



Australian Government

Department of the Environment and Heritage

# BE SMART WITH SEED.



Natural Heritage Trust

*Helping Communities Helping Australia*

An Australian Government Initiative



## Getting the best from native seed...

Native seed is a valuable resource and may be very limited in some areas. The following principles have been developed to offer practical help for regional organisations, community groups and landholders involved in protecting remnant vegetation and the planning revegetation activities. By following these principles and guidelines you can plan for the best use of your available native seed resources.

## Native seed management principles

- Collect native seed sustainably – to ensure native vegetation continues to regenerate.
- Reduce waste of seed. Match seed requirements to the biological and functional needs and objectives of the revegetation project.
- Use valuable local provenance seed to enhance remnant vegetation, rather than for broad scale revegetation.
- Use direct seeding techniques carefully in extensively cleared regions where there is restricted seed supply.
- Improve efficiency of native seed collection by better forecasting revegetation needs and improving the skill level of seed collectors.

- Encourage participation of commercial native seed suppliers in seed management. Ensure they are aware needs well in advance, and whether they can supply local seed species and particular genetic provenances if required.
- Increase the diversity of local species used in revegetation projects (particularly understorey species), to improve biodiversity benefits.
- Use quality assurance systems to ensure that the highest quality seed (physical and genetic) is used for revegetation activities.
- Adhere to legislative and regulatory requirements when collecting and planting native seed.
- Promote research into native seed, e.g. plant propagation, sustainable seed harvesting, and methods of maintaining genetic and species diversity.
- Refer to relevant guidelines, including the FloraBank Model Code of Practice for community-based collectors and suppliers of native plant seed and the FloraBank Guidelines.



## Native seed check lists

The check lists have been developed to assist application of native seed management principles in planning. They will be especially useful for native seed management on a regional scale. They may also be useful for many other projects and activities that utilise native seed. Some points may be more relevant to some regions than others.

### Native seed sources

Increasing the areas of vegetation available for seed collection will increase the amount of seed available. Regional organisations can develop and keep inventories of seed source areas to improve seed availability and to forecast what type of seed is needed when, and from where.

Source	Points to consider
Remnant vegetation	<ul style="list-style-type: none"> <li>• Undertake a vegetation survey and inventory within the region to identify suitable remnants for seed collection – seed may be available from both private and crown land</li> <li>• Use seed from different populations and species; this will provide genetic diversity and a range of biodiversity habitat benefits. Remember soil type may be relevant</li> <li>• Consider the use of local seed which may be more likely to provide a genetic match</li> <li>• Consider the real costs of native seed supply and in setting priorities for using seed in regional revegetation activities</li> <li>• Be familiar with legislative/licensing requirements relating to seed collection</li> </ul>
Revegetation areas	<ul style="list-style-type: none"> <li>• Select species that are known performers</li> <li>• Support a diversity of species</li> </ul>
Seed Orchards	<ul style="list-style-type: none"> <li>• Consider whether seed orchards can be used to target difficult species e.g. rainforest species</li> <li>• Seeds from seed orchards can be genetically limited</li> </ul>

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Source	Points to consider
Commercial seed supply	<ul style="list-style-type: none"> <li>• Give adequate notice to seed suppliers. Commercial seed suppliers may require a long period of notice for a seed order (sometimes a year in advance)</li> <li>• Specify whether seed is required from a particular area (or provenance)</li> </ul>

### Native seed collection

Improving the standards of seed collection and storage will help ensure the supply of seed is used efficiently, allowing source areas of native vegetation to regenerate.

Issue/Activity	Points to consider
Seed collection methodology	<ul style="list-style-type: none"> <li>• Plan ahead to identify future project demand and seasonal factors</li> <li>• Consider vegetation project objectives before determining seed requirements e.g. species and provenance requirements</li> <li>• Minimise damage to vegetation and soil when collecting seed</li> <li>• Adopt a precautionary approach to seed harvesting. Ensure sufficient seed is retained in vegetation source areas for natural revegetation and ecological processes (maximum of 20% of the seed crop from any individual plant to be harvested)</li> <li>• Develop collecting protocols for species groups</li> <li>• Use accredited seed collectors wherever possible or conduct training prior to seed harvest</li> <li>• Refer to the FloraBank Model Code of Practice: for community-based collectors and suppliers of native plant seed, and general FloraBank Guidelines</li> </ul>

