How to Harvest Amaranth Leaves and Grain

Omari, F., E. N. Njiru, M. Karoki, D. Mutisya, R. Ruttoh and R. Mokua

Introduction

Grain amaranth is a dual purpose crop grown for both vegetables and grain. Amaranth leaves are used as vegetables in many parts of Africa and provide valuable nutrients. Vegetable amaranth grows naturally in Kenya and is widely grown and consumed all over the Country. The main areas of production are western Kenya, Coast, Rift valley and production is increasing eastern Kenya. Although relatively new in the Country, grain amaranth has a great potential as a nutritious food and for commercial production. Amaranth grains are very tiny and require a lot of care to avoid contamination during harvesting and processing. This makes grain amaranth a labour intensive crop.

Leaf harvesting

Amaranth leaves are harvested by thinning and clipping. During thinning, the whole plant is uprooted. Thinning starts 2-3 weeks after germination or when the plant has 6-8 fully grown leaves. Leaves can also be clipped at regular intervals. Clipping may commence 3-4 weeks after germination. The tender leaves are clipped once a week until the onset of flowering or heading.

Young amaranth crop

Harvested tender amaranth leaves

Grain amaranth leaves should be harvested moderately on each plant. Harvesting of leaves is stopped just before flower onset. Heavy harvesting of leaves from one plant may negatively affect flowering, size and grain yield. Once the plant flowers, leaf harvesting should be stopped to encourage head development and grain filling. This is very important and determines grain yield.

Grain harvesting

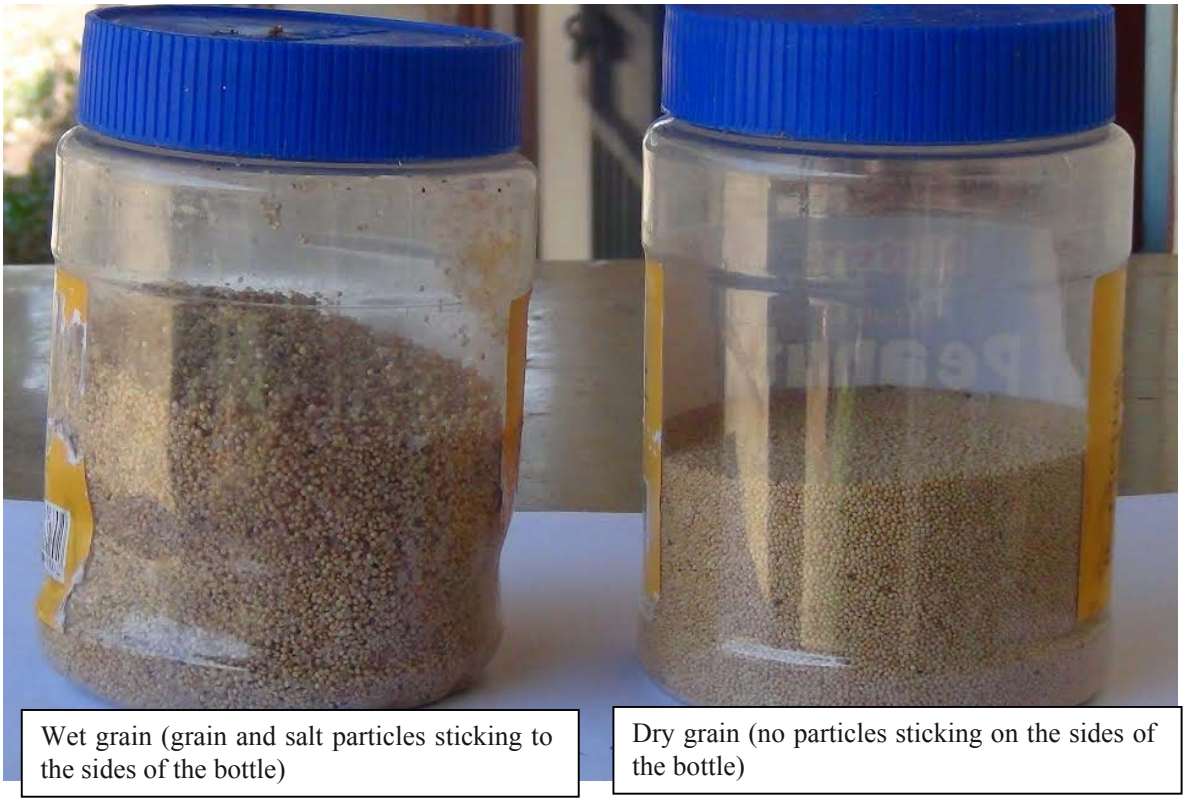
Amaranth grain shutters easily, it is therefore recommended that the crop is harvested as soon as the colour of the panicle/heads turns from green to golden brown and seeds drop on light shaking of the plant. Cut off the heads and

Harvesting of amaranth grain

insert them in a container such a gunny bag or a bucket to minimise seed loss. Cut off the panicle with a knife or *panga* so that it detaches from the stem and falls into the container. The panicles may also be detached from the plant by breaking with hands.

Drying and seed processing

Place the panicles on a clean polythene sheet or canvas to dry. Thresh the panicles by hitting lightly with a stick. Winnow the grain using shallow basins, calabashes or trays to remove the chuff. Place the grain on clean canvas or plastic sheeting, spread evenly and allow to dry in the in the sun. Turn grain frequently to ensure proper drying, the progress may take two three days during hot dry weather. The correct moisture content for storing grain amaranth is 11-13%. Moisture content can be determined by use of a moisture metre. However, this should be carried out by somebody who is conversant with the use of the gadget. This can also be done at the farm level by using the 'salt test'. The following items are required; about 250-300 grams (one standard tea cup/glass) of dried grain, 2-3 tablespoons dry salt, a bottle of 750 ml) capacity with a tight fitting lid. To dry the salt place it on a large lid or polythene sheeting and dry it in the hot sun for 3-4 hours. Fill 1/3 of the bottle with dry amaranth grain, add the dried salt and close the bottle tightly. Shake the mixture thoroughly until the salt is even distributed in the grain. Allow to stand for 15 minutes. The grain is dry if there is no salt and grain particles sticking on the sides of the bottle.



Wet grain (grain and salt particles sticking to the sides of the bottle)

Dry grain (no particles sticking on the sides of the bottle)

Drying grain

Threshing amaranth grain

Ensure that seeds are not contaminated with sand or soil particles to avoid rejection by processors. Store dried seed in gunny bags in a cool dry place. Foreign particles also encourage microbial growth which may lead microbial growth.

Manual amaranth thresher

Store in dry gunny bags

All enquiries should be addressed to:

Centre Director:
KALRO-Katumani, Machakos-Wote Road
P.O. Box 340-90100 Machakos, Kenya
Mobile 254-0710906600
Email: kalro.katumani@kalro.org
Website:www.kalro.org/asal-aprp
Editorial and publication coordinated by:
Knowledge & Information Unit