**KVU-419 (Cowpeas)**

**Climatic requirements**
- It has a semi-spreading habit and grows to a height of 18-35cm
- Spreads and produces tendrils
- It is a grain variety and has small shiny leaves with an obscure midrib.
- The pods and peduncles are green when young but develop shades of red brown coloration when dry
- The peduncles are erect and stand over the canopy
- Flowers in 41-49 days
- Matures in 65-72 days (early maturing)
- Has lower yield than K80 or M66
- Potential yield is 1000-1500kg/ha or 400-600 kg/ha
- Has smaller grains than both Machakos 66 and Katumani 80

**Recommended zones**
KVU 419 is recommended for cultivation in areas below 1200m above sea level receiving less than 200mm of rainfall per season. These are agro-ecological zones IV and V in lower Kitui, Mwingi, Makueni, Tharaka, Tana River districts, and Yatta plateau in Machakos district.

**Management/Breeding Practices**

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

**Time of planting:** Early planting is recommended but not before 30mm of rainfall is received. Spatial planting is also recommended.
**Seed rate:** 20-25kg/ha (8-10kg per acre)
**Number of plant/hill:** Sow 3-4 seeds/hill and thin 2 weeks after emergence to one seedling per hole.
**Depth of planting:** Seed should be placed between 4-5cm deep and covered properly.
**Spacing:** Machakos 66, Katumani 80 and KVU 27-1: The distance between rows is 60cm and between plants 20cm.
KVU 419: The distance between rows is 50cm and between plants 20cm.
**Intercrop:** Maize: 150cm X 30 cm, 2 rows, 120cm X 30cm, 1 row Sorghum: 150cm X 15cm, 2 rows

**Fertilizer**
Cowpeas require nitrogen and phosphate fertilizer application. However, where the soils are highly eroded and very deficient in these nutrients, a basal dose of 10-15kg/ha of nitrogen and 20-25kg/ha of single or triple super phosphate fertilizers may be broadcasted. Cowpeas not pod if a lot of nitrogen is applied and remains very leafy.

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

**Crop Protection**

**Insect pests:**
Before flowering aphids, thrips, leafhoppers
After flowering - aphids, pod borers, pod sucking bug, apion beetle
During storage - Bruchids.

**Chemical control**
Aphids: Thiodan, Duduthrin, Karate or Sherpa plus
Thrips: Sherpa plus, Karate, and Duduthrin
Leafhoppers: Thiodan
Pod borers: Thiodan, Sherpa plus, Decis, Thiodan
Pod sucking bugs: Dimethoate, Sherpa plus, and Karate
Apion beetle: Super Actellic

**Harvesting and storage**
Time of harvesting - harvest when all the pods have turned brown and are dropping. Weevils are major storage pests.
To store, dust the grain with super actellic (50g per bag) or with neem tree leaves or treat with wood-ash (4-6 kg of ash per bag). The grains should be well dried before being stored.