



# **BANANA**

## **Manure & Fertilizer Application**

### **Manure preparation and application**

**Bananas can produce good yields if well fed and managed. Feeding of the bananas can be done in different ways including the use of organic manure obtained from animal waste and crop residues and also with use of inorganic fertilizers.**



# ORGANIC MANURE

For better use efficiency and sustainability, it is advisable to integrate organic manure and inorganic fertilisers. Supplementing inorganic fertilisers with organic inputs such as external mulch and recycling banana residues helps build soil organic matter.

## ◆ COMPOST MANURE

Compost manure is a product of biological decomposition of organic materials. It helps improve the soil physical properties and increase its capacity to supply plant nutrients. The fertilizing quality of the compost manure in the soil depends on the composition of the materials used and the degree of decomposition. Below are the different composting techniques.

**Trash/crop residues:** Regular quantities of compost can be made from household organic trash or crop residues such as banana peelings, bean trash, groundnuts trash, coffee husks, chicken and goats droppings etc

**Vegetation compost:** This is made from fibrous material such as hedge cuttings, maize stalks, straw, plant material both dry and green, animal manure from e.g. cattle, sheep, goats, pigs, rabbits, poultry etc, top soil, wood ash or charcoal dust, water and a long sharp pointed stick.

**Sunken basket composting:** Composting materials are placed in a circular hole dug in the center of four perennial crop plants like bananas, mangoes, citrus, avocado etc. and then covered with topsoil.

**Trench composting:** Composting materials are placed in trenches usually dug between rows in established perennial crops like bananas and coffee and then covered with topsoil.

**Basket composting:** Fresh manure mixture from the enclosure is placed in baskets half-buried in garden plots and left to rot.

## ● FARMYARD/ANIMAL MANURE

This is made by composting the dung and urine of farm animals, particularly cattle, with any plant material such as straw, maize stalks, weeds, leaves, elephant grass that can rot. To obtain good farmyard manure with various plant nutrients, it is best to use a mixture of bedding materials. The bedding soaks up urine and droppings and reduces losses through leaching or volatilization of ammonia during drying out of the manure.



*A heap of farmyard (animal) manure covered with maize stalks. Compost should be kept moist by properly covering the material.*

## Proper manure preparation, handling and application



- Farmers with livestock are advised to keep the animals in an enclosure (zero grazing) to enable collection of urine and dung.




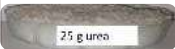


- Mix all the top soil with 2 basins of well decomposed manure and pour in the hole (to about half-full) to allow for water retention.

- Dig around the hole to get more top soil if the top soil is not enough.



# Cost of Applying Manure Vs Inorganic Fertilizers in a Banana Plantation Over a period of a Year

	Manure	Inorganic Fertilizer	Manure + Inorganic
Fertilizer accessible on market	Cattle Manure	MOP (for potassium)+Urea (for nitrogen)	Cattle Manure + MOP
How much to apply per mat	18 kgs (2 basins) of well decomposed manure	4.5kg (1/2 basin) of dry manure 126g MOP + 25g Urea	Apply 9 kilograms (1 basin) of dry manure + 95g of MOP
Locally available calibrated containers		  	
How much to apply per acre (450 mats)	8,100 Kilograms	2025 kg of manure + 57 kg of MOP+ 12 kg of Urea	4,050 kg of manure + 43 kg of MOP per acre
Price per kg (UGX)	Manure costs Shs 124	Fertiliser costs Shs 3000	
Frequency of application (per year)	Apply once (1 time) a year	Apply manure once and fertilizer twice a year	Apply manure once and MOP twice
Total cost of application ( per yr)	Shs 1, 004,400	Shs 665,100	Shs 760,200



For more information contact:  
 Banana Research Team,  
 National Agricultural Research Laboratories, Kawanda.  
 P.O.Box 7065, Kampala (U)  
 Tel: +256 414 699 242  
 www.banana.go.ug

 [info@banana.go.ug](mailto:info@banana.go.ug)  
 [Bananaaprogam](#)  
 [@NARObanana](#)  
 Banana2021/Manure