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An economic analysis of intercrop cultivation in sugarcane field in Annagramam block of Cuddalore District, Tamil Nadu

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ABSTRACT

An attempt has been made in this paper to workout the economics of bio input usage for sugarcane and to evaluate the economic feasibility of intercrop cultivation in sugarcane field. In bio-input non adopter group, farmers who are cultivating intercrops realized a net income of Rs. 88321.17 per hectare, which is 7.08 per cent over adopters who are cultivating sugarcane as a single crop. The return on investment was high for bio-input adopter farms with intercrop and very low in bio-input non adopter farms without intercrop. The sugarcane growers were more benefited by cultivating either groundnut or blackgram instead of having sugarcane as monocrop.

Key words : Sugarcane, Intercrop, Costs and Returns, Economic feasibility, Partial budgeting.

Organic farming system in India is not new and is being followed from ancient time. It is a method of farming system which primarily aimed at cultivating the land and raising crops in such a way to keep the soil alive and in good health by use of organic wastes and other biological materials along with beneficial microbes (biofertilizers) to release nutrients to crops for increased sustainable production in an eco-friendly and pollution free environment. One of the basic principles of soil fertility management in organic systems is that plant nutrition depends on biologically derived nutrients instead of using readily soluble forms of nutrients, less available forms of nutrients such as those in bulky organic materials are used.

Organic manures or other natural inputs put focus on achieving maximum yield of a specific crop. Bio input usage is not a step back to traditional method but a modern approach. Bio-input usage replaces chemical nitrogen and phosphorus level by 25 per cent and restores natural fertility. Bio-inputs represent real opportunities on several levels, contributing to vibrant rural economies through sustainable development. The organically grown crops had higher yield (60 per cent) than crops grown with expensive chemical fertilizers (www.ofrf.org). India is the second largest producer of sugar next only to Brazil in the world and contributes around 1/5th of the world's sugar production. India, by contributing 20.4 per cent area and 18.6 per cent production ranks second among sugarcane growing countries of the world for both area and production of sugarcane (The Hindu Survey of Indian Agriculture, 2005).

Tamilnadu ranks first in productivity of sugarcane for the past several years. Sugarcane is cultivated in an area of about three lakh hectares, which constitutes about two per cent of total cultivated area of the state. The scope for increasing area under sugarcane is very limited as the crop is water intensive and hence focus is mainly to sustain the production and productivity of sugarcane in the state. Since sugarcane is a crop which gives income after about a year of planting, there is a need to diversify the cropping system by introducing other crops, either in a sequence or as intercropping. This will not only generate mid season income for the farmers for meeting the expenses for sugarcane cultivation, but will also fulfill the household requirement of food, fibre and oilseeds, besides mitigating the illeffects of sugarcane monoculture. Therefore the sugarcane growers in the study area are cultivating blackgram and groundnut as intercrops.

Hence, an attempt has been made in this paper to workout the economics of bio input usage for sugarcane and to evaluate the economic feasibility of intercrop cultivation in sugarcane field.

METHODOLOGY

The selection of farmers was done using the stratified random sampling technique and the respondents were stratified on the basis of adoption of bio-input. In order to select the adopters, a list of farmers who are using bioinput for sugarcane cultivation was prepared for each of