



NIGER SAHEL AEZ

FERTILIZER USE OPTIMIZER:

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The below assumes:

Measurement for calibration is with a: Oriba bottle cap (**Oriba**) of 7 ml: holds about 4.9 g urea, and 7.7 g DAP, TSP or KCl.

Row spacing: 80 x 40 cm for maize and sorghum; 100 x 100 cm for pearl millet; 20 cm for rice; 80 x 50 cm for cowpea; and 80 x 20 cm for groundnut;

Grain prices per kg (F CFA): pearl millet 160; sorghum 170; maize 180; rice 280; groundnut unshelled 180; cowpea 200;

Fertilizer use costs per 50 kg bag (F CFA): urea 13500; TSP 18000; DAP 20000; KCl 15000; SSP 12500 and NPK (15-15-15) 13500;

Broadcast width: 2.0 m; **DAS**=Days After Sowing; **DAT**= Days After Transplanting.

Level 1 financial ability

Lowland rice: broadcast 56 kg/ha Urea at panicle initiation (1 Oriba for 0.4 m);

Pearl millet: point apply and incorporate 30 kg/ha DAP 5-10 DAS (1 Oriba for 2.6 hills);

Sorghum: point apply and incorporate 24 kg/ha DAP 5-10 DAS (1 Oriba for 7.4 hills);

Maize: point apply and incorporate 20 kg/ha Urea at 8 leaves stage (1 Oriba for 7.2 hills) and 28 kg/ha urea at tasseling (1 Oriba for 5.2 hills).

Level 2 financial ability

Lowland rice: broadcast 32 kg/ha DAP 3-7 DAT (1 Oriba for 1.2 m). Broadcast 68 kg/ha Urea, (1 Oriba for 3.4 m) and 20 kg/ha KCl (1 Oriba for 2 m) at panicle initiation;

Pearl millet: point apply and incorporate 82 kg/ha DAP 5-10 DAS (1 Oriba for 1 hills);

Sorghum: point apply and incorporate 63 kg/ha DAP 5-10 DAS (1 Oriba for 3.8 hills);

Maize: point apply and incorporate 30 kg/ha Urea at 8 leaves stage (1 Oriba for 4.8 hills) and 47 kg/ha urea at tasseling (1 Oriba for 3 hills);

Cowpea: point apply 20 kg/ha DAP 5-10 DAS (1 Oriba for 9.6 hills);

Groundnut: band apply and incorporate 20 kg/ha TSP 5-10 DAS, (1 Oriba for 4.8 m).

Level 3 financial ability

Lowland rice: broadcast 66 kg/ha DAP 3-7 DAT (1 Oriba for 0.6 m). Broadcast 75 kg/ha Urea (1 Oriba for 0.3 m) and 24 kg/ha KCl, (1 Oriba for 1.6 m) at panicle initiation;

Pearl millet: point apply and incorporate 128 kg DAP/ha 5-10 DAS (1 Oriba 0.7 point)

Sorghum: point apply and incorporate 94kg/ha DAP 5-10 DAS (1 Oriba for 2.6 hills); point apply 26 kg/ha urea at tillering stage (1 Oriba for 5.5 hills);

Maize: Point apply and incorporate 50 kg/ha Urea at 8 leaves stage (1 for 2.9 hills) and 52 kg/ha Urea at tasseling (1 for 2.8 hills);

Cowpea: point apply and incorporate 25 kg/ha DAP 5-10 DAS, (1 Oriba for 9 hills);

Groundnut: band apply and incorporate 27 kg/ha TSP 5-10 DAS, (1 Oriba for 4.9 m).