KAT/B-9 (Katumani Bean 9) (Beans)

Climatic requirements
- A determinate plant with an average height of 35-40cm
- Flowers in 30-40 days
- Flower colour is light pink.
- Has a uniform flowering period.
- Matures within 60-65 days
- Grain is brilliant red and gives an Irish brown colour when cooked with maize, a quality preferred by farmers
- Potential yield is 1400-1900kg/ha or 7-9 bags/acre
- More drought tolerant than Katumani Bean 1
- Tolerant to CBMV and rust; and has field tolerance to several fungal diseases

Recommended zones
Katurnani Bean 1 performs well in areas between 900-1600m above sea level, but at elevations higher than 1600m above sea level, angular leaf spot and halo blight may seriously affect its yields. KAT Bean 1 does not do well in areas with high rainfall.

Management/Breeding Practices

Land preparation
The field should be well prepared without big soil clods and have a fine filth. Hoes, oxen plough and tractors can be used for ploughing.

Time of planting:
Sow at the onset of the rains after a minimum of 30mm of rainfall has been received.

Seed rate: 40-50kg/ha (16-20kg/acre)

Number of seeds/hill: Sow at least 2 seeds per hill

Depth of planting: Plant at a depth of 4-5cm

Spacing: Sole crop: The distance between rows is 45cm and 20cm between plants for sole crop. However, if an oxen plough is used during planting, the distance between furrows is fixed at 60cm and the distance between plants should be kept at 15cm.

Intercrop:
Maize: 150cm X 30 cm and 2 rows of bean (legumes) Maize 120cm X 30cm and 1 row of beans, legumes Sorghum: 150cm X 15cm (2 rows) 120cm X 15cm (1 row) oxen 1 row of beans.

Fertilizer
DAP fertilizer should be applied at the rate of 1 bag/ha (50kg/ha) or about half a bag (25kg) per acre during planting. If applied in furrows or planting holes, mix the fertilizer and the soil thoroughly before covering the seed.

Weeding
The first weeding should be done two weeks after emergence and the second one must be done before flowering.

Crop Protection
Insect pests include:
1. Bean fly - usually observed at seedling stage
2. Black ban aphid - common during cool dry periods
3. Bean leafhopper - found during vegetative stages
4. Bean weevil - common during storage
5. Pod borers

Control
The Katumani bean varieties have been screened for tolerance to insect pests. Furthermore, being early maturing, these varieties escape the attack by these insects. Use dimethoate, duduthrin or other insecticides for control of beanfly, black aphid and leafhopper. Rogue plant early to avoid infestation or land rogue/affected plants. Do not use the same insecticide all the time repeatedly to avoid creating resistance in insects.

Major diseases include:
1. Anthracnose
2. Angular leaf spot
3. Charcoal rot
4. Bean common mosaic virus
5. Halo blight
6. Rust

Control
Use Binomial and copper oxychloride as recommended by manufacturer. Rotating bean fields with cereals is recommended.

Harvesting and storage
Harvest when all pods turn brown and hard. Weevils are major storage pests. During storage, dust with super actellic (50g per bag) or with neem tree leaves or treat with wood ash (4-6kg of ash per bag).