

## **PRECISE-FERTILIZATION AS AN ADDED VALUE FOR FARM PRODUCTS BY INCREASING GLOBAL AWARENESS ON HEALTH AND ENVIRONMENTAL EFFECTS**

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### **Abstract**

Intensive nutrient managements for crop production are one of agriculture management strategies that are not yet widely adopted in most third world countries. Precise N Fertilization as a part of intensive nutrient managements is a great way to manage input efficiency; yet, the technology is feasible enough for farmers to apply, in order to increase the farm product quality while improve access in modern market. Nitrogen (N) required for plant growth and development in large numbers, but the plant is only capable of absorbing an average of less than 50% N provided through conventional fertilization. Greenhouse gases emissions are increasing mostly because of expanding use of N fertilizers, while the carcinogenic effect of N residue on farm products is a dangerous risk for human health. By increasing the awareness on health and environmental effects for farm products especially concerning precise N fertilization, consumer will get health benefit while producer will get an added value for their products. Thus, by applying better input efficiency farmers could simultaneously increase the price while meeting the higher consumer demands even with gradually stricter standards in term of farm product quality and market requirements.

Keywords: *Precise N Fertilization; farm product added value*

### **Introduction**

Agricultural input efficiency is technically one of the most important farm products daunting challenges, despite problems on falling prices and meeting gradually higher consumer demands. Respectively, by applying better input efficiency eventually farmers could simultaneously increase the price while meeting the higher consumer demands even with gradually stricter standards in term of product quality and market requirements. Precise agricultural soil management is an important approach to avoid excessive nitrogen.

### **Excessive Nitrogen Effect on Human Health**

The quality of vegetables is determined by several criteria which include physical integrity, color, and flavor. However, since the increased public awareness of health, consumer demands for better quality of vegetable product; some of these are the levels includes pesticide residues, heavy metals, and nitrates.

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