ABSTRACT
"STUDIES ON RESPONSE OF DIFFERENT PLANTING DENSITIES AND NITROGEN LEVELS ON SEED YIELD OF OKRA (ABELMOSCHUS ESCULENTUS (L.) MOENCH)"

BY
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The present investigation entitled “Studies on response of different planting densities and nitrogen levels on seed yield of okra (Abelmoschus esculentus (L.) Moench)” was conducted during 2004 and 2005 to optimized plant density along with nitrogen levels for maximum okra seed production with highest economic benefit. The experiment was laid-out in Factorial Randomized Block Design along with two factors - plant density and nitrogen levels, allocating plant spacing (45 cm x 25 cm, 60 cm x 15 cm and 60 cm x 25 cm) to the first factor and nitrogen levels (40, 80, 120 and 160 kg/ha) to the second factor with three replication.

The result of experiment showed that growth, flowering, yield and yield attributes and quality characters were affected due to various treatments. With the adoption of plant spacing (60 x 25 cm) the plant height, number of branches per plant, days to fifty percent flowering, length of fruit, number of seeds per fruit, weight of seeds, fruit yield, seed yield per hectare, individual first to fifth fruit seed content, seed weight, test weight and seed viability were found maximum while, minimum with 60 x 15 cm plant spacing during both the years.

The plant height, number of branches per plant, days to fifty per cent flowering, length of fruit, number of seeds per fruit, weight of seeds, fruit yield, seed yield per hectare, individual first to fifth fruit seed content and seed weight increased with corresponding increase in nitrogen levels and maximum with 160...
kg N/ha. Where test weight and seed viability were higher with 120 and 160 kg N/ha application. The interaction effect of 60 × 25 cm plant spacing and 160 kg N/ha found best for all the growth and yield parameters.

The highest seed yield of 15.74 q/ha and 15.07 q/ha was obtained with 60 × 25 cm plant spacing and minimum with 60 × 15 cm plant spacing. The nitrogen level 160 kg/ha produced highest seed yield (19.48 kg/ha and 18.94 q/ha) whereas, 40 kg/ha produced minimum. The treatment combination 60 × 25 cm plant spacing with 160 kg N/ha produced maximum seed yield (20.11 q/ha and 19.59 q/ha) and 60 × 15 cm plant spacing with 40 kg N/ha produced minimum seed yield.

The treatment that produced the maximum seed yield also given highest gross and net return i.e. 60 × 25 cm plant spacing with 160 kg N/ha. While, maximum net return per rupee invested was found with 60 × 25 cm plant spacing with 120 kg N/ha.

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