

**EFFECT OF INTERCROPPING MUNGBEAN WITH MAIZE ON YIELD
AND YIELD COMPONENTS
BY**

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ABSTRACT

Two field experiments were conducted in 2003 and 2004 seasons in the farm of Sers El-Lian Agricultural Research Station, A.R.C. Minufiya Governorate, A.R.E. to evaluate three maize varieties under three levels of nitrogen fertilizer and intercropping maize with mungbean at different patterns and their effect on, yield and its components of the two crops. The results can be summarized as follows:

- T.W.C. 321 variety gave the highest ear length and ear weight whereas S.C. 10 variety surpassed significantly the other maize varieties in ear diameter, shelling percentage, 100-grain weight and grain yield/fed.
- Nitrogen application up to 140 kg N/fed caused a significant increase in ear characters, 100-grain weight and grain yield/fed.
- Intercropping pattern 2: 1 significantly surpassed the other patterns in yield and yield components of maize S.C. 10 maize variety with 140 kg N/feddan when intercropped with mungbean under 2:3 pattern gave the greatest grain yield /feddan.
- Mungbean plants when grown with T.W.C. 321 maize variety gave the highest number of pods and seeds/plant seeds/plant whereas; when intercropped with S.C.10variety exceeded seed yield/fed
- Yield and yield components of mungbean were increased by increasing N level. The increase in N level from 100 to 120 up to 140 kg N/fed increased seed yield by 14.67 and 26.78%, respectively in the first season and 7.58 and 18.67%, in the second season.
- Intercropping pattern of 2:1 surpassed significantly the other patterns in number of pods and seeds/plant and 100-seed weight in the two seasons. Intercropping pattern of 2: 3 gave the maximum seed yield/fed The increases were 34.56 and 15.43% in the first season over those grown in 2: 1 and 2: 2 pattern, respectively and 47.68 and 16.79% in the second season .
- S.C. 10 or T.W.C 321 maize varieties with applied 140 kg N/feddan under 2:3 patterns gave the greatest seed yield of mungbean.

INTRODUCTION

Intercropping maize with mungbean may allow better utilization of available environmental parameters.