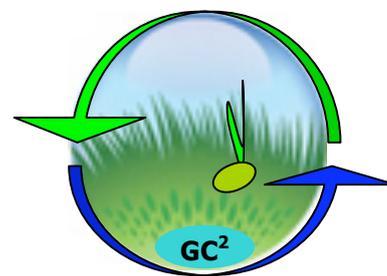


Vetiver hedge maintenance in semi-arid areas



After correctly establishing a Vetiver hedge, it is important to follow some guidelines on how to maintain it, to make the technology succeed i.e. a hedge that is effectively reducing soil loss and improving water infiltration, and to take better advantage of by-products (on-farm or elsewhere).

For an established hedge there are four procedures necessary:

1. **watering**
2. **gap filling**
3. **weeding**
4. **pruning.**

1. Watering

Generally one needs to water for six weeks following the planting, in case it does not rain sufficiently (judgement on sufficiency of rainfall is site-specific, including considerations on soil moisture retention and slope). Any young plant needs watering and care, and in this sense a Vetiver plant is better to be compared to a crop (e.g. maize) or a just transplanted tree. *It is not 'just a grass' that can fend for itself, recovering from low survival rates whenever the occasion is there. For all applications of VS high survival rates are required.* In dry areas and dry seasons watering must be assured for at least three months following transplantation. **NOTE.** In hot dry areas, prior to planting Vetiver slips should be kept damp and shaded, and not left in the sun to dry out. At time of planting dipping roots in a mud slurry containing rooting hormone or "horse/cow manure" will enhance growth and survival.

2. Gap filling

Clearly not all plants will survive transplantation, but generally the survival rate should be no less than 95%. Replacement of dead or damaged plants is necessary to ensure a uniform hedge to be effective in its primary function (to bind soil to strengthen slope stability, retard water flow, accumulate soil and/or absorb toxins). In some situations there are also gaps caused by strong water flow taking away just establishing Vetiver plants. Ensure that – for a full year at least – gaps are filled, to establish a uniform hedge.

3. Weeding

Because the planting ditches have received ample manure, weeds have a tendency to come up strongly, and faster than Vetiver. Weeds growing near the plants, or along the crown of the Vetiver plant, will strongly affect Vetiver's speed of growth, due to competition for water, fertility and also shading can be a factor (in the first year, a newly established hedge should have to compete with a high-growing crop like maize planted closely along the hedge).

For good hedge development the hedge needs some space and light. Weeding must be done for about one year, to ensure fast growth of the hedge.

4. Pruning

Pruning is not recommended in the first 10 months or before it reaches 1 metre high, but after that pruning is required; it will stimulate tillering and hence the closing of any remaining gaps. To prune the hedge has to be cut down to 30cm (just under knee level; going lower is not recommended as it will retard tillering). For new hedges for SWC, the cut leaves can be put as mulch, mostly on the upper side of the hedge, as mulch to reduce the temperature, reduce weed growth, and to assist the hedge retarding water flow and reducing soil loss.

After the first pruning, the frequency can be from at least twice yearly down to monthly (depending on growth conditions and use of leaves for by-products). In Mali a monthly pruning is suggested during the dry season, to assure good growth and a healthy plant.

