



# GUIDELINES

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## NATIVE SEED

# 6

## COLLECTION METHODS

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Seed collection is an activity that can be undertaken by people of all ages and skill levels, and can be very satisfying. Any robust person with some basic knowledge and equipment can easily and inexpensively collect native seeds. For those involved in community revegetation projects, seed collection is a great way to learn more about the plants being used and gives communities greater ownership of all stages in the revegetation cycle.

However, collecting native seed on a larger scale (for example, in every season and for a wide range of plants) is a demanding endeavour. Making such an activity cost-effective adds an extra element of difficulty. There may be many natural, logistical and bureaucratic hurdles to overcome – one could spend a lifetime learning to collect native seed efficiently in one region; only a handful of people can do it for the plants of their whole State, or of Australia.

This guideline provides an overview of how to approach seed collection and the manual and mechanical collection methods that

can be used. It stresses the importance of preparation and planning for seed collection and the need to collect mature seed.

We assume that you already have some experience of collecting native plant seed and a basic knowledge of how to accurately identify flora in the field, understand plant reproduction, seed biology and ecology, and when and where to collect seed. You can find out more about these subjects from various sources, such as standard botanical references, textbooks, field keys and local knowledge. There are also other guidelines from FloraBank that provide important information about seed collection. They include:

- *Guideline 4: Keeping records about native seed collections*
- *Guideline 5: Seed collection from woody plants for local revegetation, and*
- *Model Code of Practice* for community-based collectors and suppliers of native plant seed.

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## Planning ahead

Detailed early planning of the seed collection trip is essential. Planning can help overcome natural difficulties to collection (for example, seed located in tall trees, unpredictable seed maturation or sporadic seed set). Planning can also help avert any bureaucratic or logistical problems that could be encountered ahead of collection (for example, that sufficient people and resources are on hand to harvest in the naturally short collection window presented by nature, or that you are adequately equipped to collect in remote or difficult to access areas).

No amount of planning can change seasonal conditions, such as naturally poor seed viability, lack of rain or high levels of seed predation by insects, but planning can ensure you are aware of these conditions and that you respond well to them.

For small collections all you may need is a standard approach and a checklist of equipment, but detailed planning is required for large collections at remote sites. Your objectives should be clear and detailed to a level where you can match them up to resources at your disposal.

**Make sure you get and give adequate notice.**

Collectors need to be given adequate notice from seed users to properly plan collections and guarantee seed availability. Collectors require at least six months', but 12 months' notice is preferable.

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## Target species for collection

You should have a very clear idea of the species you wish to collect and which of those are priorities. To develop such a list you need to consider the purpose for collection and any specific requirements.

You should include a variety of shrubs, trees, ground covers, native grasses and wetland plants in your species list.

You may be able to obtain seed of the species you require through commercial or amateur collectors and suppliers. Those you cannot obtain reliably from other sources become your target species for collection.

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## Learn about the species you collect

You should gather as much information as you can on the target species you intend to collect, including:

- botanical description
- identifying keys
- distribution
- occurrence in the local area
- flowering, fruiting and seeding times
- whether the fruit/seed is located within hand's reach (2 metres) or above
- approximate number of fruit per plant
- approximate number of seeds per fruit
- approximate time from maturity to seed shedding (weeks, months)
- whether there is uneven fruit ripening on single plants
- safety precautions (allergenic or poisonous plants)

Detailed information on identification and variability of species, flowering and seeding times, and population locations can be sought from regional and State herbarium records, field botanists, foresters, beekeepers or other seed collectors. Keep the accumulated information together and add your own field observations. This will be a valuable resource for future collections if it is kept up-to-date.

Correct species identification is vital, so you should be aware of the natural variability in appearance (morphology) of the target species. Several excellent field guides for various parts of Australia are available (see Bibliography and references). If you are in doubt about identification, forward a botanical specimen (leaves, fruits and flowers or buds pressed between sheets of newspaper or blotting paper) together with a description of the plant's location, size, general appearance and bark to your nearest herbarium for checking. Many Botanic Gardens, herbaria, TAFE colleges and some community groups run plant identification workshops which provide a good introduction to field identification.

### Competition in collection

Seed collection is a way of life and a source of income for many people. There is a very healthy commercial seed collection industry in Australia. Information on collection locations, species collection times and other important background knowledge provides the commercial edge for many of these people, so don't be surprised if some are reticent to share this type of information with you.

