



UGANDA FERTILIZER USE OPTIMIZER: Central Uganda



The below assumes:

Cost of fertilizer use for 50 kg bag: Urea, TSP and KCl is 120,000/-; DAP is 140,000/-.

Grain values (UgSH/kg): maize 600/-; banana 800/-; upland rice 1500/-; bean 1200/-; and soybean 1000 and groundnut are 2500/-.

Calibration measurement units: a Highland water bottle cap (CAP) that holds 7.5 ml, about 5.25 g urea, 8.25 g DAP, TSP, or KCl; and Highland water bottle cut at 2 cm (2-cm bottle) holds 59.3 ml, 41.5 g urea, and 65.2 g of DAP, TSP or KCl.

Row spacing: maize 75 x 30 cm; banana 3 x 3 m; bean 60 cm; soybean and groundnut 45 cm.

Rates are at least 10 kg/ac. **Broadcast width** is 1m.

Level 1 financial ability.

Maize: point apply 10 kg/Ac urea at planting (CAP for 5 plants)

Banana: band apply in circle around plant 14 kg/Ac urea (2-cm bottle for 1.3 plants) and apply 11 kg KCl (4-cm bottle measure for 1m)

Bean: band apply 12 kg/Ac urea at planting time (CAP for 3.0 m band)

Upland rice: apply 13 kg/Ac DAP at planting (broadcast CAP for 2.6 m); 17 kg/Ac urea at panicle initiation (broadcast CAP for 1.2 m)

Soybean: band apply 11 kg/Ac TSP at planting (CAP for 6.7 m)

Groundnut: band apply 26 kg/Ac DAP at planting (CAP for 2.2 m).

Level 2 financial ability.

Maize: point apply 15 kg/Ac DAP at planting (CAP for 9.5 plants); band apply 15 kg/Ac urea at second weeding (CAP for 1.6 m band)

Banana: band apply in circle around plant 20 kg/Ac DAP (2-cm bottle for 1.3 plant); apply 19 kg/Ac urea (apply in a band with 2-cm bottle for 1 plant) and 15 kg KCl (2-cm bottle for 2 plants)

Bean: band apply 18 kg/Ac urea at planting (CAP for 2 m band)

Upland rice: apply 23 kg/Ac DAP at planting (broadcast CAP for 1.5 m) and broadcast 38 kg/Ac urea at panicle initiation (broadcast CAP for 0.6 m)

Soybean: apply 21 kg/Ac TSP in a band at planting (CAP for 3.5 m band)

Groundnut: apply 40 kg/Ac DAP at planting (CAP for 2.9 m band)

Level 3 financial ability (maximizes profit per Ac).

Maize: point apply 20 kg/Ac DAP at planting (CAP for 7.4 plants); band 43 kg/Ac urea at second weeding (CAP for 0.6 m band)

Banana: band apply in circle around plant 31 kg/Ac DAP (2-cm bottle for 0.9 plant); apply 21 kg/Ac urea (2-cm bottle for 0.9 plant) and 19 kg/Ac KCl (2-cm bottle for 1.5 plants)

Bean: apply 14 kg/Ac urea (CAP for 2.5m band) and 27 kg/Ac DAP at planting time (CAP for 2.1 m band)

Upland rice: apply 31 kg/Ac DAP at planting (broadcast CAP for 1.1 m) apply 54 kg/Ac urea at panicle initiation (broadcast CAP for 0.4 m)

Soybean: apply 37 kg/Ac TSP at planting time (apply in a band CAP for 2 m band)

Groundnut: apply 40 kg/Ac DAP time (apply in band CAP for 1.9 m); 14 kg/Ac TSP and 13 kg/Ac KCl at planting time (CAP for 5.3 m band for each)