

EVALUATION OF THE EFFECTS OF CATTLE URINE AND TOBACCO ASH ON COMMON BEANS APHIDS

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ABSTRACT

Common beans (*Phaseolus vulgaris*) is an annual legume and an important crop for human nutrition. It is a major source of protein, vitamin, and calorie provision in the world. The crop originated from South America and currently cultivated in all parts of the world. Like any other common crop, common beans production is facing various constraints and challenges such as effects of insect pests, decline on soil fertility and diseases. Pests cause serious economic losses to common beans farmers. They reduce yield, lower harvest quality and increase production cost by buying chemicals to control them. Other than being expensive to small scale farmers, chemicals have adverse effects on human, environment and non-target organisms if not properly used. Farmers may prefer using materials which are locally available such as cattle urine and tobacco ash to control insect pests. These materials are cheap, easy to apply, friendly to the environment, less harmful to humans and non-targeted organisms. The combination of cattle urine and tobacco ash can be applied to control a wide range of common beans insect pests and diseases.