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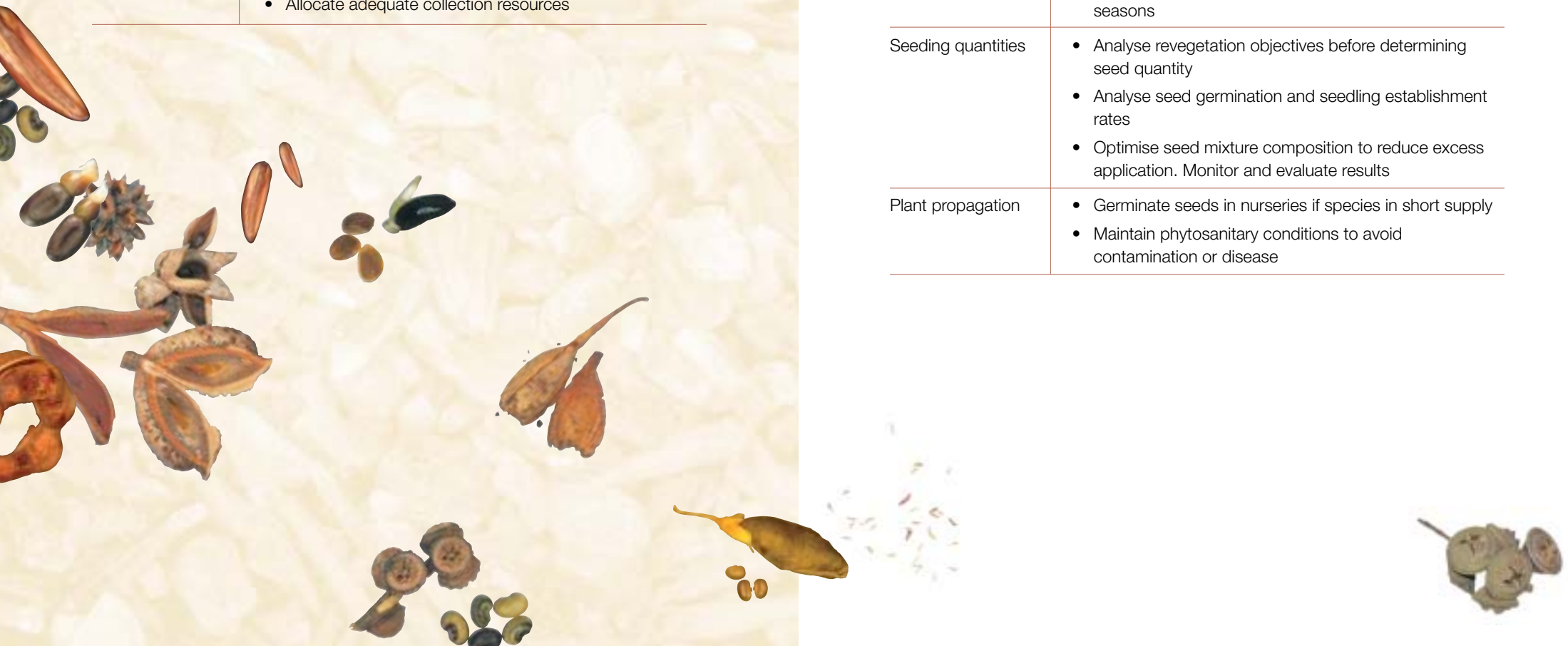


Seed viability/ maturity	<ul style="list-style-type: none"> <li>• Raise awareness of importance</li> <li>• Develop easily learned protocols for assessing seed condition and train collectors</li> </ul>
Seed storage	<ul style="list-style-type: none"> <li>• Ensure appropriate storage conditions maximise seed longevity and maintain condition</li> <li>• Reduce seed wastage by understanding the longevity of different types of seed in storage</li> <li>• Treat seeds to prevent deterioration and disease</li> <li>• Keep records of collection and provenance details</li> <li>• Avoid seed contamination</li> </ul>
Coordination of regional seed demand	<ul style="list-style-type: none"> <li>• Plan well in advance – at least one year ahead</li> <li>• Analyse soils and landforms before revegetating</li> <li>• Allocate adequate collection resources</li> </ul>

## Native seed use

Using native seed carefully will reduce the demand on seed source areas and help protect the seed resource.

Issue/Activity	Points to consider
Revegetation techniques	<ul style="list-style-type: none"> <li>• Choose the most efficient seeding technique</li> <li>• Ensure best timing of seed application</li> <li>• Plan the preparation of the site</li> <li>• Identify the required weed and pest control</li> <li>• Monitor and evaluate techniques</li> </ul>
Seed treatments	<ul style="list-style-type: none"> <li>• Identify methods to improve germination success</li> <li>• Retain a soil seed bank to offset the effects of poor seasons</li> </ul>
Seeding quantities	<ul style="list-style-type: none"> <li>• Analyse revegetation objectives before determining seed quantity</li> <li>• Analyse seed germination and seedling establishment rates</li> <li>• Optimise seed mixture composition to reduce excess application. Monitor and evaluate results</li> </ul>
Plant propagation	<ul style="list-style-type: none"> <li>• Germinate seeds in nurseries if species in short supply</li> <li>• Maintain phytosanitary conditions to avoid contamination or disease</li> </ul>



Seed collection images: Greening Australia Victoria Inc  
Acacia seed pod: Director Parks Australia  
Kangaroo Grass in hands: Department of Environment and Heritage  
All seed detail images: Anne Cochrane and Andrew Crawford – Threatened Flora Seed Centre,  
Department of Conservation and Land Management Western Australia

<http://www.deh.gov.au/land/vegetation/reveg.html>

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