



The Benefits of Mulching

By Hanks Saisai, Technical Advisor: Crops & Poultry

In Arid and semi-arid countries such as Namibia where water is a scarce resource it is always advisable for farmers to engage in water conserving practices. The tillage or cultivation of land for the purpose of crop or vegetable production often exposes the soil to scorching sunlight which speeds up evaporation and depletes moisture.

A common method that has been used to ensure water retention in fields or gardens is mulching. Simply defined, mulching is the practice of covering the surface of the soil (seedbed) between growing crops or vegetables with a layer of material. Mulching has several benefits and it is an efficient way of promoting water retention in the soil after irrigation

A prominent benefit of mulching is that it slows down the amount of soil moisture that is lost during evaporation. On very hot sunny days, seedbeds or crop fields that have no cover on the surface of the soil between growing crops, tend to suffer in water losses due to evaporation thus lowering the amount of soil moisture available to plant roots. When mulching is correctly placed on the surface, evaporation reduces thus minimizing the damage that vegetables such as tomatoes, potatoes and root crops (carrots) may experience due to low soil moisture as they approach maturity stages. Moreover, mulching reduces the frequency of watering gardens or crop fields and in so doing reducing the cost of water that may be associated with growing crops.

Additionally, mulching has the ability to reduce soil compaction that is caused by watering, rain and trampling when working in the garden. This improves water penetration in fields and gardens and reduces the chances of runoff, consequently preventing soil erosion. Mulching with a thickness of about 5 cm (50 mm) to 7.5 cm (75 mm) helps to prevent the germination and emergence of annual weeds by limiting the penetration of sunlight that is needed to stimulate the germination of most seeds.

Furthermore, mulching insulates the soil to a considerable extent from extreme day and night temperatures ensuring an ideal environment for soil micro-organisms that are vital in decomposing dead plant and animal materials to provide nutrients to the roots of crops and vegetables. When compost or manure is used as a mulch, it can provide a steady supply of nutrients to the roots. Finally, mulching helps to reduce the greening effect of roots and tubers due to protection from prolonged exposure to sunlight.

In conclusion, if you are in areas with scarce water supply or scorching day temperatures that limit your ability to successfully grow vegetables, it is recommended that you consider introducing mulching as a prudent practice to conserve soil moisture. Grass straws, palm leaves and black polythene plastics can be used as mulching materials.