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## Decide how much seed to collect

You should decide how much seed you will need of each species and the likely number of plants that will need to be sampled to obtain this amount. In good seeding years it may be desirable to collect more than

your current requirements and place the extra in storage for the poorer seed years. Remember that seed put in storage must be fully mature and handled with more care during the extraction processes.

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## Decide where to collect

FloraBank Guideline 5: *Seed collection from woody plants for local revegetation* stresses the importance of using local indigenous plants in revegetation and rehabilitation work. These provenances complement other plants and animals in the area (ecologically and genetically), and pose the least threat of genetic contamination.

It is also important in revegetation work to match the environmental conditions at the collection site to those of the planting site. Guideline 5 covers seed quality and which plants are best for collecting seed.

Suitable collecting sites should be identified through a combination of local knowledge, publications and advice from staff from relevant organisations (such as State herbaria, national parks, and State and local government departments). You might also refer to books that show species distributions and botanical surveys (conducted, for example, as part of an environmental impact assessment on major development projects). Conduct field reconnaissance to determine the exact location of your target seed population. Where plant densities are low (a few plants per hectare), you may want to mark the location of individual plants on maps or by using a handheld Global Positioning System (GPS) instrument.

Obtain permission from landowners and local authorities, and according to State legislation. Permits are required for collecting on public land and also for some species on private land. Initial enquiries can be directed to the following:

- Queensland Environment Protection (formerly the Department of Environment) and Department of Primary Industry

- New South Wales National Parks Service and State Forests
- Australian Capital Territory Parks and Conservation Service
- Victorian Department of Natural Resources and Environment
- South Australian State Vegetation Committee
- Tasmanian Parks and Wildlife Service, and Forestry Tasmania
- Western Australian Department of Conservation and Land Management, and
- Northern Territory Conservation Commission.

Alternatively, contact your forest service or State herbarium.

You should find out the conservation status of the species and whether special permission is required to collect its seed (for example, in the case of declared rare or endangered flora).

Seed collection opportunities sometimes arise in association with forestry operations, land clearance, road realignment and major building or construction projects. You should keep a regular watch on such operations through contacts at your local council or in State government. Be aware that the collection rights to these areas may be allocated exclusively to particular collectors via public tender or other processes.

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## Decide when to collect

In a good year, seed quality is better than usual and harvesting is easier. Early spring to late summer can be an especially busy time for collectors. Decide when to collect by first checking the literature for guidance on flowering and seeding times, and talking to knowledgeable locals. Some publications now show seed collection times and can be of great assistance (for example, Bonney 1994).

Each collector should build up a record of collection times over a period of years. From these records, a monthly seed collection schedule may be drawn up as an indicator for the future, although from year to year, seasonal factors may cause variations in flowering, seed set and ripening times.

In most cases there is an optimum time for collection, but a margin of weeks or even months may be available. If possible, visit plant populations regularly to check on seed ripeness and availability. It is especially useful to build up records of those species that keep seed on the plant for longer periods. This helps in planning a single visit to a location at a convenient time for collection and allows for seed from many species that retain seed to be collected at that time.

Some species ripen and shed seeds within a few days (for example, some *Grevillea* species). Here the greatest problem is missing the seed fall altogether, so frequent reconnaissance is required to check for seed ripeness. More collectors are often needed to obtain the quantity of seed required, and seed is more likely to be picked while immature. Allow for the fact that heatwaves and bursts of hot windy weather can accelerate ripening and seed drop in some species (for example, wattles).

Opportunistic seed collection is necessary where seed set is irregular or heavily influenced by seasonal factors. For example, many native grass species commonly produce seed after summer rain but are less reliable in the cool season. Maturation of seed on a single plant and single seed head is uneven. Harvesting is best undertaken when some seed is beginning to drop but most is still attached. A delay of a couple of days may mean most seed is lost to the ground (Reu 1996).

Because of the difficulties in obtaining good seed set information, it is worth observing and making a few notes about the flowering and seeding of non-target species for a time when they may be needed. Notes on the field collection sheet about associate species can serve this purpose.

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## Types of fruit and seed

Woody capsules:  
including the genera *Angophora*,  
*Callistemon*, *Eucalyptus*, *Leptospermum*,  
*Melaleuca*.

