is one of the most important characters in analysis of growth and finally yield of any crop. The maximum plant height (97.57 cm) and number of branches per plant (11.80) were noticed with fertility level F_2 (N₁₅₀P₁₀₀K₁₅₀) which was found statistically similar to fertility level F_3 (N₁₇₅P₁₂₅K₁₇₅), however, the lowest values were noted at fertility level F_1 (N₁₂₅P₇₅K₁₂₅) (Table 1). Further increase in level up to F_2 (150:100:150 NPK kg/ha) progressively increased the plant height that may be due to the fact that the higher dose of fertility level may have enhanced the transit of metabolites and photosynthates in the plant, allowing for faster and better upward vegetative development, as a structural element of phospholipids, phosphorus is crucial for the growth of the root system, which may have aided in the absorption and movement of food particle. The progressive increase in number of branches /plant at the F_2 fertility level may be due to increased nutrient availability and uptake, which would speed up the synthesis of growth regulators like auxin (IAA) and cytokinin, which would then promote cell division and elongation. Higher

photosynthetic rates at various growth stages also contributed with this. The fact that potassium is involved in the production of peptide bonds as well as the metabolism of proteins and carbohydrates may help to explain why it has a positive influence on plant growth. These findings are in close proximity with the findings of Kasi *et al.*, 2018 [10]; Rajalingam *et al.*, 2022 [16]; Zainub *et al.*, 2016 [22] in brinjal.

The minimum days to 50% flowering (71.13) and days to first harvest (83.15) was recorded in fertility level F_2 (N₁₅₀P₁₀₀K₁₅₀), while, fertility level F_1 (N₁₂₅P₇₅K₁₂₅) took the maximum days to 50% flowering (77.04) and days to first harvest (89.27) (Table 1). The reduced duration in 50% flowering and days to first harvest could be because of the increased rate of inorganic fertilizer application up to F_2 allowed for greater mineral nutrient uptake, which might have speed up the synthesis of growth regulators like auxin (IAA) and cytokinin that in turn stimulated cell division and elongation, which in turn favoured early flowering (50%), fruiting, and harvesting. These findings are in close proximity with the findings of Rajalingam *et al.*, 2022 [16] and Zainub *et al.*, 2016 [22].

The shape, size and the weight of fruits are the important aspects in deciding the yield and consumer's acceptability. All the yield attributing traits like number of fruits /plant (13.28), weight of fruits/plant (3.07kg), average fruit weight (231.14g), length of fruit (10.56cm), diameter of the fruit (8.78cm), and yield/500 m² (3413.69kg) of hybrid brinjal were the highest under fertility level F_2 (N₁₅₀P₁₀₀K₁₅₀) followed by F_3 and F_1 fertility levels, however, the difference between F_2 and F_3 fertility levels were non-significant for the number of fruits/plant (Table 1). The progressive increase in the parameters at the fertility level F_2 may be due to the more absorption and translocation of nutrients for the production of photosynthates that might have increased the number of fruits/plant. One possible explanation for this could be because the fruits serve as a sink for assimilates made in plant parts (source). Higher levels of food supply may have enhanced plant photosynthetic activities, making more assimilates available to the fruits and increasing their weight, length and diameter of fruits. These findings are in close proximity with the findings of Kasi *et al.*, 2018 [10]; Sondarva *et al.*, 2018 [19], Zainub *et al.*, 2016 [22] in brinjal, Anburani *et al.*, 2019 [1] and Rajalingam *et al.*, 2021 [16]. Further increase in fertility level to F_3 (N₁₇₅P₁₂₅K₁₇₅) reduced the values of all the parameters. This may be fact that higher doses of NPK might have imbalanced the availability of other nutrients that might had the negative effects (Devi *et al.*, 2002 and Aujla *et al.*, 2007) [8, 3].

