



Direct seeding in the Top End

What is direct seeding?

Direct seeding is a technique now commonly used for revegetation projects and involves the spreading of seed directly on the soil surface, avoiding the need for growing seedlings in nurseries.

Why use direct seeding?

The main advantages of direct seeding are:

- low-cost compared to planting seedlings
- large areas of direct seeding can be established quickly
- directly seeded plants establish quickly and develop stronger root systems, and are generally more hardy than nursery grown seedlings
- natural selection results in stronger plants
- a broad range of trees and understorey shrubs can be established

Some disadvantages of direct seeding are:

- can be less reliable than planted seedlings - increased risk of failure
- seed predation by birds and insects can reduce seedling establishment
- good weed control is vital for successful direct seeding
- newly germinating seedlings require regular moist spells

Where can direct seeding be used?

- roadside revegetation
- rangeland revegetation
- mining rehabilitation
- large landscaping projects
- revegetation of cleared and degraded sites
- windbreaks for property, stock and crop protection
- fire resilient buffer zones around fire sensitive vegetation
- revegetation and dust suppression around communities
- erosion control along drainage lines
- production of trees for timber, firewood, fodder and/or nectar creation for wildlife habitats and corridors.

Project planning

Direct seeding operations are timed to coincide with the commencement of the north-west monsoon. Plan a schedule of work for your project to maximise your chance of success. Include the collection or acquisition of seed in your plan.

Site preparation

Seedbed preparation and sowing is carried out during the "Build-up" to allow seedling establishment during the monsoon period. The best time for this is November and December when storms are common. Good weed control is essential for as their rapid growth rates will generally out-compete native seedlings. Weeds emerging after early rains can be cultivated and sprayed to achieve good control. Deep ripping of the site along the contour to prepare the seed bed prior to seeding will also help control weeds. Fertiliser is not usually applied to direct seeding sites as it tends to promote weed species over native species.

Seeding rates and seed mixes

The standard seeding rate is between 2 and 5 kilograms per hectare. The relatively high rate is used to provide a more competitive native plant canopy over highly invasive and vigorous tropical weed species, especially grasses. All seed mixes are site specific and are based upon the surrounding remnant vegetation species, the most successful revegetation species used in past operations, as well as the desired outcomes of the project. Between 20 and 30 species are used on a typical direct seeding site in the Darwin area, with Eucalypts and Acacias generally making up a large percentage of the seed mix. Seed can be bulked up with sand and hand broadcast over the site, or specialised direct seeding machinery or spray seeders can be used.

Post sowing work

Weed control is vital in the post-sowing phase of the project, especially in the first year. Weeds are hand pulled or spot sprayed by experienced operators. Some over-spraying after the first year of sowing has been carried out which has achieved reasonable weed control. Fire protection measures are required at all seeding sites. This entails graded or slashed fire-breaks, and brushcutting all of the grasses within the seeded beds (native and introduced species).