and light between the Red amaranthus plant and weeds. It also reduces pest and disease infestation at the early stages.

WEEK 8: CONTINUOUS PEST AND DISEASE MANAGEMENT

- Both organic and inorganic pesticides can be used to control pests and diseases.
- It is recommended to always seek advise from an agriculture extension worker on pest and disease identification and management.



Note: The farmer should monitor the field to ensure quick action is taken in case of break out of pests and diseases. The farmer must also mulch.

WEEK 10-15: HARVESTING

- Test the maturity of seed before it shutters by shaking the plant head. If ready, mature seeds will fall in your palms/hands.



Growing RED AMARANTHUS (*Ebbugga*) for Commercial seed production



CONTACT US:

National Agricultural Research Organisation (NARO)-Mukono ZARDI

Ntawo DFI Village Mukono.

Tel: +256 414 290232

Email: muzardi@naro.go.ug / director@muzardi.go.ug

Website: www.naro.go.ug/muzardi

Twitter: @MukonoZardi

Facebook: @muzardi

WEEK 15: SEED PROCESSING (VALUE ADDITION) AND STORAGE

Step 1:



Cut the whole plant from the bottom with a sickle and remove the tips of the head.

Step 2:



Place the harvested fingers/ heads on a clean tarpaulin and leave in direct sunlight for drying of the seed. Check if seed is dry by rubbing between palms. If seed sticks on your palm then it needs further drying, if it does not stick then it is dry. Alternatively use a moisture meter.

Step 3:



Pack the dry heads into a light pack and hit the pack gently until the seed separates from the husks.

Step 4:



Thresh to remove trash using clean containers.

Step 5:



Store clean seed on a raised surface in a cool, dry and well ventilated place.

Red amaranthus (*Amaranths*) is one of the common indigenous vegetables in Uganda. Access to the seed of Red amaranths is one of the major limitations to its production. In order to grow Red amaranths seed as a business, the following should be considered:

- Profitability compared to other seed crops
- Capital and skill required
- Available market and current weather conditions
- Registration process by the seed certification agencies.

WEEK 1: LAND CLEARANCE

- Remove all perennial weeds and any other obstacles from your field. The result should be a field that is ready for ploughing or use spraying of herbicides to kill the weeds i.e Glyphosate, Weedmaster, or Roundup.
- Do not burn the bushes because burning exposes the soil to erosion and also causes loss of soil nutrients.





WEEK 2: FIRST PLOUGHING AND GERMINATION TEST

- This is done before the onset of rains to turn plant material into organic manure while also breaking the soil to allow more water to enter. This process also increases the amount of air available in the soil.





- Depending on the resources available, the farmer can use a hand hoe, an ox plough or a tractor with a plough.

NB: A germination test should be carried out during this period to ensure that seeds are capable of germinating. It should also be of high germination percentage-not less than 85% in 2 weeks. Contact agro-dealers and seed producers for quality seed.

WEEK 3: SECOND PLOUGHING FOLLOWED BY HARROWING

- To obtain a finer tilth.



Remove any trash and other obstacles which can hinder seed germination.

WEEK 4-5: MANURE APPLICATION AND PLANTING

Farmers are encouraged to apply organic fertilizer to improve the soil fertility. This will result in higher yields.

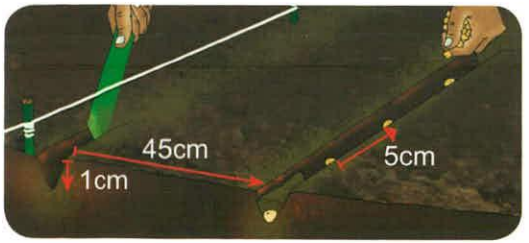
- Mix seed with soil/manure in a ratio of 1:4 (1 quantity of seed to 4 quantities of soil/manure) before planting to avoid congestion and seed wastage.





Inorganic fertilizers e.g UREA, NPK can also be used but only after advice from your agriculture extension worker or agro dealer.

Planting in lines:



- Use a string to make rows in your field. Spacing between rows should be 45cm x 5cm plant to plant.
- Use a stick to make a 1cm deep farrow following the string. Apply manure in the farrow then plant the seed and cover with light soil.
- Weeding should be done as soon as weeds emerge and especially before the flowering of weeds. This will reduce the spreading of the weeds and minimizes competition for nutrients