Papery capsules:  
including the genera *Bursaria*, *Convulvus*,  
*Dodonaea*, *Lomandra*, *Wahlenbergia*.

Seed pods:  
including the genera *Acacia*, *Brachychiton*,  
*Daviesia*, *Dillwynia*, *Glycine*,  
*Hardenbergia*, *Indigofera*, *Jacksonia*,  
*Pultenaea*.

Drupes:  
including the genera *Acmena*, *Astroloma*,  
*Eleocharis*, *Persoonia*, *Leucopogon*.

Berries:  
including the genera *Atriplex*, *Dianella*,  
*Polycias*, *Tetragoni*.

Seed follicles:  
including the genera *Hakea*, *Grevillea* and  
*Banksia*.

Nuts:  
including the genera *Baumea*, *Carex*,  
*Cyperus*, *Eleocharis*, *Ghania*, *Isolepis*.

Grains:  
including the genera *Spinifex*, *Stipa*,  
*Themeda*, *Danthonia*.

Achenes:  
including the genera *Bedfordia*,  
*Bracyscome*, *Helichrysum*.

Cones:  
including the genera *Cyprus*, *Casuarina*,  
*Allocasuarina*, *Exocarpus*.

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## Collect mature seed

It is essential that fully mature (ripe) seed be collected. This can be difficult. It requires the collector to determine when the seed is mature and to time the harvest accordingly. The interval between bud formation and maturity of seeds and fruits varies greatly (even between species in a single genus) from a few weeks to as long as several years. Many trees and shrubs (for example, *Acacia*, *Grevillea* and *Cassia*) shed their seeds within weeks of maturity, while others retain fruit and seed for months (for example, *Casuarinas*) or years (for example, some of the ash group of *Eucalyptus*). The latter may build up a large store of seeds.

The number of flowers and fruits produced may vary greatly from year to year and from stand to stand of trees, and is both genetically and environmentally controlled. Some species show genetically determined cycles in the timing and number of seeds they produce and have big seed years when bumper crops are available for collection. Local environmental factors such as rainfall, insects and fungi can modify this cycle.

### Signs of maturity

Crop maturity varies over the natural distribution of a species due to factors such as latitude, altitude, distance from the coast, and weather conditions during flowering and seed set. Determining maturity is often based on experience. Good records of past collection times are, of course, a great assistance.

Characteristics to observe include the size and colour of the fruit, whether the embryo is firm and swollen and whether the seed coat collapses when cut.

Capsules, seed heads or cones in many species change colour near to maturity (often from green to grey or brown) and reach full size, turn dry and woody when mature.

In *Eucalypts* the seed may be viable prior to capsule maturity but is not released until the capsule is mature. Cutting *Eucalypt* capsules (gum nuts) through the middle with secateurs will expose the seed, which will be coloured brown or black if ripe. Most *eucalypts* can be collected if the capsules are brown and the outlines of the valves are readily visible on the top. Look for seed that

has already been shed from mature fruit as this indicates that other fruit is mature. Alternatively, place a sample bag of fruit in a warm place. If seed is shed from the fruit within a couple of days, they are ready for collection.

Capsules, pods, follicles and cones usually open or split on maturity, allowing seeds to be shed and dispersed by wind and other agents. Some capsules, follicles or cones form discernible valves when the seed is ripe.

Pods and papery capsules become dry and brittle as they mature, as do seed heads that contain grains, nuts and achenes.

Pods of some species burst open when dry and discard seeds away from the plant. Collect these pods just as they change colour. *Acacia* (wattle) seed may be mature before the pods open and, while some species will hold their seed even when the pods have opened, it is better to make the collection just as the pods are opening. Some seed may be lost but it will be a lot easier to extract the remainder. The extraction of mature seeds from green pods requires greater effort.

The ease with which the grains, drupes, berries or achenes may be removed is also an indicator of maturity. They should release with gentle pressure when mature.

Fleshy fruits like those of many rainforest species soften, wrinkle and dry when they mature and sometimes also change colour (for example from green to red, orange, yellow, blue or black): this attracts fruit-eating birds and mammals which then act as agents for seed dispersal. Colour change is a good guide to seed maturity for *Dianella*, *Santalum* and *Solanums*. In many rainforest plants, seeds are fully mature (even germinated in some cases) before they drop from the tree. The seed from these species needs to be sown quickly after collection and cannot be stored even for short periods.

