

## **Kenya Eastern Lower Fertilizer Use Optimizer: paper version (CAN-DAP) Nov. 2016**

### **The below assumes:**

- Calibration measurement is with: a 3.14 ml of soda bottle with lining that holds about 3.5 g DAP and CAN
- It is assumed maize (30 cm within row) is planted at 90 cm row spacing, Irish potatoes and sorghum are planted with 75 cm row spacing, and beans with 50cm row spacing.
- It is assumed grain prices per kg (Ksh): 25 maize; 60 beans, 25 sorghum and 30 Irish potato.
- It is assumed 50 kg of fertilizer costs (Ksh): 2850 urea and 3600 DAP.
- Application rates are in kg/ac.
- If any fertilizer rate application is less than 10 kg/acre it is not economical and should be converted to another fertilizer. WAP –weeks after planting

### **Level 1 financial ability**

- Irish potato: At planting, apply 40 kg CAN (1 top for 0.3 m) by banding. Side dress by banding 41 kg CAN (1 top for 0.3 m) 4 weeks after emergence.
- For beans, at planting band 11 kg DAP (1 top for 2.5 m).

### **Level 2 financial ability**

- For maize, side dress with 25 kg CAN (1 top for 0.3 m) by banding at 6 WAP.
- For beans, at planting band 24 kg DAP (1 top for 1 m) and 12 kg CAN (1 top for 1.5 m).
- For Irish potato, at planting band 27 kg DAP (1 top for 0.7 m). Side dress with 40 kg CAN (1 top for 0.3 m) 4 weeks after emergence and 41 kg CAN (1 top for 0.3 m) 6 weeks after emergence.

### **Level 3 financial ability (maximize profit per acre).**

- For maize, side dress with 54 kg CAN (1 top for 0.2 m) by banding at 6 WAP.
- For beans, at planting band 32 kg DAP (1 top for 0.9 m) and 18 kg CAN (1 top for 1.6 m).
- For sorghum, at planting band 10 kg DAP (1 top for 1.7 m).
- For Irish potato, at planting band 61 kg DAP (1 top for 0.3 m). Side dress by banding 40 kg CAN (1 top for 0.3 m) 4 weeks and 41 kg CAN (1 top for 0.3 m) 6 weeks after emergence.