



MALI-NORTH SUDAN-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; 13,500 NPK, 16,000 TSP, 16,000 KCL.

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

Level 1 financial ability.

Millet: Point apply 17 kg DAP (1 Diago lid for 6.8 plants) at emergence

Maize: Point apply 45 kg urea (1 Diago lid for 3.7 plants) at 6 WAP.

Rice lowland: Broadcast 34 kg urea at Panicle Initiation (1 GINO can for 4.8 m)

Sorghum: Point apply 37 kg Urea (1 Diago lid for 2.7 plants) at emergence

Level 2 financial ability.

Millet: Point apply 43 kg DAP (1 Diago lid for 2.7 plants) at emergence

Maize: Point apply 30 kg urea (1 Diago lid for 2.4 plants) at emergence and 53 kg urea (1 Diago lid for 3.1 plants) at 6 WAP.

Groundnut: Point apply 20 kg DAP at emergence (1 Diago lid for 28 plants)

Rice lowland: Broadcast 46 kg urea (1 Gino for 3.7 m) at transplanting and 46 kg urea (1 Gino for 3.7 m) at panicle initiation.

Sorghum: Point apply 47 kg Urea (1 Diago lid for 2.7 plants) at emergence.

Level 3 financial ability (maximizes profit per hectare).

Millet: Point apply 65 kg DAP at emergence (1 Diago lid for 1.4 plants)

Maize: Point apply 50 kg Urea at emergence (1 Diago lid for 3.3 plants) and 62 kg 6 WAP (1 Diago lid for 2.7 plants) and 12 kg DAP at emergence (1 Diago lid for 13.6 plants).

Groundnut: Point apply 29 kg DAP at emergence (1 Diago lid for 13 plants).

Rice lowland: Broadcast 70 kg Urea at transplanting (1 Gino can of 70 ml for 2.3 m) and 75 kg at panicle initiation (1 Gino can of 70 ml for 2.2 plants).

Sorghum: Point apply 57 kg Urea (1 Diago lid for 2 plants) at panicle initiation.