

Organic manure provides hope for poor farmers

➤ **AGRICULTURE** The sharp rise in fertiliser prices is forcing small holders to avoid them

BY STEVE MBOGO

Small holder farms feeling the pinch of high fertiliser prices could make huge savings when mass production of organic manure starts.

The concept is relatively new in Kenya and is currently being used by several flower and coffee farms.

The dramatic rise in the price of oil, which provides raw materials for fertilizers, has caused a doubling in their price. Small-scale farmers have been hardest hit due to their low spending power and this has forced them to avoid fertilizers, resulting in lower harvests.

Organic fertilizers on the other hand, are produced through a process known as vermicomposting. This is the use of earthworms to transform organic materials like farm and kitchen waste into rich, organic fertilizers. This can be done on the farm and requires less investment from the farmer.

Henry Wainwright of Real IPM, a consultancy for horticultural exporters, said construction costs for the facility which produces this type of compost is Sh6,000. Currently, a 50kg bag of fertilizer is going for Sh4,000.

Real IPM is promoting the production and use of this type of organic fertilizer, together with the Kenya Horticulture Development Programme (KHDP), a group that is supported by the United States development agency USAID.

Generally when worms are introduced to organic material, they consume it and produce a liquid known as leachate which is high in nutrients.

Leachate also generates rich compost from the worm casts which are left when all food material has been consumed.

This process happens in a vermicompost bed, a shallow container full of worms and organic waste materials. It is watered daily and must be sloped to ensure that the leachate drains down into a collection tank.

KHDP said the worm currently being used in Kenya is *Lumbricus rebellus* which is red in colour. These types of worms thrive in fruit wastes that contains sugar; such as coffee pulp, mango and avocado peels.

Small amounts of animal manure are added to increase the nitrogen content of the leachate, which is high in potassium and micronutrients, making it particularly good for flowering plants and fruit production.

But this organic fertilizer only contains moderate

amounts of phosphate and nitrogen and a farmer must supplement it with Nitrogen and phosphorus if growing green vegetables.

The leachate liquid can be applied by the usual spray method used in farms.

KHDP said the process of production only take about three months. The materials required for construction like wood, iron sheet and polythene are readily available to most small scale farmers.

A bed requires about 200 to 300 worms, which when introduced into the waste material under optimum conditions, produces organic fertilizer in three months.

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The production process involves introducing earthworms into materials like farm waste to make fertiliser