Yield is the resultant of number, size and weight of the fruits. The significantly higher yield per plant, per plot and per hectare was recorded at F_2 (N₁₅₀P₁₀₀K₁₅₀) fertility level, while further increase in fertility levels did not bring significant improvement towards fruit yield (Table 1). The increase in fruit yield at this fertility level might be attributed to improvement in growth of plants, which in turn led to higher number of fruits, weight and size of fruits and ultimately total yield. Phosphorus might have enhanced the translocation and partitioning of assimilates to floral parts, resulting in improved yield attributes, which obviously resulted in higher fruit yield. The beneficial effects of potassium may be explained from the fact that potassium involved in synthesis of peptide bond and protein and carbohydrate metabolism, thus increases fruit yield. Similar results have also been made by Beena *et al.*, 2018 [6]; Kasi *et al.*, 2018 [11] in brinjal.

Increasing levels of fertility up to F_2 (N₁₅₀P₁₀₀K₁₅₀) progressively increased both the quality parameters like TSS as well as

Ascorbic acid content in fruits (Table 1). It may only be due to the fact that the application of more inorganic fertilizers enabled the plants to absorb maximum nutrients along with water which synergistically flourished translocation of photosynthates towards reproductive parts that might have increased the mineral concentration in brinjal fruit, which helped in chemical interaction between organic constituents and enzymes activation, osmo-turgor regulation, metabolic and membrane transport process that resulted an increase in total soluble solids as well as ascorbic acid content of fruits. Significantly minimum fruit quality parameters were recorded in at fertility level F₁ (N₁₂₅P₇₅K₁₂₅). The lower content of TSS as well as ascorbic acid at low fertility level might be due to the fact that the inadequate supply of nutrients resulted in restricted metabolic activities and photosynthetic rate thereby decreased the translocation of carbohydrates from vegetative part to reproductive part. Similar results have also been obtained by Anburani *et al.*, 2019 ^[1], Rajalingam *et al.*, 2021 ^[16].

3.2 Effect of plant growth regulators on growth, yield and quality of hybrid brinjal

Foliar spray of plant growth regulator P₃ (GA₃@100ppm+NAA@50ppm) recorded maximum plant height (99.40 cm) at final harvest and number of branches/plant (12.02 cm), while the minimum plant height (82.73 cm) and number of branches (9.92) was recorded in plants developed in the absence of plant growth regulators (P₀) (Table 2). GA₃ may have contributed to cell elongation, which in turn may have been the cause of the plant's increase ed height. Similar findings have also been made by Basnet *et al.*, 2021 ^[5]; Singh *et al.*, 2021 ^[18]; Patel *et al.*, 2022 ^[15]; Kropi *et al.*, 2018 ^[12]; Dhaker and Singh, 2015 ^[9] in brinjal. The increase in number of branches/plant at P₃ (GA₃ @100ppm+NAA@50ppm) may be because of that the NAA promotes the activity of xyloglucan endo-transglycosylase (XET), which might have weakened the cell wall and enhanced cell permeability, while GA₃ increases cell elongation and division. Additionally, the number of branches may have risen due to an antimitotic activity that inhibited apical growth. Similar findings have also been reported by Basnet *et al.*, 2021 ^[5]; Singh *et al.*, 2021 ^[18]; Kumari *et al.*, 2022 ^[13], Patel *et al.*, 2022 ^[15] in brinjal.

The minimum days to 50% flowering and harvesting of fruits were noticed under the P₃ (GA₃ @100ppm + NAA@50ppm) treatment, while maximum values of the parameters were noted in the absence of PGR (Table 2). The progressive reduction in the parameters were might be due to the Synergistic effect of NAA and GA₃ in P₃ (GA₃ @100ppm + NAA@50ppm) treatment that might have stimulated the flower primordia in brinjal and decreased the number of days needed for 50% flowering and harvesting of fruits. Similar findings have also been reported by Singh *et al.*, 2021 ^[18]; Patel *et al.*, 2022 ^[15]. Basnet *et al.*, 2021 ^[5].

