



## **Comparative Study of Synthetic Fertilizers and Organic Manures on Some Mung bean (*Vigna radiata*(L.) Wilczek) Genotypes 2\_Yield, Yield Component and Seed Quality Characters**

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**Abstract :** In the light of recent scientific discoveries that let us understanding the role of management fertilization practices in maintain soil health and increasing productivity as well as seed quality of several crops, consequently we need to a change the agricultural strategy for achieving sustainable agriculture production, preserving soil fertility, producing healthy food free with chemical contamination, reduce pollution and increasing farmers return. Therefore, the present work was conducted in field experiment at Agriculture and Research Station, College of Food and Agriculture Sciences, Derab, King Saud University, Saudi Arabia, during 2014 and 2015 seasons, to evaluate the suitable fertilizers doses for sustaining high crop yield of mungbean and restore soil fertility. The treatments included two mungbean genotypes i.e., (Kawmy-1and VC- 2010) and five fertilization treatments *viz.*,recommended dose of NPK fertilizer 150: 150: 60 kg ha<sup>-1</sup> (T1- control); organic manure 10 t ha<sup>-1</sup>(T2); recommended dose of chemical fertilizer (NPK) + Biofertilizers (T3); organic manure 10 t ha<sup>-1</sup> + bio fertilizer (T4) and organic manure 10 t ha<sup>-1</sup> + 50 % of recommended dose of NPK fertilizer + bio fertilizer (T5). Results concluded that although reducing dose of synthetic fertilizers by 50 % and replaced by organic fertilizers (T5), could compensate the reduction of yield and yield component characters and achieve the highest seed yield and quality.

**Key Words :** Mung bean; Organic manures; Inorganic fertilizers; Bio-fertilizers; Compost.