Effect of Different Weed Control Methods on the Yield of Common Bean

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Abstract

Weeds are major biological constraint influencing bean production. Poor agronomic practices such as lack of effective weed control methods are the major cause of poor yields in beans Yield of dry bean can be reduced up to 85% due to long season weed competition. Yield per unit area can be increased through effective of weed control. An experiment was set up at the University of Embu with the general objective to evaluate the effectiveness of different weed management systems in bean production. The specific objectives were to determine the most appropriate type of weed management method in bean production, to evaluate the effect of different of weed control methods on yeild of bean and to evaluate the effect of weeds on different growth parameters of beans. The experiment was a randomized complete block design replicated three times. Treatments were : mulching, mechanical weeding, chemical weed control using bean clean at 200ml/20L water and a control experiment. The plots measured 2M by 2M while the crop spacing was 0.50M by 0.15M. Seven plants were sampled from every plot. The data was collected at an interval of one week on the following parameters: number of pods per plant, plant height, number of trifoliate leave, life biomass, dry mass and weed population. The data was subjected to ANOVA for analysis using (SAS) statistical analysis software version 9.2 while mean separation was done using least significant difference (LSD) at P<0.05. Results obtained indicated that weed population was lowest in the nweeded check with an average of 76 weeds per m^2 whereas the chemical weed had the lowest with 61 plant per m². The results also showed that mulching gave the highest plant height although it has no significant difference from the other treatments. Chemical weed control had the highest number of trifoliate leaves because the weeds were effectively controlled although it has no significant difference from the others.