Crop Protection

Insect pests

Thrips – Threshold (4-6 thrips/flower) -use Thiodan, sherpa plus, duduthrin, thunder

Bean fly- Use dimethoate, thunder

Hericoverpa armigera -Threshold (4-5/m^2)- Use Karate, thunder

Bean bugs – Threshold (3 larva/ m^2)- Use Karate, dimethoate, thunder

Aphids - Thiodan, sherpa plus, Karate, thunder

Pod borer - Threshold (3 larva/m^2) –use Dimethoate sherpa plus, thunder

Pod sucking bugs – Threshold (3 larva/m^2)- Use dimethoate, Karate, Thunder

Apion beetle – Thiodan, Karate, thunder

Bruchids – Affect the crop both in the field and in storage –Control: Proper sanitation, Super Actellic

Harvesting

Harvest when the pods have turned brownish Dry brown pods are plucked manually. Dry pods are harvested manually. The harvested pods are sundried for 5 days before threshing.

Sorting

The most important product of a green gram plant is its seed. Market preffered seed should be clean and uniform. The seed should be cleaned to remove green pods, leaf materials, broken and damaged seeds, debris as these can create problems during storage.

Storage

The recommended maximum moisture content for storage should be 12%. Mung bean seed should be dried well before storage because grains that are not well dried are prone to weevil attack. When stored in bags, the grain should be protected from weevils. For protection against storage pest, add actellic at 50g per 90 kg bag

Early Maturing, large seeded Green gram variety KAREMBO for improved food security and income generation.

AgriFI Kenya CS APP

AgriFI Kenya Climate Smart Agricultural Productivity Project

KALRO Kenya Agricultural & Livestock Research Organization

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More information can be obtained from

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Green gram

Introduction

- Green gram is a relatively drought tolerant and a low-input crop.
- A major income generating crop in Semi-arid eastern Kenya.
- Causes less flatulence than other legumes
- Currently the country produces 125,000 metric tonnes against the domestic demand of 3.4 million metric tonnes
- Mungbean is a warm crop requiring 65 – 75 days of frost-free condition from planting to maturity.
- The optimum temperature range for growth is between 27^0C – 30^0C. Green gram are responsive to daylight length.
- High humidity and rainfall in the late season can result in diseases (Like Powderly mildew, Bean ancthracnose)

Rainfall

Adequate rainfall is required from flowering to late pod fill for purposes of ensuring good pod filling and yield.

KAT 00309 characteristics

It is a semi-determinate plant.

- Dry pods are brown in colour
- Grains have shiny green colour.
- Large seed size (8 –10 g/100 seeds)
- Flowers in 40—45 days
- Matures in 65—75 days
- Potential yield range from 1800—2100 kg/ha
- Tolerant to major mungbean diseases

Target areas of Production

KAT 00309 is suitable for both short and long rain seasons. The variety is recommended for cultivation in both semi-arid and well-watered areas of between 500-1600m above sea level. It is suited to well- drained sandy loam soils and because of its earliness it has proved more successful in the drier areas of lower Machakos, Kitui, Mwingi, Tharaka, Mbeere and Makueni districts. At elevations of more than 1800m above sea level, it has very poor pod set.

Crop Management

Land preparation

The field should be well prepared without big soil clods and have a fine filth to give good seed-soil contact. Hoe, oxen and tractor can be used for ploughing. A good seedbed gives a better crop stand.

Planting:

Seed Quality and Varietal Purity

Varietal purity is essential as mixtures are unacceptable both for market and cooking. Mixtures can give problems by germinating unevenly.

The quality of seed retained on-farm can deteriorate over two to three years due to genetic drift. These seed have poor emergence. Replace planting seed every two to three years.

Always use certified seed. Early planting is recommended but not before 30mm of rainfall is received.

Spacing is 50 x 15cm. When using oxen, the spacing is 60 cm x 10 cm. However, under concervation agriculture (No soil disturbance) the spacing may be reduced to 45 x 10 cm.

Under very severe moisture stress, wider spacing may be used to reduce plant population.

Seed rate: 10 -15 kg/ha (4– 6kg/acre)

Number of plants per hill: At least 2

Depth of planting: The depth should be kept at 4-5cm.

Weeding

The first weeding should be done 2-3 weeks after emergence and the second weeding before flowering. Avoid weeding the crop after flowering as this may lead to flower fall thus reducing yield. Also avoid cultivation on damp plants since this can result in the spread of bacterial and fungal diseases.

Fertilizer

Mung bean has phosphorus, potassium calcium, and magnesium and sulfur requirement like other legumes which must be met by fertilizer addition if the soil is deficient in these elements. A starter N and P of 10 kg/ha is recommended [DAP is recommended but Phosphate fertilizer (NPK) can be used where the soils are acidic at 50 kg/ha]. Higher rates may be required on severely P deficient soils. Fertilizer application should be done at a time when there is adequate moisture in the ground. In case of dry planting avoid seed-fertilizer contact. In very poor soils combination of ma-