



MALI-SAHEL-AEZ Fertilizer Use Optimizer

The below assumes:

Calibration measurement is with: Diago water bottle lid that holds about 8 ml, 5.6 g urea, 8.8 g DAP, 8.8 g of TSP, 8.0 g NPK and 8.8 g KCl; Gino tomato can of 70 ml to hold 49 g urea, 77 g DAP, 77 g TSP, and 77 g KCl

Planting: It is assumed maize and cowpea: 0.8 x 0.4 m; sorghum 0.8 x 0.8 m; pearl millet 1 x 0.8 m; groundnut 0.4 x 0.4 m; rice 20 cm.

Crop values: It is assumed grain prices per kg (CFA): 80 maize; 130 sorghum; 300 rice; 135 pearl millet; 600 Ground nut; 600 cowpea.

Fertilizer use costs for 50 kg: It is assumed 50 kg of fertilizer use costs (CFA): 13,500 urea; 20,000 DAP; 13500 NPK, 16000 TSP, 16000 KCL.

Broadcast width: 3 m; WAP=weeks after planting, WAT=weeks after transplanting. Application rate is kg/ha.

Level 1 financial ability.

Pearl millet: Point apply 36 kg DAP (1 Diago lid for 3.1 plants) at emergence

Maize: Point apply 24 kg urea (1 Diago lid for 7.3 plants) at 6 WAP.

Irrigated rice: Broadcast 63 kg urea at Panicle Initiation (1 GINO can for 2.6 m)

Sorghum: Point apply 24 kg TSP (1 Diago lid for 5.7 plants) at emergence

Level 2 financial ability.

Pearl millet: Point apply 76 kg DAP (1 Diago lid for 1.4 plants) at emergence

Maize: Point apply 46 kg urea (1 Diago lid for 3.8 plants) at 6 WAP.

Cowpea: Point apply 42 kg TSP (1 Diago lid for 6.5 plants) and 13 kg KCl (1 Diago lid for 21 plants) at emergence.

Irrigated rice: Broadcast 70 kg Urea at panicle initiation (1 Gino can for 2.3 m) and broadcast 41 kg DAP at (1 Gino can for 6.3 m) and 20 kg of KCl at emergence or transplanting (1 Gino can for 13 m).

Sorghum: Point apply 52 kg DAP (1 Diago lid for 2.6 plants) at emergence.

Level 3 financial ability (maximizes profit per hectare).

Pearl millet: Point apply 115 kg DAP at emergence (1 Diago lid for 1 plant)

Maize: Point apply 67 kg Urea at 6 WAP (1 Diago lid for 2.6 plants).

Cowpea: Point apply 75 kg TSP at (1 Diago lid for 3.7 plants) and 15 kg KCl (1 Diago lid for 18 plants) at emergence. .

Irrigated rice: Broadcast 69 kg Urea at panicle initiation (1 Gino can for 2.4 m) and broadcast 57 kg DAP at transplanting (1 Gino can for 4.5 m); and broadcast 40 kg of NPK 16-26-12 at transplanting (1 Gino can for 6 m).

Sorghum: Point apply 12 kg Urea (1 Diago lid for 7 plants) at panicle initiation and point apply 79 kg DAP (1 Diago lid for 1.7 plants) at emergence.