The maximum number of fruits per plant (13.53), average fruit weight (235.86 g), fruit length (10.76cm) and fruit diameter (8.85 cm) and fruit yield per plant and per plot were found with use of plant growth regulator P₃ (GA₃ @100 ppm+NAA@50 ppm), which was statistically similar to P₂(NAA@100ppm) i.e. 13.11 followed by P₁ (GA₃@100 ppm). The lowest values of all the parameters were recorded in plants developed in the absence of plant growth regulators P₀ (Table 2). The faster and better nutrient transfer from roots to apical regions of the plant may have favoured plant growth and development and, eventually, yield, which could explain why NAA and GA₃ treatments increased number of fruits plant. Similar views have also been reported by Basnet *et al.*, 2021 ^[5]; Kumari *et al.*, 2022 ^[13], Patel

et al., 2022 ^[15] in brinjal.

Maximum average fruit weight (235.86 g) with plant growth regulator P₃ (GA₃ @100ppm+NAA@50ppm) may be attributed that the application of NAA might have increased the photosynthetic area by increasing the number of branches per plant and the leaf area, which in turn affected the fruit weight (Table 2). It's possible that GA₃ enhanced the availability of photosynthetic materials and their effective mobilization in plants, which led to a greater stimulation of fruit growth and, eventually, a higher average fruit weight. Similar findings have also been reported by Kumari *et al.*, 2022 ^[13]; Basnet *et al.*, 2021 ^[5]; Singh *et al.*, 2021 ^[18] and Patel *et al.*, 2022 ^[15] in brinjal. The progressive increase in fruit length (10.76 cm) and fruit diameter (8.85 cm) with the use of plant growth regulator P₃ (GA₃ @100ppm+NAA@50ppm) may be due to the fact that the combination of plant growth regulators like GA₃ and NAA kept the plant more physiologically active, which aided in the accumulation of enough food materials and the translocation of nutrients to sink, ultimately increasing the fruit's length and diameter (Table 2). These results are in close conformity with the findings of Singh *et al.*, 2021 ^[18], Basnet *et al.*, 2021 ^[5] and Kumari *et al.*, 2022 ^[13] in brinjal. Foliar spray of plant growth regulators brought progressive improvement in yield attributes and yield of brinjal with foliar spray of P₃ (GA₃ @100ppm+NAA@50ppm) may be attributed to the fact that the application of NAA is responsible for increasing growth in terms of plant height and number of branches that might have enhanced the photosynthetic process and promoted the accumulation of photosynthates and other photosynthetic products that might have directly involved in inducing number of fruits/plant, length of fruit and yield of fruits/plant and per plot of net house area. Similar results were reported by Patel *et al.*, 2022 ^[15], Singh *et al.*, 2021 ^[18] in brinjal.

The maximum TSS (4.65 °Brix) and Ascorbic acid (6.25 mg/100g) contents were found with the foliar spray of plant growth regulator level P₃ (GA₃ @100ppm + NAA @50ppm), however the lowest values of both the parameters were recorded in fruits developed in the absence of plant growth regulators (P₀) (Table 2). These changes in total soluble solids as well as in ascorbic acid contents could occur due to the breakdown of polysaccharides. NAA is known to increase the photosynthetic efficiency of the leaves and greater production of assimilates due to the hydrolysis of insoluble polysaccharides into simple sugars. NAA encourages the biosynthesis the Ascorbic acid or protection of already synthesized Ascorbic acid from enzymatic oxidation. The greater production of photosynthates and their translocation to economic sinks may be the reason of improved TSS and Ascorbic acid content in the fruits. Similar findings have also been reported by Kumari *et al.*, 2022 ^[13] in brinjal and Pramanik *et al.*, 2017, Kumar *et al.*, 2014 in tomato.

3.3 Interaction Effect of fertility levels and plant growth regulators on growth, yield and quality of hybrid brinjal

The plants developed under the fertility level F₂ (N₁₅₀P₁₀₀K₁₅₀) along with plant growth regulator P₃ (GA₃ @100ppm + NAA@50ppm) i.e. F₂P₃ gave significantly the highest plant height (103.90 cm) and number of branches per plant (12.56), however, days to 50%flowering and days to first fruit harvest did not touch the level of significance (Table 3). The progressive increase in the parameters may be due to effective and synergistic effects of fertility as well as plant growth regulators. The findings were reported by Kumari *et al.*, 2022 ^[13], Rajalingam *et al.*, 2022 ^[16], Patel *et al.*, 2022 ^[15] in brinjal.

