

Table 1 List of treatments and application doses

Treatments	Concentration (ppm)
T ₁	Control (Spraying distilled water)
T ₂	GA ₃ -50 ppm
T ₃	GA ₃ -75 ppm
T ₄	GA ₃ -100 ppm
T ₅	NAA-50 ppm
T ₆	NAA-75 ppm
T ₇	NAA-100 ppm

2.3 Cultural practices

Standard agronomic practices were followed throughout the experimental period. Land preparation involved deep ploughing followed by harrowing to make soil free from large soil clods and weeds prior to transplanting. Seedlings of uniform size and age were transplanted carefully. Fertilizers were applied according to recommended doses, with basal and topdressing applications. Irrigation was provided immediately after transplanting to maintain adequate soil moisture, then it was given at 7-8 days interval. Weeding and plant protection measures were carried out uniformly across all plots to minimize biotic stress.

2.4 Data collection and measurements

Data were recorded from central 2 plants per plot resulting in a total of 42 sampled plants. Observations were taken at 15 days after treatment (DAT), 30 DAT and at harvest. Growth parameters included peduncle height, number of leaves, number of branches and canopy cover. Yield attributes such as number of inflorescences, pods per inflorescence, seeds per pod, Thousand Grain Weight (TGW) and seed yield per plant were recorded following standard measurement procedures.

2.5 Statistical analysis

Data entry was done with the help of MS Excel following standard format then data were subjected to analysis of variance (ANOVA) appropriate to one-way randomized complete block design technique using RStudio. All the analyzed data were subjected to Duncan's Multiple Range Test (DMRT) for mean comparison at 5% level of significance and findings were discussed related with available literature (Gomez and Gomez, 1984).

3 Results and Analysis

3.1 Growth parameters

3.1.1 Peduncle height

The result showed that peduncle height was significantly influenced by the application of different concentrations of GA₃ and NAA (Table 2). At 15 DAT, the maximum peduncle height was recorded from GA₃ at 50 ppm (106.33 cm) followed by GA₃ at 100 ppm (96.33 cm) which was statistically similar with NAA at 100 ppm (87 cm). Monoruzzaman et al. (2019) also reported the maximum peduncle height from GA₃ at 50 ppm. The control treatment gave the lowest peduncle height (58.67 cm) which was statistically at par with NAA at 50 ppm (61.67 cm). At 30 DAT, the maximum peduncle height was recorded from GA₃ at 100 ppm (136.33 ppm) which was statistically similar with GA₃ at 50 ppm (118.83 cm) whereas the minimum peduncle height was recorded from control treatment (95.33 cm).

At harvest, the mean peduncle height was found to be 121.61 cm. The maximum peduncle height was recorded from GA₃ at 100 ppm (136.33 cm) which was statistically similar with NAA at 100 ppm (130.33 cm). The minimum peduncle height was recorded from control treatment (110.33 cm) which was statistically at par with NAA at 50 ppm (113 cm) and NAA at 75 ppm (117.33 cm). However, the minimum peduncle height was recorded all in control treatment at 15 DAT, 30 DAT and a harvest.