

RESEARCH ARTICLE :

Effect of organic and inorganic nutrient sources on reproductive, yield and economics of acid lime cv. kagzi lime

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ARTICLE CHRONICLE :

Received :

11.07.2017;

Accepted :

25.08.2017

KEY WORDS :

Acid lime, Inorganic, organic, Biofertilizer, Yield

SUMMARY : A field experiment was carried out at *Instructional cum Research Fruit Orchard* Department of Fruit Science, College of Horticulture Mandasaur (M.P.) during the year of 2016-17 on well established ten years old orchard of acid lime planted at 6.0 m X 6.0 m. The experiment comprised fourteen treatments including absolute control viz., T_0 = Control, T_1 = RDF (Recommended dose of fertilizers- 900:400:400 N:P:K g/plant), T_2 = 75 % RDF + 3 Kg Vermicompost + 10 Kg FYM, T_3 = 50 % RDF + 7 Kg Vermicompost + 15Kg FYM, T_4 = 25 % RDF + 10 Kg Vermicompost+ 20 Kg FYM, T_5 = 75 % RDF + 3 Kg Vermicompost + 10 Kg FYM + 150 g VAM, T_6 = 50 % RDF + 7 Kg Vermicompost + 15 Kg FYM + 150 g VAM, T_7 = 25 % RDF + 10 Kg Vermicompost + 20 Kg FYM+ 150 g VAM, T_8 = 75 % RDF+ 3 Kg Vermicompost + 10 Kg FYM + 25 g Azotobactor, T_9 = 50 % RDF + 7 Kg Vermicompost+ 15 Kg FYM + 25 g Azotobactor, T_{10} = 25 % RDF + 10 Kg Vermicompost + 20 Kg FYM + 25 g Azotobactor, T_{11} = 75 % RDF + 3 Kg Vermicompost + 10 Kg FYM + 150 g VAM + 25 g Azotobactor, T_{12} = 50 % RDF + 7 Kg Vermicompost + 15 Kg FYM + 150 g VAM + 25 g Azotobactor, T_{13} = 25 % RDF + 10 Kg Vermicompost + 20 Kg FYM + 150 g VAM + 25 g Azotobactor. The results revealed that the soil application of 50 % RDF + 7 Kg vermicompost + 15 Kg FYM + 150 g VAM + 25 g Azotobactor (T_{12}) was significantly increased the value of the fruit setting (62.71%), minimum fruit drop (32.40 %), maximum fruit retention (67.60 %), fruit weight (54.14 g), number of fruit per plant (967.06), yield per plant (52.35 kg). The maximum gross income (Rs. 363439.9) and net income (Rs. 301060.1) was obtained from application of 50 % RDF + 7 Kg Vermicompost + 15 Kg FYM + 150 g VAM + 25 g Azotobactor (T_{12}). Whereas, the most appropriate benefit cost ratio (5.15) was registered in T_{11} (75 % RDF + 3 kg vermicompost + 10 kg FYM + 150 g VAM + 25 g Azotobactor).

How to cite this article : Bhandari, J., Kanpure, R.N., Kachouli, B., Haldar, A. and Vasure, N. (2017). Effect of organic and inorganic nutrient sources on reproductive, yield and economics of acid lime cv. kagzi lime. *Agric. Update*, **12** (TECHSEAR-10) : 2908-2912.

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