



CONVENTIONAL MULTIPLICATION OF PYRETHRUM



NAVCDP

NATIONAL AGRICULTURAL VALUE CHAIN
DEVELOPMENT PROJECT

Introduction

Pyrethrum is propagated vegetatively by splitting mature plants or by use of seed. However, conventional vegetative propagation is slow, expensive and largely dependent on weather. Consequently, there has always been lack of adequate planting material to distribute to farmers in good time for planting. Local demand for planting material ranges from 15–20 million seedlings annually; which may not be easily met through conventional multiplication in nurseries.



Pyrethrum seeds produced by Pyrethrum Processing Company of Kenya

(Source- Dr. Lusike Wasilwa)

Nursery management

The Pyrethrum Processing Company of Kenya propagates pyrethrum through a network of multipliers and maintains seeds

and clonal material in growing areas. The nurseries multiply new elite cultivars. Several steps need to be adhered in order to establish successful nurseries.



Pyrethrum seedlings

Seedling nursery

The procedure for the preparing and managing a seed nursery is as follows:

- Make 1.5-2.0 m raised beds of convenient length.
- Make straight furrows 15 cm apart and about 1.25 cm deep using a stick.
- Place seeds in furrows at a rate of 10 seeds spread evenly on 2.5 cm length of the furrow.
- Do not cover the seed with soil.
- Cover the seedbed with seedless dry grass and water thoroughly.
- Germination takes 10-18 days, after which the grass

mulch should be removed in stages to allow the tender seedlings to acclimatize and become strong.

- Top-dress with CAN (26%N) at 400 kgha-1 three months after germination.
- Seedlings should be transplanted after four to five months. Seed should therefore, be sown in October, in order to transplant the seedlings to the field at the onset of the long rains in March or April the following year.

Any pyrethrum crop that has been established from seed or seedlings should be ploughed back or discarded after four years to avoid



Pyrethrum seedling beds and seed placement (Source: G. K. Gathungu)

loss of hybrid vigour in subsequent generations. Such plants are not suitable for replanting onto a new field. Farmers should obtain fresh seed and raise them in nurseries in order to have sufficient seedlings ready for transplanting once the old crop is removed from the field.

Clonal nursery

- The procedure for the preparation and care of a clonal nursery is as follows:
- Make raised beds of about one-metre-wide and of a convenient length.
- Make sufficiently deep holes 15 cm between the lines and 15 cm between the holes in each line.
- Split up the clonal material

while still fresh before transplanting.

- Apply Triple Super phosphate fertilizer at a rate of one teaspoonful per planting hole.
- Also apply nematicide if necessary to control existing nematodes.
- Place a single split into each planting hole making sure the roots are straight.
- Press the soil against the roots and ensure the soil reaches just above the root level.
- Water the nursery as required.

Plants are ready for splitting and replanting in a commercial field after 3 months.



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