You can scratch the surface of the seed follicles of *Banksia* cones, which are soft and green when seeds are immature and turn brown and hard when the cones are ready for collection. Some species, such as some of the *Banksias* and *Hakeas*, require extreme heat (for example, a stint on the barbeque) to encourage the capsules to open and release the seed.

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## Get the right equipment and resources

The equipment you need depends on the frequency and quantity of your seed collection activities. Provided your safety is not compromised, you can ‘make do’ with less specialised equipment if you only occasionally collect small quantities of seed. However, it is not recommended that you improvise or make do with climbing gear. Specialised equipment makes collection easier and increases productivity if collections are more frequent and the amount of seed collected is large. Equipment needs also vary according to the type of vegetation. For example, you need more specialised equipment to collect from tall trees in wet forests than, say, arid-zone bushland.

You will need a sound (possibly four-wheel drive) vehicle that will get you to the collection sites safely and carry substantial loads if required.

### Useful equipment

(More versatile ‘standard’ equipment is indicated with italics.)

- Trailer with high wire-mesh cage, or sturdy roof-rack with ladder
- Extension ladder, fruit-picker’s ladder, climbing equipment and ropes
- *Telescopic pole pruner, pole and rope saws, aluminium extension pole (fruit knocker), throwing rope with weight*
- *Flexible saw, bow saw*
- *Secateurs, long-handled secateurs*
- *Kitbag, woolpacks, tarpaulins, fruit-picker’s bags, calico drop-sheets, thin stockings or bags for enclosing plants*
- Petrol-driven garden blower/vacuum
- *Binoculars, hard hats, safety glasses, gloves*
- Bow and arrows, or catapult with line, or rifle and ammunition (with appropriate licences and permits)
- *Plant identification books*
- *Plant press, newspaper and boxes for specimens, tags*

- *Maps, compass, handheld Global Positioning System (GPS) instrument*
- *Field collection data sheets, booking boards and writing gear, camera and film.*

It may be worth developing your own checklist to suit the type of collections and areas in which you carry out most of your work.

### Play it safe!

Safety is of paramount importance and amateur collectors should not be too ambitious in their collection activities. Think about safety and vary the precautions you take to suit local conditions, tree species and collection methods. Make sure that all equipment is in top condition and properly serviced. It is advisable to work as a team, wear safety goggles, appropriate clothes, safety hat and footwear; and take a first-aid kit. Seeds can often be collected safely from the ground or by using a stepladder, but if you plan to climb high trees, take extra care. For some people, tall trees may be too difficult to collect seed from safely and should be left to professional collectors. Defer to the experts or work with them when the going gets tough.

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## Seed collecting methods

### Natural seed fall (seed traps)

Large seeds or fruits that fall to the ground when mature can be collected by laying tarpaulins or plastic sheeting beneath the plants. These sheets may be raised on purpose-built frames and funnelled into a container to retain the seed. This technique is useful with low shrubs, especially those that are prickly (for example, *Acacia victoriae*), and some rainforest species, but is unsuitable for species which have fine seeds that are dispersed by wind (for example, *Eucalypts* and *Melaleucas*). The technique is normally used when seed collection times are unknown and crops may be missed.

Drop sheets should not be used if there is a likelihood of seed from nearby plants (of the same or different species) contaminating the collection (see Guideline 5 on how to avoid sampling seed of neighbouring plants). Seed traps should be checked fairly frequently, as the seed is susceptible to predation and rotting if left for too long. Take care when clearing a trap, as it is possible for snakes or biting insects to take up residence!

Another technique is to collect seed as it dehisces by enclosing the plant fully or partially in breathable lightweight fabric (Murphy and Dalton 1996). The fabric is tied around the plant stem or branch and the bag left in place. This technique is useful for small shrubs and bushes that are less than a metre in height, especially at low plant densities and where seed is shed quickly or progressively over a period, or where shedding times are uncertain.

Both techniques suffer from insect attack (especially by ants) and wind can remove seed from drop sheets. Soil, leaf litter and other material must be sieved out to obtain pure seed and yields are often lower with drop sheets than by other collection methods. A drop sheet or enclosure bag, when left in place to collect seed, may free the collector for other work. For most collections you should not use plastic to store or transport seed or plant material as it causes the material to sweat and go mouldy. An exception can be made in the case of fleshy fruit where it is important that the seed does not lose its moisture.

