



## UGANDA FERTILIZER USE OPTIMIZER: Eastern, Lake Kyoga Basin



**The below assumes:**

**Cost of fertilizer use for 50 kg bag (UgSh):** urea, TSP and KCl is 120,000/-; DAP is 140,000/-.

**Grain values (UgSh/kg):** maize 600; Sorghum 500; finger millet 1200; upland rice paddy 1500; bean 1200; soybean 1000; and groundnut unshelled 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; sorghum, 60 cm; finger millet and upland rice, 20 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.

**Finger millet:** broadcast 14 kg/Ac DAP at planting (CAP for 2.4 m); 17 kg/Ac urea after 2<sup>nd</sup> weeding (CAP for 1.2 m)

**Sorghum:** band 11 kg/Ac urea after 2<sup>nd</sup> weeding (CAP for 3.2 m)

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

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

**Groundnut:** band apply 14 kg/Acre DAP and 12 kg TSP at planting time (2-cm bottle to cover 4.2 m band for DAP and 6.7 m band for TSP).

### Level 2 financial ability.

**Maize:** point apply 17 kg/Ac urea at planting (CAP for 3.1 plants); apply 17 kg/Ac urea at second weeding (CAP for 3.1 plants);

**Finger millet:** broadcast 22 kg/AC DAP at planting (CAP for 1.5 m); apply 17 kg/AC urea after 2<sup>nd</sup> weeding (CAP for 1.2m)

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

**Sorghum:** band 19 kg/Ac urea at 2<sup>nd</sup> weeding (CAP for 1.9 m).

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

**Soybean:** band 25 kg/Ac TSP at planting (CAP for 3.0 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 10 kg/Ac DAP at planting (CAP for 16 plants); band 43 kg/Ac urea at second weeding (CAP for 2.2 plants)

**Finger millet:** apply 28 kg/AC DAP at planting (CAP for 1.2 m); apply 41 kg/AC urea after 2<sup>nd</sup> weeding (broadcast 2-cm bottle for 0.5m)

**Sorghum:** band 14 kg/Ac DAP at planting (CAP for 4 m); 24 kg urea at 2<sup>nd</sup> weeding in a band (CAP for 2.5 m)

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

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

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

**Groundnut:** band 40 kg/Ac DAP time (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)