

Frequently Asked Questions

www.erosionqld.com.au

Why use Vetiver?

<https://www.erosionqld.com.au/why/>

Propagation of Vetiver 'slips':

What is a slip? What is a tiller?

Terminology of Vetiver material:

A Vetiver *slip* is a propagation piece of Vetiver Grass which represents a small individual plant.

A *tiller* is a living or actively growing shoot of grass leaf or stem.

A quality Vetiver slip has 2-3 tillers and a piece of crown (where the shoots grow from). It is also known as a 'bareroot slip'.

Where should a Vetiver Nursery be sited?

In a full sun location preferably on a sand or sandy loam soil for ease of digging. Nutrient rich and moist/irrigated are preferred. Vetiver will grow almost anywhere so as long as you have sun, you can have a nursery. You can plant on any soil type, even slightly saline.

When is the ideal time to propagate Vetiver?

When soil temperatures are rising or high. In the subtropics, this could be between late August to April in Australia. It depends on your location e.g. coastal versus inland/subtropical versus tropical will be different. In most places except for the full tropics, late Autumn/Winter is not the time to dig/divide/plant Vetiver as the results will be poor.

What is an ideal spacing between 'mother' clumps?

50cm is recommended but can be larger or smaller. Consider that each clump must get a good amount of sun so too close can compete with each other. Too far apart and weeds/grasses will also require maintenance to prevent competition with the Vetiver and the size of the nursery will increase.

How old should a Vetiver clump be before division?

12-24 months is recommended. Any longer results in difficulty in digging up and breaking the clump apart as the crown can become woody (this may require slicing tools). If you have physical constraints, try dividing at 6 months of age.

How can I improve the success rate of propagation and survivability for planting in the field?

A simple tool to use is to soak your Vetiver slips in fresh water (covered just over the crown) for 2-7 days, changing the water every 1-2 days (to prevent anaerobic conditions; 1 day for small containers, 2 days for larger or sparsely populated). After 2 days, the Vetiver crown and slip will become 'turgid' (or hydrated) and will statistically perform slightly better when planted out as a bareroot slip into the field. This is simpler than rooting hormones or specific fertilisers and has a decent result. This step is not always necessary or if it has been raining excessively. Your choice.

How can I make my plants grow quicker?

Vetiver responds well to most standard horticultural treatments like nutrient regimes, irrigation, mulch etc. Vetiver will grow faster when supplied with added nitrogen and phosphorous. Warm Summer temperatures, rainfall/irrigation, and fertiliser are the 3 things that will have most impact on your plants. Greywater outflows are an ideal place for Vetiver to grow.

Cutting the tops of the Vetiver to approximately 30-40cm at 12 months of age may induce and enhance tiller formation which can thicken the clump and create more potential slips.

Planting your Vetiver:

When do I plant Vetiver?

Similar to the propagation timing. When the weather is warm and preferably during the wet season to make establishment easier.

How do I plant Vetiver?

There are many different methods. The 'Vetiver System' dictates that a Vetiver hedge is the most efficient means of application of Vetiver to a site. A standard method is a small V-furrow or trench dug on or close to contour which enables the planting of Vetiver slips at 10-15cm centres (a human fist apart – closer is always better). Each slip is buried to just over the crown in an unbroken line of plants which forms a solid Vetiver hedge as it grows.

How many plants do I need?

A very simple rule of thumb when working out plant needs is to measure the distance of your potential hedges in lineal metres, multiply by 10, and multiply by number of hedges. This will give you enough plants to have quite a few left over in case there is any death of slips. Big planting jobs could use 7-9 slips per metre to keep the numbers realistic.

In a nursery situation to guesstimate slip production, 1 slip could multiply to 15+ after 12 months. This is extremely variable based on site/latitude, nutrients, season timing, and irrigation so only use this as a basic guide.

Do I need to water my new Vetiver planting?

Yes, if the soil is dry and the plants are young. When planting bareroot slips, even though the plants have old damaged/dead roots attached, most/all of the new living roots need to grow from the crown first before the plant can start establishing. This requires a moist soil and time. If you have ample rainfall or soil moisture, watering or irrigation may not be required at all and timing your plantings around rainfall can reduce a lot of energy in digging/watering. Sandy or rocky soils may require more irrigation than clay-based sites, each site is different. Try using a finger and checking for moistness, keep wet for 2-3 weeks at a minimum. Vetiver is amazingly drought-hardy once established.

Do I need to fertilise or mulch my new hedge?

