

**PENGARUH JARAK TANAM DAN LEVEL PUPUK TERHADAP  
PERTUMBUHAN DAN PRODUKSI TANAMAN  
*Sorghum bicolor* L. VARIETAS SUPER 2  
PADA RATUN KETIGA**

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**INTISARI**

Penelitian ini bertujuan untuk mengetahui pengaruh jarak tanam dan level pupuk majemuk NPK terhadap pertumbuhan dan produksi tanaman *Sorghum bicolor* L. varietas super 2 pada ratun ketiga. Penelitian menggunakan rancangan split blok dengan 2 faktor, bila terjadi perbedaan yang nyata dilanjutkan dengan uji Duncan's Multiple Range Test (DMRT). Faktor utama yaitu jarak tanam (J) yang terdiri dari J1 (90 X 20 cm), J2 (75 x 25 cm) dan J3 (60 x 30 cm). Faktor kedua yaitu level pupuk majemuk NPK yang terdiri dari P1 (0 kg/ha), P2 (100 kg/ha) dan P3 (200 kg/ha). Masing-masing perlakuan dilakukan 3 ulangan. Hasil penelitian menunjukkan bahwa jarak tanam berpengaruh nyata ( $P < 0,05$ ) pada jumlah anakan. Jumlah anakan tertinggi pada perlakuan J3 (4 anakan). Pemberian level pupuk majemuk NPK berpengaruh nyata ( $P < 0,05$ ) pada tinggi tanaman, jumlah anakan, produksi segar, produksi bahan kering (BK) dan produksi bahan organik (BO). Tinggi tanaman tertinggi pada perlakuan P3 (198,56 cm). Jumlah anakan tertinggi pada perlakuan P2 dan P3 (3,44 dan 3,67 anakan). Produksi segar tertinggi pada perlakuan P3 (9,63 ton/ha). Produksi bahan kering tertinggi pada perlakuan P3 (2,32 ton/ha). Produksi bahan organik tertinggi pada perlakuan P2 dan P3 (1,93 dan 2,16 ton/ha). Penggunaan jarak tanam 60 x 30 cm dan pemberian level pupuk baik 100 kg/ha maupun 200 kg/ha menghasilkan jumlah anakan tertinggi yaitu 4 dan 5 anakan. Disimpulkan bahwa penggunaan jarak tanam 60 x 30 cm mampu meningkatkan jumlah anakan dan penggunaan pupuk majemuk NPK sampai 100 kg/ha mampu meningkatkan tinggi tanaman, jumlah anakan, produksi segar, produksi bahan kering dan bahan organik, tetapi produksi bahan kering dapat ditingkatkan dengan pemberian pupuk sampai 200 kg/ha.

**Kata Kunci** : Jarak tanam, Level pupuk, Pertumbuhan, Produksi, Sorgum.

**EFFECT OF PLANT SPACING AND FERTILIZER LEVEL ON THE  
GROWTH AND PLANTS PRODUCTION OF *Sorghum bicolor* L.  
VARIETIES SUPER 2 ON THE THIRD RĀTOON**

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**ABSTRACT**

This study aimed to determine the effects of plant spacing and compound fertilizer NPK application on the growth and production of *Sorghum bicolor* L. super 2 varieties on the third ratoon. This study was designed in split block with 2 factors, if there were significant differences followed by Duncan's Multiple Range Test (DMRT). The main factors was plant spacing (J) consisted of 3 levels : J1 (90 x 20 cm), J2 (75 x 25 cm), and J3 (60 x 30 cm). The secondary factor was the level of compound fertilizer NPK that consisted of 3 levels : P1 (0 kg/ha), P2 (100 kg/ha), and P3 (200 kg/ha). Each treatment performed 3 replications. The results showed that plant spacing had significantly ( $P < 0.05$ ) effect on the number of tillers. The highest number of tillers was on J3 (4 tillers). The application of compound fertilizer NPK levels had significantly ( $P < 0.05$ ) effect on plant height, number of tillers, fresh production, dry matter production (BK) and organic material production (BO). The highest of plant height was on P3 (198.56 cm). The highest of number of tillers were on P2 and P3 (3.44 and 3.67 tillers). The highest of fresh production was on P3 (9.63 tons/ha). The highest of dry matter production was on P3 (2.32 tons/ha). The highest of organic matter production were on P2 and P3 (1.93 and 2.16 tons/ha). Plant spacing at 60 x 30 cm with 100 kg/ha and 200 kg/ha of compound fertilizer NPK had the highest number of tillers (4 and 5 tillers). The conclusion of the study was the application of plant spacing on 60 x 30 cm can increase the number of tillers and the application of compound fertilizer NPK up to 100 kg/ha can increase of plant height, number of tillers, fresh production, dry and organic matter production, but dry matter production can be increased the application of compound fertilizer NPK up to 200 kg/ha.

**Keywords:** Plant spacing, Fertilizer level, Growth, Production, Sorghum.