

A Few Observations on Misconceptions: Rot 'n Rush®

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SAWDUST AND ITS MANY USES

It's amazing how the soil we have treated so badly continues to bless us with food, clothing, and beauty. To see whole areas stripped and dumped into huge anaerobic heaps and sold off as top soil is at the least depressing! To have spent hours double digging and "Bastard Trenching," was for me a waste of youthful exuberance if not character building. To have learned that mulching and no digging is the way to grow is a blessing in old age; it takes much time for soil to recover from poor husbandry and the mixing up of its vital ecological components. "Never use sawdust" an age old adage was and still is, the cry being that it robs the soil of nitrogen, a huge hangover from the trenching and bury it brigade. We use tons of sawdust with not a trace mineral or other deficiency. Thick mulch over gardens and tree areas keeps the soil cool, full of organisms, and rich in humus with few weeds; the type of sawdust (untreated) can be from any species. The only drawback is that it is soon gobbled up and needs another layer. The large trees soon send up masses of roots with their assistant mycorrhiza (a symbiotic association of a fungus and the roots of a plant) and become healthier and more insect- and fungus-resistant. The perennials planted grow at a fast rate, producing dark green foliage and richly coloured flowers. Ferns grow to perfection, while the young native seedlings are produced in overabundance.

Sawdust used as a heeling in media produces strong root formation even on so-called dormant deciduous trees, and masses of new white roots soon grow. Divisions of evergreen species such as *Astelia* sp., New Zealand (NZ) flaxes (*Phormium* sp.), and a host of perennials soon grow strong roots, far better than when being potted into cold, soggy potting mix, over winter, ready for potting up in early spring with few losses.

I have observed in the past and more recently huge logs fallen or felled, covered in healthy young trees forming a native mixed hedge, the tree providing the media and mycorrhiza the food. Putting observations into nursery practice, we (nursery persons) are trying to produce good healthy plants, and I believe the use of sawdust mycorrhiza can help us. There are a number of NZ native trees and perennials hardly ever seen for sale because they are tricky or slow to grow. We have managed to grow some of them by using sawdust with *Podocarpus* root and mycorrhiza in a sandy mix for cuttings that are hard to root and grow on.

Dracophyllum – twenty or so species to try. Some rooted in 12 weeks and are growing well 2 years later as still small plants. Others include tree species such as *Ixerba brexioides*, *Litsea calicaris*, *Quintinia serrata*, *Archeria*, and *Epacris* and perennial species such as *Ourisia* and *Euphrasia*, with possibly many more to be tried. Experiments with sawdust continue, possibly as mulch over potted trees for revegetation to give them a boost before planting out in situ.

RUSH

With the advent of wetlands as part of revegetation and subdivision of land there has been a rush to produce plants suitable for planting. While *Phormium* and *Cordyline australis* are a mainstay, the many Cyperaceae are also valuable genera. Most are easily identified although they do somewhat all look the same, and most plant growers do not seem to have a clue what they are producing. We have been producing reeds and rushes, exotic and native, since the late 1980s. The last 5 years have been a steep learning curve to be able to grow from seed and division our native forms. Production has gone from a few hundred in the early days to many thousands at present. A useful key to identification can be found in the Flora of New Zealand (Moore and Edgar, 1970), good line drawing and sketches in Field Guide to Stewart Island Plants (Wilson, 1982), and good photographs in The Cultivation of New Zealand Native Grasses (& Rushes) (Metcalf, 1998).

The following is a list of rushes using a visual description, not a botanical description.

- The rare and elusive *Sporadanthus traversii* (originating in the Chatham Islands) and *S. ferrugineus* (originating in the Waikato) have very erect bright green stems with joints and scales to 3 m tall, are slow growing with brown flower heads at the tip of stems, with male and female plants separate. Both species grow on peat bogs and sphagnum moss.
- *Bulboschoenus fluviatilis*, very open leafy foliage, 100–200 cm tall, green in summer and then goes dormant. Rampant and very untidy with hard rhizomes that can be eaten when in fresh growth and grows in shallow water or boggy ground.
- *Machaerina articulate* (syn. *Baumea articulate*), very strong growing, rampant, bright green, 100- to 200-cm-tall plant with ridges on the stem that can be felt by running fingers up the stem. Fluffy brown seed heads and grows in shallow water.
- *Machaerina rubignosa* (syn. *Baumea rubignosa*), large clumps, 30- to 80-cm-tall, blue green stems, slightly oval in appearance with flower heads at top of stem which seeds light golden brown and grows in boggy conditions.
- *Machaerina tenax* (syn. *Baumea tenax*), clumps but spreads slowly, stiff grey 30- to 50-cm-tall stems forming seeds with hard grey-black tips, often growing on clay banks and poor soils.
- *Eleocharis acuta*, makes thick clumping mats, 20–80 cm tall with stiff wiry leafless stems coloured green with base reddish brown. Small cylindrical seed heads coloured pale brown.
- *Eleocharis sphacelata*, rampant, very strong growing usually to 1 m tall with soft green stems that crush and will grow in shallow water to 30–40 cm deep. Pointed cylindrical papery seed from heads which break up easily.
- *Juncus gregiflorus*, clumps to 60–150 cm height, with wiry shiny green stems and multi-stemmed almost fluffy seed head. The tip of the stem is about 10 cm above seed head. Grows in dry to bog conditions.
- *Juncus pallidus*, strong growing to 100–200 cm tall with blue-grey stems that are full of white pith. Multi-stemmed seed head usually close to the stem and about 20 cm from the tip. Grows in dry to bog conditions.

LITERATURE CITED

- Metcalf, L.** 1998. The cultivation of New Zealand native grasses. New Zealand Gardening Guides, Godwit Press Ltd, Auckland.
- Moore, L.B.** and **E. Edgar.** 1970. Flora of New Zealand Volume 2, Government Printer, Wellington.
- Wilson, H.D.** 1982. Field guide: Stewart Island plants. Field Guide Publications, Christchurch.