

## PIL409A Manage a permaculture seed bank

This unit covers the process of managing a permaculture seed bank.

It requires the ability to plan seed collection, implement seed collection and maintain a seed collection in storage. Managing a permaculture seed bank requires knowledge of plant biology, handling and extraction of seed, treatment and documentation, collecting ethics, protocols and legislative parameters and storage techniques.

Element	Performance Criteria
1 Plan <b>seed</b> collection for a permaculture seedbank	<p>1.1 Requirements for seed collecting are considered, analysed and interpreted for required <b>seed characteristics</b> and implementation issues.</p> <p>1.2 Opportunities for seed collection are identified from field observation and liaison with other specialists in this field</p> <p>1.3 Suitable area and plants for seed collection is identified and marked on a plan for later reference.</p> <p>1.4 <b>Method of seed collection</b> is selected in accordance with the geography of the local area, size and type of plants, available resources and enterprise guidelines</p> <p>1.5 Quantity, cost and provenances to be collected are determined and documented</p> <p>1.6 Where required, relevant authorities or owners are liaised with and approvals sought</p>
2 Implement seed collection	<p>2.1 People, materials and equipment required for seed collection are co-ordinated and scheduled</p> <p>2.2 Any permits and/or approvals required for the seed collection are identified and obtained.</p> <p>2.3 <b>Documentation</b> identifying the seed is completed clearly and accurately in accordance with enterprise guidelines</p> <p>2.4 Documentation of seed types, dates and sources is completed clearly and accurately during the progress of seed collection.</p>
3 Maintain a seed collection	<p>3.1 Checks are made to ensure that the quantity, cost and provenances collected accord with requirements</p> <p>3.2 Health of seed collected is regularly checked and monitored and remedial action taken where required</p>

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- 3.3 Pests and conditions detrimental to seed health are controlled to optimise seed viability
  - 3.4 Seeds that are non-viable due to age or pest attack are disposed of according to enterprise policy
  - 3.5 Seed supplied to others are true to type and are appropriately labelled
  - 3.6 Records detailing seeds held in storage are kept up to date
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## Range of Variables

The Range of Variables defines the different contexts, work environments and parameters governing the performance of this competency standard. The variables chosen in training and assessment will need to reflect local industry and regional contexts.

What types of <b>seeds</b> may be applicable to a permaculture seed bank?	Vegetable, fruit, timber, oil-plants, herbs, native and exotic plants, local provenance species, and seed from other plants that can provide products or benefit in a permaculture system.
What <b>seed characteristics</b> may be relevant to this standard?	Seed characteristics may include provenance, potential growth characteristics, and optimum time to collect.
What <b>method of seed collection</b> may be applicable?	Method of seed collection may include hand-picking, collecting after felling, ladders, climbing, shaking, high-powered rifles and elevated platforms.
What <b>documentation</b> may apply to this standard?	Documentation may include provenance; species; identity of collector; weight of seed collected

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## Evidence Guide

### What evidence is required to demonstrate competence for this standard as a whole?

Competence in managing a permaculture seed bank requires evidence that seed collection has been planned and implemented and seed has been appropriately stored to optimise its viability. The skills and knowledge required to manage a permaculture seed bank must be **transferable** to a range of work environments and such as different seed types, and storage and collection requirements.

Note that appropriate firearm licences will be required when using a firearm to collect seed.

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<b>What specific knowledge is needed to achieve the performance criteria?</b>	Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts and to deal with unplanned events. The knowledge requirements for this unit are listed below:
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- Flowering biology of the target species
- Biological signs which indicate that the seed crop is ready to be collected
- Handling the collected material after collection
- Extraction of the seed from the collected material
- Handling of the seed crop after picking
- Treatment and documentation of the extracted seed
- Collection methods
- Occupational health and safety guidelines, procedures, and principles, including manual handling
- Collecting ethics, protocols and legislative parameters
- Storage techniques

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**What specific skills are needed to achieve the performance criteria?**

To achieve the performance criteria, some complementary skills are required. These skills are:

- Plan seed collection
- Implement seed collection
- Maintain a seed collection

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**What processes should be applied to this competency standard?**

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the **key competencies**, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

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| 1. How can <b>communication of ideas and information (3)</b> be applied? | Through instructions given to collectors.            |
| 2. How can <b>information be collected, analysed and organised (3)</b> ? | Through records on seed collected and in storage.    |
| 3. How are <b>activities planned and organised (3)</b> ?                 | Through collection and extraction of seed.           |
| 4. How can <b>team work (3)</b> be applied?                              | Through involvement of others in seed collecting.    |
| 5. How can the use of <b>mathematical ideas and</b>                      | By maintaining records and counts of seed quantities |

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**techniques (2)** be applied?

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6. How can **problem-solving skills (3)** be applied?

By monitoring and maintaining seed in a viable condition and dealing with pests and changes in weather

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7. How can the **use of technology (3)** be applied?

In management of records

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**Are there other competency standards that could be assessed with this one?**

This competency standard can be assessed on its own or in combination with other competencies relevant to the job function.

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For information about assessing this competency standard for consistent performance and where and how it may be assessed, refer to the **Permaculture International Ltd Course Documentation**.

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