

**Effect of integrated nutrient management
on growth, yield and quality of okra
[*Abelmoschus esculentus* (L.) Moench]**

**SUMMARY
of
THESIS**

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Summary

The present investigation entitled “**Effect of integrated nutrient management on growth, yield and quality of okra [*Abelmoschus esculentus* (L.) Moench]**” was carried out at Horticulture Research-II, Department of Applied Plant Science (Horticulture), School for Bioscience & Biotechnology, Bhasaheb Ambedker, (A Central University) Vidya Vihar, raebareli Road, Lucknow -226 025 during the year 2015-16 and 2016-17, respectively. The experiment was laid out in Randomized Block Design with three replication and nineteen different treatment combination. The studies were concentrated on plant vegetative growth, yield and quality. The salient features of the findings of the investigation are summarized below:-

- ❖ The maximum plant height at 30, 60 and 90 DAS was obtained under the treatment T₁₃ followed by T₉, respectively as compared to the treatment T₀ (control).
- ❖ The maximum number of branch per plant was found under the treatment T₁₃ followed by T₉ and T₁₇ respectively as compared to the treatment T₀ (control).
- ❖ The maximum stem diameter (mm) was noted under the treatment T₁₃ followed by T₉, T₁₇ and T₁₈ respectively as compared to the control (T₀) treatment.
- ❖ The maximum number of flower buds were recorded with T₁₃ closely followed by T₉ and T₁₇ while minimum number of flower buds were recorded with T₀ (control).
- ❖ The maximum leaf area in cm² were found under treatment T₁₃ closely followed by T₉ and T₁₇ while minimum leaf area were recorded with T₀ (control) respectively.
- ❖ The minimum days to 50% flowering were recorded with the application of T₁₃ closely followed by T₉, T₁₇ and T₁₈. The maximum days to 50% flowering was found under the treatment T₀ (control).

- ❖ The maximum number of fruit per plant was recorded under the treatment T₁₃. The minimum number of fruit per plant was recorded in treatment T₀ (control).
- ❖ The maximum fruit yield per plant was increased significantly under treatment T₁₃ followed by T₉, T₁₇ and T₁₈ respectively as compared to control (T₀) treatment.
- ❖ The highest fruit yield per plot was recorded under the treatment T₁₃ while the minimum fruit yield per plot were observed in T₀ (control) treatment.
- ❖ The maximum fruit yield per hectare was recorded under the treatment T₁₃ while the minimum fruit yield per hectare was recorded in treatment T₀ (control).
- ❖ The maximum fruit length was recorded under the treatment T₉ closely followed by T₁₃ and T₁₇ while the minimum values fruit length was recorded in T₀ (control) treatment.
- ❖ The data presented in above table clearly indicated that the fruit diameter was recorded under treatment T₉ closely followed by T₁₃ and T₁₇ while the minimum values fruit length was recorded in T₀ (control) treatment.
- ❖ The maximum fruit fresh weight was recorded under the treatment T₁₃ while the minimum values fruit fresh weight was recorded in T₀ (control).
- ❖ The maximum fruit dry weight was recorded under the treatment T₁₃ while the minimum fruit dry weight was recorded in T₀ (control).
- ❖ The minimum acidity was recorded under the treatment T₁₃ closely followed by T₉ and T₁₇ while the maximum acidity was recorded in T₀ (control) treatment.
- ❖ The maximum T.S.S. was obtained by the use of T₁₃ closely followed by T₉ and T₁₇ respectively as compared to control treatment (T₀).
- ❖ It was further observed that use of T₁₃ proved to be more useful in improving ascorbic acid values with respect to ascorbic acid mg/100g was also found to

be at par with T₉. The minimum ascorbic acid content of okra was observed with T₀ (control) treatment.

- ❖ The data indicated that maximum reducing sugar was noticed under the treatment T₁₃ which was significantly highest closely followed by T₉ and T₁₇. The minimum values were recorded under the control treatment T₀.
- ❖ The maximum non reducing sugar was recorded with T₁₃ closely followed by T₉ and T₁₇ while minimum non reducing sugar was recorded with T₀ (control).
- ❖ The maximum total sugars was recorded with T₁₃ while minimum total sugars was recorded with T₀ (control) respectively.
- ❖ The maximum Protein percent was recorded with T₁₃ closely followed by T₉ and T₁₇ while minimum protein was recorded with T₀ (control) respectively.
- ❖ The maximum phosphorus content of okra was recorded with the application of T₁₃ which was significantly highest closely followed by T₉ and T₁₇. The minimum phosphorus content of okra was observed with T₀ (control) treatment.
- ❖ The highest calcium content of okra was recorded with the application of T₁₃ which was significantly highest closely followed by T₉ and T₁₇ while minimum calcium content of okra was observed with T₀ (control) treatment in both the year of investigation.
- ❖ The maximum magnesium content of okra were recorded with the application of T₁₃ which was significantly highest while minimum magnesium content of okra was observed with T₀ (control) treatment in both the year of investigation.