Plant developed under the fertility level F₂ (N₁₅₀P₁₀₀K₁₅₀) along with plant growth regulator P₃ (GA₃ @100ppm + NAA

@50ppm) i.e. F_2P_3 gave significantly highest average fruit weight (247.43 g), fruit length (11.24 cm), fruit diameter (9.34 cm), yield per plant (3.41kg) and yield per plot (68.29kg) and yield 500 m² net house area (3794.26 kg), however the minimum values were recorded at fertility level of F_1 ($N_{125}P_{75}K_{125}$) in absence of plant growth regulators (P_0) (Table 3). The fertility levels F_2 interacted significantly to various plant growth regulators and secure the maximum values of all the growth attributes and yield at $F_2 \times P_3$ (Table 3). It was mainly due to the positive interaction of both the fertility F_2 and plant growth regulator P_3 that produced the maximum value of all the growth parameters that resulted in higher yield attributes and yield of brinjal. Similar findings have also been made by Kumari *et al.*, 2022 ^[13], Basnet *et al.*, 2021 ^[5], Patel *et al.*, 2022 ^[15],

Dhaker and Singh, 2015 ^[9]; Souza *et al.*, 2017 ^[20] in brinjal in brinjal.

The interaction effects due to fertility and plant growth regulators were found to non -significant in case of TSS content, while Ascorbic acid affected significantly. The highest TSS (4.79 °Brix) as well as Ascorbic acid (6.53 mg/100g) contents were obtained under the fertility level F_2 ($N_{150}P_{100}K_{150}$) along with plant growth regulator P_3 (GA_3 @100ppm + NAA @50ppm) i.e. F_2P_3 , however the lowest values of both the parameters were observed at fertility level of F_1 ($N_{125}P_{75}K_{125}$) was applied in the absence of plant growth regulator (P_0) (Table 3). Similar results have also made by Anburani *et al.*, 2019 ^[1], Rajalingam *et al.*, 2021 ^[16] in brinjal and Pramanik *et al.*, 2017, Kumar *et al.*, 2014 in tomato.

Table 1: Effect of fertility levels on growth, yield and quality of hybrid brinjal

Treatment	Plant height (cm)	Number of branches /plant	Days to 50% flowering	Days to first harvest	Number of fruits/plant	Weight of fruits/plant (kg)	Average fruit weight (g)	Fruit length (cm)	Fruit diameter (cm)	Yield/plot (kg)	Yield/ 500 m ² net house area (kg)	Ascorbic acid (mg/100g)	TSS (°Brix)
Fertility levels (F)													
F_1 (125:75:125 NPK kg/ha)	83.79	10.25	77.04	89.27	12.81	2.63	204.50	9.28	6.58	52.60	2922.44	5.33	4.33
F_2 (150:100:150 NPK kg/ha)	97.57	11.80	71.13	83.15	13.28	3.07	231.14	10.56	8.78	61.44	3413.69	6.13	4.57
F_3 (175:125:175 NPK kg/ha)	93.25	11.21	75.10	87.20	12.90	2.85	220.99	10.04	7.64	57.06	3170.12	5.74	4.46
SEm±	1.334	0.156	1.315	1.570	0.189	0.042	2.591	0.145	0.120	0.832	46.217	0.063	0.041
CD at 5%	3.91	0.46	3.86	4.60	NS	0.12	8.77	0.43	0.35	2.44	135.55	0.18	0.12

Table 2: Effect of plant growth regulators on growth, yield and quality of hybrid brinjal

