Kenya Agricultural & Livestock Research Organization

KAT 60/8 (KAT/PP 60/8) (Pigeonpea)

Climatic requirements
- Plant height ranges from 85-130cm depending on the altitude and season
- Shorter when planted in the long rains (March-May) than in short rains (October-December)
- Taller at lower altitudes (less than 1000m) than in higher altitudes
- Has a spreading growth habit
- Flower in 95-120 days
- Both unopened and opened flowers are yellow in color with no streaks
- Flowering is indeterminate. The plant will keep on producing flowers and pods enabling multiple harvests if there is adequate soil moisture
- A medium maturity variety in 136-150 days
- Grains are white in colour with brown spots and smaller than long duration local landraces (Tunyai0
- Potential grain yields range from 1200-1500kg/ha or 480-600 kg/acre in one season and in two seasons it yields 3000kg/ha or 1200 kg/acre
- Susceptible to insect pests mainly pod sucking bugs and pod borers
- Tolerance to wilt and leaf spot diseases

Recommended zones
Pigeonpea varieties are sensitive to differences in temperature. With late maturing types, high temperatures (greater than 20°C) delay maturity whereas in the early types higher temperatures (20-30°C) hasten maturity.

Kat 60/8 can be grown between 50-1800m above sea level and performs well in lower Makueni, Kitui, Mwingi, Mbeere, Tharaka, Meru and Machakos where temperatures are high.

Management/Breeding Practices

Land preparation: Requires a fine tilth like other grain legumes. Avoid soils with huge soil clods

Planting: Practice spatial planting, that is plant half the crop and plant the rest at rain onset

Seed rate: 20-25kg/ha (8-10kg/acre)

Method of planting: Plant in furrow or holes but place at least 5 seeds per hole

Depth of planting: Place at a depth of 4-5cm and cover properly if there is little moisture

Thinning: Thin to 2 seedlings per hole two weeks after emergence

Spacing:

i). Sole cropping

Mbaazi-1:
Plant at 50cm between rows and 10cm between plants if using plough, skip one furrow.

Kat 60/8: Plant 75cm between rows and 50cm between plants. When using oxen for ploughing and planting, sow after every other two furrows.

Mbaazi-2: Plant 100cm between the rows and 50cm between the plants at lower altitude where temperatures are warmer. At higher altitudes these spacings should be reduced by 20-30cm.

ii). Intercropping

Kat 60/8 and Mbaazi-2 can be intercropped with maize, sorghum or millet during the first season, which are normally the short rains (October). If intercropped with maize, sow either one row of pigeonpea after one row of maize or one row of pigeonpea followed by two rows of maize at a distance of 90cm between maize/sorghum and pigeon pea rows.

Mbaazi-1 should always be planted as a pure stand.

Fertilizer
Fertilizer is not recommended. However, in extremely poor soils, a basal application of one bag of NPK fertilizer (20:20:0) could be applied.

Weeding
The slow initial growth of pigeonpea seedlings makes the crop vulnerable to weed competition in the first six weeks of growth. During this period, keep the crop free from weeds. For short duration pigeonpea varieties such as Mbaazi-1, weed twice, for medium and late types weed three times in the first season. The first weeding of all varieties must be done within the first 2-3 weeks whereas the second weeding should be done two weeks after the first one. Subsequent weedicings will depend on the growth of weeds and amount of rainfall.

Crop Protection

Insect pests and their control methods
Pod sucking bugs, pod borers and thrips are major pigeon pea pests. Mbaazi-1 and KAT 60/8 normally flower coinciding with peak periods of the insect pests infestations. Insect pests are best controlled in the following stages:

i) Before flowering - Thrips and aphids
ii) After flowering - Pod fly, pod borers, pod sucking bugs
iii) Storage - Bruchids

General recommendation - spray once before flowering and twice after flowering. The following is recommended at
various phases of plant growth:

i). Before flowering to control thrips and aphids, spray Sherpa plus, Karate or Thiocdan when flowers are forming.

ii). During and after flowering - the common insects include thrips, pod fly, pod borers and pod sucking bug. Spray with Sherpa plus, thiocdan, Karate, Decis or Thiocdan.

iii). Storage - During storage, control bruchids through use of super actellic (50g/90kg bag), ash or neem leaves (4-5 kg/ton)

**Diseases and their control methods**

**Fusarium wilt** - Rogue and destroy infected plants - Crop rotation - successive pigeon pea sole crops should not be planted in the same field after 3 years. In the meantime rotate with cereal crops.

**Harvesting**
Green mature pods may be harvested for grain food. Harvest dry grains when most of the pods are dry and have turned brown.

**Storage:** Dry grain in the sun before sorting and dust with super actellic at 50g/90kg bag.

**Use**
Pigeonpea can be consumed in form of whole grain or split pea (dehulled).
There is market within and export for green pods, whole dry grain and split pea (dehulled).