New Agriculturist, **28**(1) : 227–233, 2017 http://biovedjournal.org/

# Studies on integrated use of organic manure and inorganic fertilizer on yield of soybean (*Glycine max* L.) under rainfed condition

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Received November 17, 2016 and Accepted March 5, 2017

**ABSTRACT :** A field experiment was conducted at the Agro forestry field unit, GKVK, University of Agricultural Sciences, Bangalore, to study the integrated nutrient management to enhance the productivity of soybean under rainfed condition during *kharif* season 2008. The results showed that application of levels of FYM as 15 t FYM/ha ($M_3$) gave 2.47%, and 6.97%, more seed yield compared than other 10 t FYM/ha ($M_2$), and 5 t FYM/ha ($M_1$), respectively and significantly maximum growth and yield attributes plant height (12.10 cm, 22.70 cm, 32.00 cm, 33.20 cm at 20, 40, 60, 80 DAS, respectively), number of leaves per plant (12.10, 26.30 at 20, 60 DAS), number of branches (2.85), dry matter production (2.85 g), leaf area index (1.62), number of pods/plant (34.30), pod weight per plant (10.80 g), pod length (4.80 cm), number of seeds/pod (3.10), seed yield (1949 kg/ha), stalk yield (3163 kg/ha), than other application of FYM treatments. While application of 150% RDF ($F_3$) recorded significantly maximum, growth and yield attributes, plant height (13.40 cm, 24.50 cm, 34.30 cm, 35.40 cm at 20, 40, 60, 80 DAS, respectively), number of leaves per plant (13.20, 30.00 at 20, 60 DAS), number of branches(3.03), dry matter production(2.85 g), leaf area index(1.63), number of pods/plant (35.60), pod weight per plant (11.40 g), pod length (5.00 cm), number of seeds/pod (3.20), seed yield (2447 kg/ha), stalk yield (3553 kg/ha), over rest of two application of fertilizers. The 150 % RDF ($F_3$) recorded higher seed yield that increased to the tune of at 13.81, 28.93 and 48.63 % over the application of fertilizers 100 % RDF ($F_1$), 50 % RDF ($F_1$) and control 0 % RDF ($F_0$), respectively.

**Key Words:** Organic manure, inorganic fertilizer, soybean,FYM, recommended dose of fertilizer (RDF).