### From within hand's reach

#### Collection by hand

The safest and most advantageous way to collect seed is when it is within hand's reach of a person standing safely on the ground (usually fruits below two metres in height). Wearing a bag with a wide rigid mouth allows the collector's hands to be kept free. Seed from small plants low to the ground, or from low branches, may be easily collected by hand, though in some cases (such as with prostrate groundcovers) this process may be tedious and yield little seed. Try to collect from fruit in the middle or upper portions of the plant rather than the lower portions.

*Plants with pods* (*Acacia*, *Davesia*, *Hovea*, *Kennedia*, *Lotus*, *Pultenea*, *Senna*): Using gloved hands, strip pods from branches into a belly bag or container, or shake the plant to dislodge seed or pods and collect them on a drop sheet placed under the plant. With acacias for example, when the pods are brown and split along the margins, beat the branches with a stick. This will dislodge the seeds and pods, which will fall onto the drop sheet, which you can bundle for transport by tying its opposite corners.

*Plants with woody fruits* (*Allocasuarina*, *Banksia*, *Callistemon*, *Callitris*, *Eucalypt*, *Hakea*, *Melaleuca*): In most cases remove small branches or, where necessary, remove individual fruit using ordinary secateurs. Seed release and extraction is often easier if the capsules are left attached to small branches – secateurs are very useful for this purpose.

*Plants with fleshy fruit* (*Dianella*, *Kunzea*, *Scaevola*, *Solanum*): Pick fruit off the branches by hand when ripe.

*Plants with seed heads*, such as sedges (*Gahnia*, *Lepidosperma*), daisies (*Olearia*, *Helichrysum* and *Cassinia*) and native grasses (*Microlaena*, *Danthonia*, *AstrelaThemeda*, *Bothriochloa*, *Dichanthium*, *Stipa*): Strip seed heads off their stems by running a cupped hand along the seed heads in an upward motion, or cut them off with secateurs.



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## Mechanical harvesting

Perhaps the most widely used and versatile mechanical harvesters are the brush-cutter and the portable vacuum.

A brush-cutter is useful for the quick harvesting of native grasses (removing seed head from the stem), especially if fitted with some form of catcher. Alternatively, the cut material may be raked and gathered in a collection bag or vacuumed.

The petrol-driven garden blower/vacuum is a recent addition to the seed collector's toolkit. Some models duct incoming material through a macerating fan blade before depositing into the collection bag, others do not. It is generally better not to damage seed material as it is vacuumed but for some species this may be desirable. A portable vacuum is especially useful for collecting from small, low plants or those with profuse and fine seed, which may be easily vacuumed either from the plant or from the ground immediately below the plant.

Be careful not to contaminate the seed collection through inadvertent collection of non-target species. It is also very easy to over-collect from individual plants, leaving nothing for ecological function.

A quick method suitable for some Acacias is to lay a drop sheet in the back of a utility or trailer and back it up to one side of the tree, which is then shaken, or its branches knocked, to release the pods.

Mechanical harvesting of native grasses has developed rapidly in recent years. A range of vehicle-mounted techniques have been tried for harvesting chaffy grass seed direct from the plant. A common approach that has had limited success is a beater harvester, which uses rotating timber or metal paddles to knock seed off seed heads. In the last decade the advent of rotating brush harvesters has led to greater success. These use a soft brush that is upward rotating at the leading edge and has a collection box at the trailing edge of the brush. Some use a vacuum to deliver seed to a hopper box, which may then be located away from the brush. Brush harvesters may be mounted in front of a tractor or towed by a four-wheel drive vehicle. Another technique that may

be useful is slashing and baling grass seed using a hay baler. For a full discussion of harvesting native grass seeds see Loch and Clark (1996) and Reu (1996).

## From above hand's reach

Above two metres in height, a collector requires either a device to provide longer reach or an elevated platform to stand on.

Although a variety of long-handled tools (including saws) can be used, the most effective are long-handled secateurs. There are also telescopic pole pruners, but any pole longer than four or five metres is difficult and tiring to handle. Used in combination with a three-legged fruit picker's ladder, long-handled secateurs provide a range to about 10 metres. Pole pruners are difficult to use safely from a ladder, but are easier from a fixed roof-rack atop a vehicle.