If you can, sure, but you don't have to. It likely won't need much special treatment on anything but the hardest of sites. You, as the landowner, will know how tough the conditions are at each location and can approach it as required. A fertilised hedge will potentially grow much faster so if you need a thicker, working hedge in a shorter period of time then it is up to you. A mulched hedge may reduce maintenance and competition from other plants/weeds as well as conserve moisture.

I have a really tough site; how can I improve survival rates?

Establishing your slips into pots of fertilised soil or media before planting out can increase survival, sometimes up to 100%. Approximately 2-3 months of potted growth in a small pot or bag (big enough to get the initial slip into) will establish a strong, fine feeder root system which will likely grow much faster and is less likely to fail in the field. They may even establish with no subsequent irrigation. Pot in Spring, plant in Summer.

How do I prevent gaps in my new Vetiver hedge?

As discussed previously, a Vetiver hedge is an unbroken line of plants. It needs to be unbroken so as to create a barrier to water and soil movement, a gap will funnel water/soil through it. After planting a hedge, keep a few plants handy and aside just in case any of the new slips die. If any do die, replace them immediately which should stop any gaps from forming. Look around each slip, a growing slip after 2+ weeks should have new tillers forming and pushing through the soil or existing tillers should be green and increasing in length (new tillers will come later). Establishing new slips between established plants is difficult due to the competition from the existing larger clumps. Also, always add to a hedge on one end of it and conversely, remove plants from one end, never in-between.

Where can I find different applications and techniques for Vetiver?

www.vetiver.org

Maintenance of Vetiver:

Why and how do I maintain Vetiver?

Cutting Vetiver is the act of removing part of the upper section of the leaves and using it as required e.g. mulch, biomass, handicrafts, or fodder. It also encourages tillering and thickening of hedges, adds to filtering of soil on the top side of the hedge when leaves are placed there, reduces dead material inside of the hedge, and improves palatability for animals. Vetiver can be cut 1-4 times a year, depending on the conditions and rainfall. 2-3 cuts is the average.

A minimum of one cut is recommended at flowering time (late Summer/Autumn) to prevent thickening of the flowering stems which makes subsequent cuts harder to make. The flowers and seeds are sterile but removing or preventing them makes things easier. Post-flowered tillers or shoots tend to lose vigour so if you are planning on dividing your clumps, try not to let it flower. Hedges in the field, not so much but it's good maintenance to do so.

A hedge is cut at approximately 30-40cm in height with any cutting tool available to you. A brushcutter blade, hedgers, shears, serrated grass sickles, secateurs are a few examples. A mower/slasher could do it but a low cut can reduce the effectiveness of a hedge as a silt control and it does have some impact on total photosynthesising material so should be done sparingly.

What about weeds and Vetiver?

During initial planting of your Vetiver slips, either hedges or a nursery in a sunny position, there will be competition from other plants. How you manage these depends on your definition of a weed and the pressure it puts on the young Vetiver clumps. Ideally, you want the Vetiver to receive maximum sun so your weeding should allow that to happen. Eventually, the Vetiver will dominate most other lower-growing or herbaceous species in the immediate footprint. On a revegetation site, it's recommended to remove any desirable tree species in or near the hedge to allow the Vetiver to establish first. After the first year if any wanted plants start to germinate in the hedges, they can be left with the knowledge that the trees will eventually weaken (shade) the Vetiver. Your end goal is how you determine your weeding.

If the hedge or nursery has pressure from other pasture grasses or herbaceous weeds, brushcutting or mowing as close as you can get to the Vetiver clump or hedge (without damaging it) should be enough to allow the Vetiver to establish. You may need to handweed anything inside the clump or hedge if it's too large or competitive. The shade from the Vetiver will dominate the other plants when established. This can be used as an advantage on garden edges to stop running grasses from entering beds/planting sites.

Can I burn Vetiver for maintenance or weed control?

Vetiver is extremely tolerant to fire as its crown/buds or growing points are underground. Some growers will use fire to control and clean hedges/nurseries and this tool may be an option for you if you take the damage to the standing part of the hedge into account for water and silt control effectiveness. If needed, you can burn your planting any time of the year to control weeds, but burning at the end of the flowering season is the best way of getting rid of the hard flower heads mentioned above. After burning, the Vetiver will recover quickly. For quicker regrowth you should water it after the fire.

Can I use herbicides to control weeds?

Vetiver is tolerant to most chemical herbicides, except Glyphosate, commonly known as "Roundup", to which it is extremely sensitive. At 10% of the recommended concentration, young Vetiver can be killed by Glyphosate so it is not recommended for use to control weeds after planting. In older plants, 50% concentration is needed. In addition, Diesel fuel can also kill mature Vetiver.