**KAT/B1 (Beans)**

**Climatic requirements**
Suitable for ASAL areas; performs best at 900-1600m above sea level (asl). Reduced growth in low temperatures and very high rainfall.

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

**Maturity:**
in 60-65 days for all

**Potential yield:**
1400-1900 kg/ha or 7-9 bags/acre

**Recommended zones**

**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:
- i). Bean fly - usually observed at seedling stage
- ii). Black ban aphid - common during cool dry periods
- iii). Bean leafhopper - found during vegetative stages
- iv). Bean weevil - common during storage
- v). 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:
- i). Anthracnose
- ii). Angular leaf spot
- iii). Charcoal rot
- iv). Bean common mosaic virus
- v). Halo blight
- vi). 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).

**Use**
-Used for assorted pre-cooked bean products
-Suitable for use in hospitals and schools