

Benefits of fertilizers in cotton production

Recognize the problem

Cotton (Butonje in Tonga) is grown without fertilisers by some farmers. The lack of fertiliser prevents the plant from reaching the full variety height. It may have fewer branches and fewer or smaller bolls. Plants may show stunted growth over large areas of the field.

Cotton at 8 weeks of growth. The growth is stunted and uneven because of lack of fertilizer. (Photo by Chipso)



Background

Many farmers are only producing 6-7 bales (about 80 kilograms) of cotton per hectare instead of 15-18 possible bales per hectare (about 200 kilograms). There are many reasons but most often, this is as a result of not applying fertiliser. Fertilisers are a source of food for the plants that is needed for roots, branches and fruits to grow. Every season, cotton plants use nutrients from the soil. If nutrients are not reapplied by fertilizers, yields become less and less. Normally the cost of fertilisers is lower than the money gained from the increased yield.

Management

- Apply basal fertiliser "compound D" just before planting or during planting. Compound D contains Nitrogen (N) for vegetative growth, Phosphorous (P) for root growth and Potassium (K) for fruiting. They are also called NPK fertilisers.
- The usual compound D fertiliser rate in cotton is two 50 kilogram bags per hectare. Richer soils may need a bit less, poorer soils may need a bit more.
- In rip line planting, use a Vaseline bottle (100millilitre) full with fertiliser per 20 pace.
- In basin planting, use 1 filled number-8-cup or match box (6.5 grams) per basin. Top dress with urea 4 weeks after planting
- The usual urea fertiliser rate is one 50 kilogram bag per hectare. Richer soils may need a bit less, poorer soils may need a bit more.
- In a rip line growing, use half a Vaseline bottle of urea per 20 pace
- In basins growing, put a half filled number-8-cup per basin onto or into soil. Caution: urea application must be done 5-7 cm away from the plant to avoid having a negative effect on the plant.

Putting fertiliser in the basin with a number 8 cup. (Photo by Chipso)



The recommendations in this factsheet are relevant to: Zambia



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Edited by Plantwise.