Land clearing

Land clearing

Week 1:

- Land preparation is the first step for your farming venture. If you prepare the land properly, the rest of your farming activities will become much easier to complete.
- Start with clearing or cutting all the tall grasses.
- Remove trees and all heavy bushes and tree stumps.
- Take care to also remove stones and any other obstacles from your field.
- The result should be a field that is ready for ploughing.
- Do not burn the bushes because burning exposes the soil to erosion and also causes loss of soil nutrients.

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First ploughing

First ploughing

Week 2:

- First ploughing 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 to the farmer, one can use a hand hoe, an ox plough or a tractor with a plough.
- If your field has perennial weeds such as couch grass, spear grass or wandering jew, you need to spray the field using herbicides like glyphosate, round up and weedmaster. Always contact an agriculture extension worker or an agrodealer for more guidance on herbicides.

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.

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Second ploughing and harrowing

Second ploughing and harrowing

Week 3:

- Carry out second ploughing followed by harrowing to obtain a finer tilth.
- Remove any trash and other obstacles which can hinder seed germination.

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Manure application and planting

Manure application and planting

Week 4-5:

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

  Note: *Other fertilizers can also be good as long as these are also decomposed. Inorganic fertilizers e.g UREA, NPK can also be used but only after advice from your agriculture extension worker or agrodealer.*

Planting in lines:

- Use a string to make rows in your field. Spacing between rows should be 30cm.
- Using a stick to make a 1cm deep farrow following the string.
- 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.
- Plant the seed in the farrow and cover with light soil.

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Weeding and thinning

Weeding and thinning

Week 7:

- Timely weeding will lead to increased yields because it will minimize competition for nutrients and light between the red amaranthus plant and weeds.
- Weeding will also reduce pest and disease infestation at the early stages which will again lead to increased yields.
- Weeding should be done as soon as weeds emerge and especially before the flowering of weeds. This will reduce the spreading of the weeds.
- Thinning is done at the time of weeding. During thinning the less vigorous, off-types or relatives and diseased plants are also removed.
- The good quality thinned plants can be sold or consumed at home.

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Pests and disease management

Pests and disease management

Week 8:

- Pest and disease management should be a continous effort.
- 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.*

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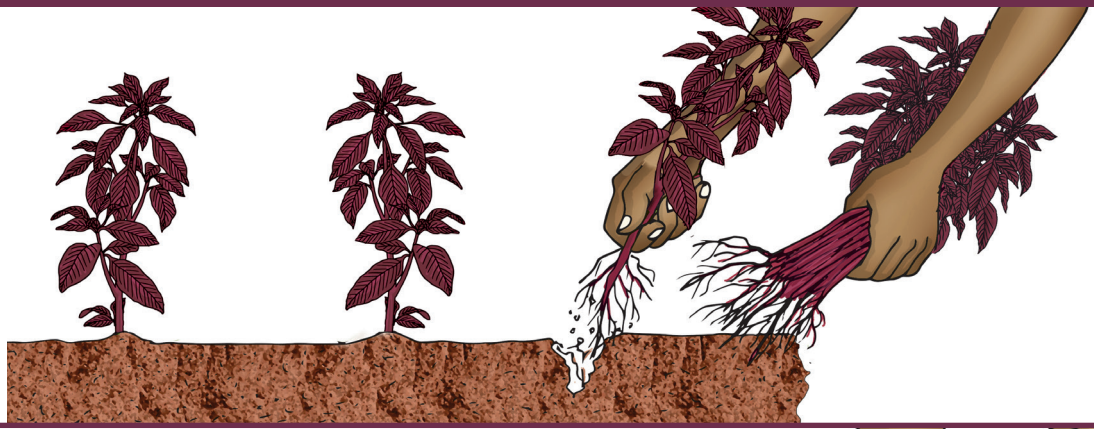
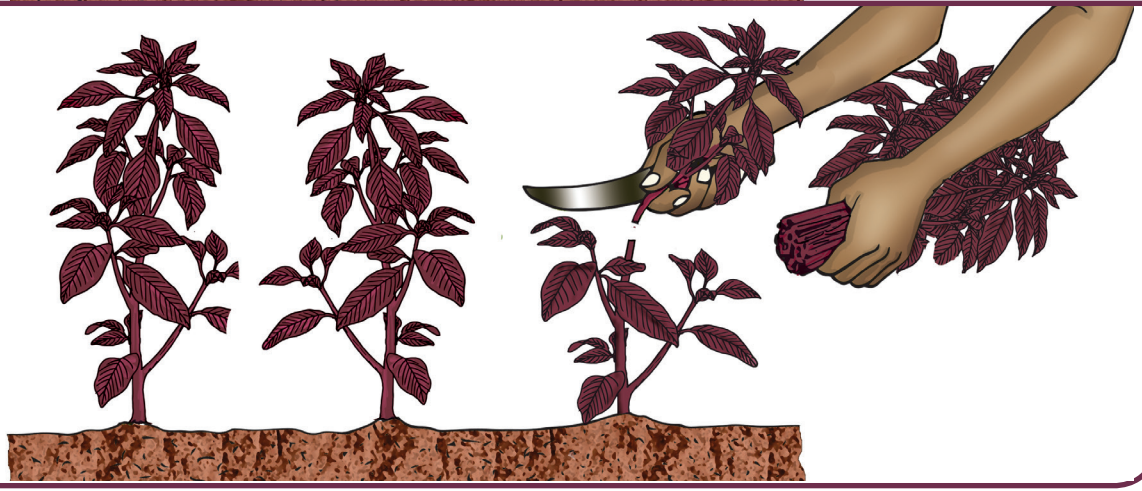
Harvesting red amaranthus

Short term



Long term



Harvesting red amaranthus

Week 10-15:

Red amaranthus vegetable is ready for harvesting starting from 3-5 weeks after germination. The crop can be harvested in two ways:

1. **Uprooting (Week 10-11):** This is mostly done in commercial production by uprooting the whole plant.
2. **Cutting tender stems (Week 12-15):** This is commonly done in kitchen gardens for home consumption. The tender stems are cut every 1-2 weeks until the plant flowers. The harvest can continue for 4 months, especially if local varieties are used.

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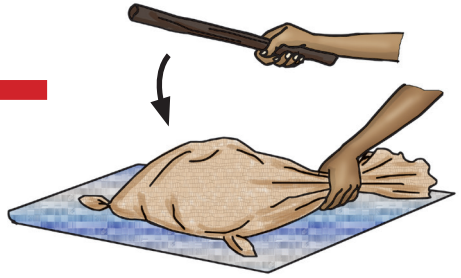
Red amaranthus seed processing and storage



Red amaranthus seed processing and storage

Week 15:

Step 1: Identify mature seeds by shaking the finger and the seeds will fall easily. Cut the whole plant from the bottom with a sickle.

Step 2: Place the harvested fingers/plants 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 fingers into a light pack and hit the pack gently until the seed separates from the husks.

Step 4: Thresh to remove chaff using clean containers.

Step 5: Store clean seed in a cool, well ventilated and dry place.

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