

**Economic Impacts of Chemical Pesticides Use on Fadama
Crop Farming in Sudano-Sahelian Zone**

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ABSTRACT Primary data were collected from users and non-users of chemical pesticides in fadama farming. The data collected included number of plots, farm size, types of crops grown, prices and quantities of outputs of the farms. In addition, the application costs of pesticides (material cost, labour for applying and equipment) were collected from pesticides users. The data were analysed using descriptive and inferential statistics, partial budgetary and marginal analyses, and sensitivity and regression techniques. The results indicated that the chemical pesticides users operated smaller mean number of plots, larger mean farm size, obtained higher crop yield as such larger output per farmer. None of the chemical pesticides users used herbicides. Budgetary analysis and regression technique indicated that chemical pesticides use was economically rational at the present chemical pesticide technology, and relative input-output prices. An investment of one naira in chemical pesticides use returns 2.21naira in addition to the one naira invested, as such based on economics only their use should be encouraged. However, pesticides use will be irrational if *ceteris paribus*, prices of chemical pesticides rise by more than 86%.