

Quick guide to direct seeding riparian areas

A synopsis of the Best Practice Guidelines: Direct Seeding of Riparian Areas

Choosing to direct seed

Consider: the desired diversity of species; the suitability of the land; the abiotic conditions of the site; your capacity to control weeds (before and after seeding); and community expectations.

- Direct seeding typically results in lower species diversity; is not recommended for reestablishing rare species and is most likely to improve condition in sites scoring 1-3 on Melbourne Water's condition scale.
- Effectiveness of direct seeding can be reduced by compacted or higher fertility soils and elevated phosphorous.
- Successful direct seeding is more likely when the riparian area is still connected to the waterway.
- If adequate weed control is unlikely, then direct seeding is unlikely to be effective.
- Direct seeding is well suited to large, relatively flat sites where a mechanical seeder can sow several hectares in a few hours.
- Sites in full public view and those with an engaged local community may be better suited to planting, where results are instantly visible.
- When full EVC restoration is desirable, a combination of planting and direct seeding might be best.

Site preparation

Consider: potential weed competition (at the time of sowing and as plants establish); animal pest control; soil cultivation; and the timing of your sowing.

- Weed competition is the biggest single limiting factor to successful direct seeding. Woody weeds should be removed 1 - 2 years prior to sowing and other weeds some months before sowing.
- Generally, weed control in spring and in autumn prior to sowing, and then approximately 2 weeks before sowing should be sufficient.
- Time sowing to avoid: temperatures extremes; very low soil moisture levels; and waterlogging and floods (until plants are established).
- For wetter sites (east, north-east of MW's region): sow in spring.
- For drier sites (west, north-west of MW's region): sow in autumn – winter, after the autumn break.
- Consider the need for and options to control invertebrate and vertebrate pets.
- Intensive cultivation of riparian soils prior to direct seeding is NOT recommended, although some small scale cultivation may help.

Sowing seed

Consider: the timeline for ordering seed; seed storage and preparation; how much seed you will need; and the most appropriate sowing methods.

- Order seed at least 12 months prior to sowing, storing in cool, dry conditions.
- Some species are more likely to germinate if pre-treated (such as abraded or smoke water).
- In general, 250 – 500 g/km of seed will be required per kilometer (which equates to about 750-1500g/ha).
- Sowing seed can be done either by machinery (allows large areas to be sown in a relatively short time) or hand (when the topography and landscape features prevent vehicle access to the site).
- Collect seed from a range of individuals to ensure genetic diversity.

Maintenance

Consider: the need to monitor the growth of seedlings and the re-emergence of weeds; plan for on-ongoing maintenance.

- The first inspection should be within 4-6 weeks of sowing; to check for emergence of seedlings & weeds and browsing pressure
- Ideally, maintain a weed-free radius of 1m around the seedlings for the first year.
- Field trials indicate that hand weeding within sown areas is the most effective post-sowing weed control technique.
- Usually herbicide application is not possible during seedling establishment if the direct seeding is on a broad scale and not in niches, due to the risk of damaging seedlings. Hand weeding is likely to be the most effective weed control during seedling establishment, with herbicide applications possible once there is a low risk of off-target damage."
- If soil moisture is limited during early growth, additional watering will be required.