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Full Length Research Paper

Sesame (*Sesamum indicum* L.) weed infestation, yield and yield components as influenced by sowing method and seed rate in a Sudan Savanna agro-ecology of Nigeria

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Abstract

An experiment on the influence of seed rate and sowing method on sesame (*Sesamum indicum* L.) weed infestation, yield and yield components was conducted at Maiduguri, Nigeria, during the 2001 and 2002 rainy seasons. A split-plot design was used such that method of planting was allocated to main plots and seed rate was assigned to sub-plots and replicated three times. The site was harrowed, leveled properly using a hand hoe and then marked out. The size of each sub-plot measured 6 x 8 m leaving a distance of 1 m between replications and 0.5 m between sub-plots. Seeds variety Gwoza Local were planted as broadcast and drill at the rate of 3, 6, 9, 12 and 15 Kg/ha respectively. Fertilizer Urea (46% N) and Single Superphosphate (18% P₂O₅) were used to supply 75 Kg N/ha and 50 Kg P/ha first at planting and the second dose at 6 weeks after sowing (WAS). Weeding was carried out using a hand hoe. Data taken included soil analysis of the experimental site, plant height, number of flowers per plant, weed cover score, weed dry matter, number of pods per plant and grain yield respectively. Results showed that broadcasting method of sowing produced taller plants in 2002 and greater number of flowers and pods per plant in both years and the average of two years data significantly higher weed cover and weed dry matter in 2001 and 2002 and their combined data compared with drilling method. Plant height, number of flowers and pods per plant decreased with increase in seed rate with 15 kg/ha producing significantly lowest of these characters in 2001 and the average of two years data. The amount of weed dry matter and weed cover decreased with increase in seed rate up to 12 Kg/ha with 15 Kg/ha producing the highest in 2001, 2002 and the average of two years data. Similarly, seed rate of 6 Kg/ha produced the highest seed yield compared with higher seed rates in the two years and only in the data on the average of the two years that differences in yield were significant. From this study, best weed suppression and highest yield was obtained

from drilling method at seed rate of 6 Kg/ha.

Key words: Sesame production, sowing methods, seed rates, weed control, seed yield.

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