Treatment	Plant height (cm)	Number of branches /plant	Days to 50% flowering	Days to first harvest	Number of fruits/plant	Weight of fruits/plant (kg)	Average fruit weight (g)	Fruit length (cm)	Fruit diameter (cm)	Yield/plot (kg)	Yield/500m ² net house area (kg)	Ascorbic acid (mg/100 g)	TSS (°Brix)
Plant growth regulators (P)													
P_0 (No PGR)	82.73	9.92	78.94	90.89	12.46	2.53	202.55	9.02	7.67	50.59 28	2810.83	5.04	4.25
P_1 (GA_3 @ 100 ppm)	94.63	10.97	75.94	88.30	12.88	2.75	213.51	9.82	7.66	55.05	3058.55	5.70	4.42
P_2 (NAA @ 50 ppm)	89.38	11.44	72.76	85.08	13.11	2.93	223.58	10.24	8.72	58.62	3256.99	5.95	4.48
P_3 (GA_3 @ 100 ppm + NAA @ 50 ppm)	99.40	12.02	70.05	81.88	13.53	3.19	235.86	10.76	8.85	63.87	3548.63	6.25	4.65
SEm±	1.540	0.180	1.518	1.813	0.218	0.048	2.991	0.167	0.138	0.961	53.367	0.073	0.047
CD at 5%	4.52	0.53	4.45	5.32	0.64	0.14	7.60	0.49	0.41	5.08	271.10	0.21	0.14

Table 3: Combined effect of fertility levels and plant growth regulators on growth, yield and quality of hybrid brinjal

Treatment	Plant height (cm)	Number of branches /plant	Days to 50% flowering	Days to first harvest	Number of fruits/plant	Weight of fruits/plant (kg)	Average fruit weight (g)	Fruit length (cm)	Fruit diameter (cm)	Yield /plot (kg)	Yield/500m ² net house area (kg)	Ascorbic acid (mg/100g)	TSS (°Brix)
F × P													
F_1P_0	66.18	8.00	80.76	92.12	12.00	1.85	175.34	7.59	6.58	42.08	2338.05	4.16	4.12
F_1P_1	91.99	10.24	80.74	91.44	12.85	2.56	198.04	9.16	7.00	50.90	2827.80	5.32	4.30
F_1P_2	80.71	11.12	74.98	88.04	13.00	2.67	216.77	9.95	8.64	56.36	3131.37	5.78	4.41
F_1P_3	96.29	11.64	71.64	83.49	13.40	2.23	227.84	10.42	8.56	61.06	3392.56	6.05	4.50
F_2P_0	92.81	11.22	77.69	89.82	12.79	2.57	218.90	10.04	8.78	55.99	3111.06	5.83	4.35
F_2P_1	97.11	11.66	70.48	82.46	13.22	2.89	228.27	10.44	8.65	60.35	3353.3	6.06	4.56
F_2P_2	96.45	11.74	69.28	80.94	13.29	2.63	229.97	10.51	9.16	61.13	3396.16	6.10	4.56
F_2P_3	103.90	12.56	67.08	79.38	13.80	2.79	247.43	11.24	9.34	68.29	3794.26	6.53	4.79
F_3P_0	89.19	10.54	78.38	90.74	12.58	2.92	213.42	9.43	7.64	53.70	2983.38	5.12	4.28
F_3P_1	94.80	11.00	76.55	89.00	12.58	2.88	214.22	9.85	7.32	53.90	2994.56	5.72	4.40
F_3P_2	90.99	11.46	74.03	86.26	13.03	2.98	224.01	10.26	8.35	58.38	3243.43	5.96	4.48
F_3P_3	98.02	11.85	71.43	82.78	13.40	3.28	232.31	10.61	8.64	62.26	3459.11	6.16	4.66
SEm±	2.668	0.312	2.629	3.140	0.377	0.083	5.181	0.290	0.240	1.664	92.435	0.126	0.081
CD at 5%	7.82	0.91	NS	NS	NS	0.24	15.20	0.85	0.70	4.88	271.10	0.37	NS

4. Conclusion

On the basis of the present experiment it can be concluded that the application of 150:100:150 kg/ha NPK along with the foliar application of GA₃ @ 100 ppm + NAA @ 50 ppm at 35 and 55 days after transplanting is more effective for getting higher growth, yield and quality of hybrid brinjal under net house conditions and holds the vast potential for future.

Competing Interests

Authors have declared that no competing interests exist

Authors' Contributions

'Author A' designed the study, performed the statistical analysis, wrote the protocol and the first draft of the manuscript. 'Author B', 'Author C', 'Author D and 'Author E' managed the analyses of the study. All authors read and approved the final manuscript.

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