

**THE EFFECT OF ORGINIC MATTER AND POTASSIUM
FERTILIZERS ON GROWTH AND YIELD OF BROAD BEAN
(*Vicia faba* L.)**

Luay D. Farhan

University of Diyala-College of Agriculture

ABSTRACT

Field experiment was conducted in the farm of Agriculture College, Diyala University during winter season 2010 – 2011 in silty clay soil to investigate the effect of potassium and organic manure on growth and yield of broad bean – Spanish cultivar (barcelona). Three poultry residues levels (0,2.5 and 5 ton.ha⁻¹ and three levels of potassium fertilizers levels (0,50,75kg . ha⁻¹)were used . RCBD in a factorial experiment was used , with three replicates. Results was showed that a significant differences among organic residue levels the addition with 5 tons . ha⁻¹ was significantly the best on plant height , number of branches , dry weight , %K in shoot , leaves chlorophyll content , weight of 1000 grains , and total yield compared with no addition , that gives lowest means in the studied parameters . On the other hand the results revealed a significant differences among potassium levels in all growth and yield parameters , the third level of potassium (75)kg k.ha⁻¹ was significantly the best in plant height, number of branches , dry weight , % K in shoot , leaves chlorophyll content , weight of 1000 grains and total yield , compared with no addition . two interaction treatment (5 tons .ha⁻¹ + 75 kg . ha⁻¹) and (5tons , ha⁻¹ +50 kg k. ha⁻¹) was significantly the best in most of the studied characters.

Key words: broad bean , organic manure , potassium manure .