

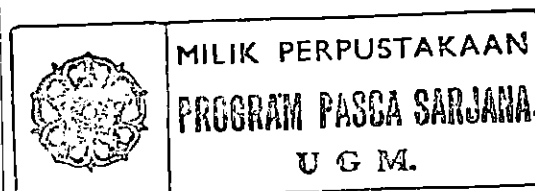
PENGARUH FREKUENSI PEMUPUKAN NITROGEN PADA BERBAGAI FASE PERTUMBUHAN TERHADAP SERAPAN N, PERTUMBUHAN DAN HASIL TIGA VARIETAS JAGUNG

INTISARI

Tujuan penelitian ini untuk mengetahui frekuensi pemupukan nitrogen yang paling baik terhadap serapan nitrogen, pertumbuhan dan hasil tanaman jagung dan untuk mengetahui varietas tanaman jagung yang dapat menghasilkan serapan nitrogen, pertumbuhan dan hasil paling tinggi. Penelitian dilaksanakan di Kebun Pendidikan Penelitian dan Pengembangan Pertanian (KP4) Universitas Gadjah Mada di Kalitirto, Berbah, Sleman, Yogyakarta dari Juli sampai Oktober 2002. Percobaan disusun dalam rancangan petak terbagi dengan rancangan acak kelompok lengkap sebagai rancangan dasar yang terdiri dari 3x3 faktorial yang diulang tiga kali. Petak utama adalah varietas jagung yaitu jagung genjah, jagung sedang dan jagung dalam. Anak petak adalah frekuensi pemupukan nitrogen yaitu pemupukan nitrogen satu kali saat tanam; pemupukan nitrogen dua kali, saat tanam dan umur 30 hari; pemupukan nitrogen tiga kali, saat tanam, umur 30 hari dan menjelang keluar bunga jantan.

Hasil penelitian menunjukkan bahwa varietas jagung dalam (Bisma) menghasilkan serapan nitrogen dan pertumbuhan tertinggi, sedangkan hasil biji kering pipilan tertinggi dihasilkan jagung varietas sedang (Arjuna). Selain itu frekuensi pemupukan nitrogen tiga kali yaitu pada saat tanam, umur 30 hari dan menjelang keluar bunga jantan masing-masing $\frac{1}{3}$ dosis mampu meningkatkan serapan nitrogen dan hasil bobot biji kering per hektar tanaman jagung varietas genjah (Pulut), sedang (Arjuna) dan dalam (Bisma), sedangkan frekuensi pemupukan nitrogen dua kali yaitu pada saat tanam dan umur 30 hari masing-masing $\frac{1}{2}$ dosis hanya meningkatkan pertumbuhan pada fase vegetatif.

Kata kunci: nitrogen, varietas jagung, frekuensi pemupukan



EFFECT OF SPLIT NITROGEN APPLICATION AT VARIOUS GROWTH STAGE ON N UPTAKE, GROWTH AND YIELD OF THREE MAIZE VARIETIES

ABSTRACT

This experiment aimed to determine the best split nitrogen application on nitrogen uptake, growth and yield of maize and to determine the highest nitrogen uptake, growth and yield of three varieties of maize. The experiment was carried out in the experimental station (KP4) of Gadjah Mada University in Kalitirto, Berbah, Sleman, Yogyakarta from July until October 2002. The treatment were arranged in split plot design consisted of 3x3 factorial with three replication. The main plot were variety i.e. maize of early mature, maize of medium mature and maize of late mature. The sub plot were nitrogen application i.e. nitrogen application one time at planting; nitrogen application two times at planting and 30 days after planting; and nitrogen application three times at planting, 30 days after planting and when the tassel is visible.

The result showed that the highest nitrogen uptake and growth were result from Bisma variety (maize of late mature), whereas the highest dry weight of seeds were result from Arjuna variety (maize of medium mature). Besides that, split nitrogen application three times i.e. at planting, 30 days after planting and when the tassel is visible with $\frac{1}{3}$ dosage each, can increase nitrogen uptake and yield of dry weight of seeds per hectare of maize for Pulut variety (maize of early mature), Arjuna variety (maize of medium mature) and Bisma variety (maize of late mature), whereas split nitrogen application two times i.e. at planting and 30 days after planting with $\frac{1}{2}$ dosage each can increase growth at vegetative stage only.

Key words: nitrogen; maize variety, nitrogen application