

An Agricultural Extension Initiative
of Dangote Fertiliser Limited

GOOD AGRONOMIC PRACTICES FOR YAM




**DANGOTE
FERTILISER**

Power to Farmers



Nigeria is the world's largest producer of yam. Yam, in the class of roots and tubers are primary agricultural commodities and a major staple crop in Nigeria. It is very popular and can be grown in any part of Nigeria provided adequate water and environmental conditions are favorable. However, it is mostly cultivated in Benue state. As a result of the state's significant yam production status among other things, it was named the food basket of the nation. In Nigeria, yam is a major source of income and has high cultural value, hence it is used in marriage ceremonies. Yam festival is held annually to celebrate its harvest in some parts of the country.

SITE SELECTION

Select a good fertile and well-drained soil for yam production. Though, yam can be cultivated in all types of soils. However, the level of inherent soil fertility will determine the growth and development of the yam tuber.

LAND PREPARATION

The land should be cleared by removing the shrubs from the farm or burning before mounds and ridges are made. Deep ploughing 15 - 20 cm with two ploughing and two harrowing will be enough for yam. Ridging should be constructed 60 or 90 cm apart. To minimize the soil erosion in sloppy land, contour ridging should be made.



PLANTING

Planting season: Early planting is in April depending on when rain starts and Late planting is in the month of October/November.

Yam is grown by planting pieces (setts) of tuber or small tubers saved from the previous season crop. Setts should be taken from healthy tuber of a healthy plant and treat the setts with mixture of 100 ml Chloropyrifos 48% EC and 100g Mancozeb 80% WP in 10 litres of water. Sprouting of setts takes long time from 1 month to 3 months. For pre-sprouting of setts, a shallow ditch should be constructed under shady area. Setts should be placed side by side in the ditch and covered with dry grasses and sprinkled water regularly.



After sprouting, sett are ready to be planted in the field. The most common varieties of yam are:

- White yam (*Dioscorea rotundata* Poir)
- Yellow yam (*Dioscorea cayenensis* Lam)
- Water yam (*Dioscorea alata* L.)
- Bitter yam (*Dioscorea dumetorum*)

The setts are planted on ridges, mounds or holes at an interval of 15 - 20 cm with the cut part facing up. One yam sett is planted in a hole and the size of the sett is recommended to be between 400 g to 500 g. Ridges are formed 1 m apart and 25 - 35 cm high; Stakes, 2 m high, are used for staking the plants before the vines start crawling on the ground.

FERTILISER MANAGEMENT

Fertiliser should be applied based on soil test recommendations. Apply FYM @ 25 tons/hectare at the time of field preparation. Potash is recommended to encourage optimum tuber bulking.

Yam needs 90 kg Nitrogen (200 kg Dangote urea), 50 kg Phosphorus (P_2O_5) and 75 kg Potash (K_2O). Half dose of Nitrogen, Potash and full dose of Phosphorus should be applied 2 months after sprout emergence. Remaining Nitrogen and Potash should be applied after 6 months of planting. Fertiliser should be placed 15 - 20 cm away from the base of the plant.



WEED MANAGEMENT

Timely weed management is crucial for yam production. Controlling weeds for the first 6 – 8 weeks after planting is important. Remove weed manually from furrows. Use selective contact herbicide Fluometuron at 2.0 kg /hectare or Metrobromuron and Metolachlor (2 + 2 kg/hectare) in the furrows during growth.



PEST AND DISEASE MANAGEMENT

Yam is infested by nematodes such as root knot nematode (*Meloidogyne spp*) and yam nematode (*Scutellonema bradys*), mealybug, yam beetle and anthracnose diseases. The best measures of control are the use of resistant and disease-free varieties and crop rotation practices. Destroy affected plant



parts at the beginning of infestation. Avoid excessive chemical pesticide spray and preserve natural enemies. A wide range of natural enemies that attack pest like: ladybird beetles, hover flies, lacewings and parasitic wasps can also be employed.

CROP MATURITY AND HARVESTING

In Nigeria, tubers planted between February and April, depending on weather conditions in the humid forest or savannah, are ready for harvest after 240 to 270 days of planting depending on variety. Carefully dig out the tubers without causing injury. Generally, a yield of 10 - 15 ton/hectare for white yam and 16 - 25 tons/hectare for water yam are obtained by good crop management.

