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RESEARCH PAPER

Growth, yield, quality and nitrogen uptake of various genotypes of mustard (*Brassica juncea* L.) as influenced by varying nitrogen levels under late sown conditions in Eastern Uttar Pradesh

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Abstract : The field experiment conducted at Narendra Dev University of Agriculture and Technology Kumarganj, Faizabad, U.P. (26.5^{0}N, 82.12 ^{0} E and an altitude of 113 m above mean sea level), from 2004-05 to 2005-06 on silt loam soil revealed that the highest mean dry matter accumulation of 87.30 g/plant in mustard was recorded with 120 kg N/ha which was 36.1 and 26.0 % higher as compared to control and 30 kg N/ ha, respectively. The highest seed and oil yield of 19.78 and 7.57q/ha, respectively was obtained with 120 kg N/ha which was significantly higher as compared to all the lower doses including control. But the seed yield was only 1.6 q/ha more over 90 kg N/ha and the per cent increase over control with 90 kg and 120 kg/ha was 19.8 and 17.8, respectively. The highest total nitrogen uptake (106.32 kg/ha) was also reported with 120 kg N/ha which was significantly superior over rest of the treatments. Whereas, among the varieties Urvashi registered significantly more number of branches and dry matter accumulation/plant as compared to all other varieties. The next in the order was Maya. The plant height was highest in case of Maya (176.6cm) followed by Vardan and the smallest plants were noticed in Urvashi with highest (4.35) leaf area index. Urvashi registered the highest mean seed yield (14.50 q/ha) and maximum oil yield (5.68q/ha) which were significantly superior over Vardan and Narendra Rai but statistically at par with Maya (13.94 q/ha). All the yield attributing characters *viz.*, number of siliquae / plant, siliqua length, seeds /siliqua and 1000 seed weight were also statistically higher under Urvashi followed by Maya. Narendra Rai gave the lowest oil yield and next in order were Vardan and Maya. The per cent increase in oil yield of Urvashi over Narendra Rai, Vardan and Maya was to the tune of 21.1, 9.9 and 8.4, respectively. Urvashi also registered the highest nitrogen uptake (75.84 kg/ha) which was significantly superior over Vardan and Narendra Rai but statistically at par with Maya (73.12 kg/ha).

Key Words : Mustard, Seed yield, Oil yield, Nitrogen uptake

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