



Malawi Fertilizer Use Optimizer: paper version, Zone <760 m asl
Prepared by: Patson C. Nalivata & Moses W. Munthali
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The below assumes:

- **Calibration measurement unit:** a water bottle cap (CAP, 8 mL) for 5.6 g urea, 8 g of NPS.
- **Row spacing:** maize, 75 cm; bean, soybean, cowpea all 50 cm; pigeon pea 75 cm.
- **Apply point spacing:** maize and cowpea, 25 cm; g/nut 20 cm; pigeon pea 75 cm
- **Grain prices:** per kg (MK): 120 maize; 350 bean; 120 rice; 300 sorghum; 600 pigeon pea; 600 cow pea; 700 g/nut;
- **Fertilizer use costs per 50 kg bag (MK):** 25000 urea; 23000 NPS.
- **Weeks after planting (WAP)**

Level 1 financial ability

- Maize: 20 kg NPS, 2 WAP (1 CAP for 18 plants or 9 points); point apply 65 kg urea, 8 WAP (1 CAP for 2.1 plants or 1.1 points)
- Cowpea: point apply 55 kg NPS at planting (1 CAP for 7.7 plants or 3.8 points).
- Bean: band apply 34 kg Urea at planting (1 CAP for 2 m).
- Soybean: band apply 66 kg NPS at planting (1 CAP for 1 m).
- Pigeon pea: point apply 85 kg NPS at planting (1 CAP for 4.9 plants or 2.5 points).

Level 2 financial ability

- Maize: 150 kg NPS at 2 WAP (1 CAP for 2.8 plants or 1.4 points); point apply 59 kg urea, 8 WAP (1 CAP for 4.8 plants or 2.4 points).
- Cowpea: point apply 72 kg NPS at planting (1 CAP for 5.9 plants or 3 points)
- Bean: band apply 26 kg Urea at planting (1 CAP for 2.7 m).
- Soybean: point apply 103 kg NPS at planting (1 CAP for 0.6 m).
- Pigeon pea: point apply 105 kg NPS at planting (1 CAP for 4.1 plants or 2.0 points).

Level 3 financial ability

- Maize: 150 kg NPS at 2 WAP (1 CAP for 2.8 plants and 1.4 points); point apply 121 kg urea, 8 WAP (1 CAP for 2.3 plants or 1.2 points).
- Cowpea: point apply 89 kg NPS at planting (1 CAP for 4.8 plants or 2.4 points)
- Bean: band 71 kg NPS at planting (1 CAP for 1.5 points).
- Soybean: point apply 142 kg NPS at planting (1 CAP for 0.4 m).
- Pigeon pea: point apply 125 kg NPS at planting (1 CAP for 3.4 plants or 1.7 points).