



**African cassava mosaic virus disease**



**Resistant Variety**

**A publication of the Sub-Directorate:  
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**Cassava**  
**Manihot esculenta**

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**Mjumbulo**

### **IMPORTANCE:**

#### **Famine Reserve Crop:**

Harvested from 6 months after planting as needed for fresh roots boiled, fried in oil etc. and leaves as green / dry vegetable.

#### **Cash Crop:**

For making animal feed, granulated human food preparations (gari) and for extracting high quality starch, bio-fuel etc.

### **ADVANTAGES:**

Drought tolerant, easily propagated from stem cuttings, resists locust damage, low input requirement, high yield (calorie/unit area) etc. These make cassava a famine reserve crop. Cassava produce more carbohydrates per ha than any other food staples.

### **MAJOR PROBLEMS**

#### **(For the smallholder farmers):**

Farmer yield low (9-15 t/ha) Lack of improved varieties, poor agronomic practices followed, African cassava mosaic virus, mealy bugs, long growing season (12-24 months) etc.

### **POTENTIAL:**

The soil and climate in the Lowveld are well suited to cassava production. With improved production practices, including the use of improved varieties, the smallholder farmers can increase their cassava out-put significantly. This would in turn enhance food security and profitability among the rural population.

### **OPTIMUM ENVIRONMENT:**

- Well drained soil: <20% clay
- Optimum temperature 25-35°C
- Low temperature delays tuber development
- Free from frost

### **PLANTING:**

- On ridges, mound or flat
- Harvesting easier when planted on ridges / mounds
- Length of cuttings 20-30cm
- Cuttings taken from healthy plants
- Planted vertically, angled or flat
- Optimum depth 10-15cm
- Vertical planting preferred in light soils
- Planting as early as possible soon after the temperature picks up (September-November)
- Spacing 70-100cm between row and plants
- Plant population 10000-125000 /ha

### **WEEDING**

- Weeding 3-4 rounds
- Manual, mechanical or chemical

### **MANURING**

- Nitrogen 45-90kgs/ha
- Phosphorus 25-60kg/ha
- Potassium 50-90kg/ha
- N preferably applied in two split doses at planting and 30-45 days after planting
- P & K at planting

### **HARVESTING:**

- 6-10 months as food crop
- 18-24 months as cash crop

### **MAJOR INSECT-PESTS AND DISEASES:**

- Termites, Red spider mite, White fly
- Mealy bug, Nematodes
- African cassava mosaic
- Bacterial blight, Leaf spot etc.

These can be controlled using mechanical, chemical or biological measures

### **PROGRAMMES BY LRU (DARDLA)**

#### **1. Variety Testing:**

- Several lines obtained through ARC-VOPI were evaluated in the past as part of **SARNET** (Southern African Root Crop Research Network).
- All the introduced genotypes showed good degree of resistance to Mosaic Virus disease.
- Significant differences in plant height, stem length, top weight, number of stem, roots plant<sup>-1</sup> and root yield were observed.
- Highest fresh root yields were recorded in the genotypes 081/00247 (74 t ha<sup>-1</sup>) & I-89/00715 (70 t ha<sup>-1</sup>) with lower cooking quality (time taken and taste).
- Farmers preferred the susceptible and low yielding (32 t ha<sup>-1</sup>) local accession LAL for its excellent cooking quality and longer planting materials (stems) produced.

Limited planting material of the sweet variety LAL is available for distribution.

#### **2. Intercropping with legumes (On-going)**

Intercropping trials with cowpea, groundnut and chickpea are in progress.

#### **3. Studies on N-fertilization is on-going**