Another widely-used tool is a lead casting weight (fishing tackle) attached to a strong braided nylon cord (25 metres of five millimetre sash cord or nylon rope) which is thrown over branches up to about 12 metres above the ground. Once the branch is 'lassoed' in this way, the collector has the option of pulling the branch down using the cord (if the branch has a diameter of less than 50 millimetres), or hauling a rope over the branch to do the same thing, or attaching a flexible saw blade to the line and sawing through the end part of the branch. A rope saw uses either a chainsaw blade or a flexible saw with a cord attached at either end. This method needs two operators, and branches may fall close by. Cutting causes much less damage to the plant and you have more control over the portion of the branch that is removed. It is more suited to horizontal branching habits. Branches that grow at narrow angles to the upright are less suitable.

Harvesting from trees above 10 metres is the most difficult and dangerous type of seed collection. You should wear a hard hat and safety goggles. Take precautions to avoid injury from falling limbs or fruit. Your options are to use a rope saw, bow and arrow or rifle from the ground, or to climb into the tree and use hand tools.

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If you are not up to this, you can take advantage of clearing operations (forestry, development, mining, building, power line clearance) to collect seed. You may even collect seed from fallen branches following a wild storm or from the pruning operations (along roadsides and power lines) of councils and authorities. Trees should not be felled simply for harvesting seeds, however if a tree is being cut down for other reasons, any seeds present can be salvaged. In some districts, the easiest and cheapest way to collect large quantities of seed is to visit local clearing or timber harvesting operations. Obtain permission beforehand, select good parent trees and, of course, take care with safety. The quantity of seeds can be worth the effort. Seed in the heads of fallen trees will shed very quickly so it is necessary to keep up-to-date with operations in your area to avoid disappointment (for example, on a hot day in most coastal Eucalypt forests, seed will begin shedding within 12 hours of the tree being felled).

Using a bow and arrow is time-consuming and more suitable if trees are bearing

heavily or are in high demand. Rifles are very effective for collecting small amounts of seed from a large number of trees and, for this reason, are commonly used in research collections. The technique is safe compared to climbing, but requires great care and specialised training as well as special licences and permits. The technique is limited to sparsely populated areas and it can be expensive (ammunition and rifle servicing costs). Climbing taller trees may be possible, but agility and special attention to safety are required. Common aids include climbing irons, safety belts and portable or mounted ladders. An extension ladder may be fixed to a tree to aid climbing up to about 12 metres into the first branches. Successful adaptations to caving and abseiling equipment have been made which have greatly increased the safety of climbing at the cost of outright speed. Climbing also brings the collector into much closer contact with falling branches. Great care is needed when removing seed-bearing branches from within the tree crown.

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## Preparing material for transportation

Collection activities may yield pure seed, fruit only, or leaves and branches with fruit attached. The latter may need to be cut, beaten or trampled to reduce its bulk for transport. A large crop should be bagged for transport. The CSIRO uses calico collecting sheets (two metres square) with corners tied diagonally; close-weave calico bags for small seeds; or hessian sacks for large seeds.

Avoid prolonged transport periods for green fruits, especially in hot weather, as

the high moisture content encourages micro-organisms, fermentation and overheating. This can reduce the seeds' capacity to germinate.

It is essential to label bags and bundles carefully. The identity of each bag or container of plant material should be established by a collector's name or initials and a field collection number. See Guideline 4 for seed collection record-keeping details.

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## Bibliography and references

Florabank is seeking to assist in the training of collectors and revegetation practitioners and we are very interested in your feedback on the usefulness of this guideline and any further requirements you may have. Readers are encouraged to access the following references. Many provide a wider

range of information on seed collection methodology and protocols than the brief outline given above, others provide information on topics such as seeding times and assessment of soil characteristics.

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### Your Comment

The FloraBank guidelines are a consolidation of existing information and draw on the practices observed at seedbanks across Australia as well as the expertise and technical understanding of the Australian Tree Seed Centre at CSIRO Forestry and Forest Products, Greening Australia's Seedbanks and the Australian National Botanic Gardens Seedbank. The guidelines present, as far as is known by the authors, best practices.

However, they are drafts because we recognise that other people may have better approaches, and that best practices change with time. Also, our climate and vegetation is diverse and not all practices are equally applicable across Australia. If you would like to comment on any of the guidelines please contact the FloraBank Coordinator. If you have practices or knowledge you would like to share with others you can do this through the forum pages of the FloraBank website.