5. Soil fertility management

Brachiaria grass like any other cultivated forage grasses requires nitrogen, phosphorus, potassium, and micro-nutrients for optimal growth, development, and yields. Depending on the availability of resources, soil fertility can be managed by application of either organic fertilizers or inorganic fertilizers to maximize yield.

Organic fertilizers/manure

Soils that are low in nutrients should be supplemented with well decomposed manure. Farmyard manure and/or compost can be applied at the rate of 10 -15 t/ha at the time of land preparation before planting. Thereafter about 4 - 6 t/ha at every alternate year can be applied between the rows and incorporated into the soil.

Inorganic fertilizer

Phosphorus is an important element for root development in young plants and therefore it is essential for good establishment of the grass. About 40 to 50 kg phosphorus (200 to 250 kg of Triple Super Phosphate (TSP) or 6 to 7 bags of Single Super Phosphate (SSP) is required for one hectare at planting and should be mixed thoroughly with soil before the seeds are sown. Nitrogen fertilizers should be applied in split doses during the production of the grass and when soil is moist. Normally about 100 kg of nitrogen (8 bags each 50 kg of Calcium Ammonium Nitrates (CAN) in 2 to 3 splits per hectare every year are recommended during the wet season. Higher rates can be used if farmers target higher forage

production. Application of fertilizers with ammonium such as Di-Ammonium Phosphate (DAP) and CAN at planting should be avoided as they may scotch the seeds and affect germination.

In the acid prone soils, the soils should be supplemented with lime following recommendation of the soil testing laboratory and should be applied and incorporated into the soil at the time of land preparation.