CHAPTER 6

Drying and cleaning seeds after collection

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The handling of seeds following collection involves several steps: the treatment and storage of collected material while still in the field, drying the material before cleaning, and cleaning itself.

Collection and storage practices in the field can influence seed viability and longevity in the store, and it is counter-productive if successful collecting practices are followed by poor post-harvest management. This chapter details appropriate methods for drying seeds in the field after collection, prior to cleaning back at the seed storage facility. It also provides an overview of common seed cleaning methods and the equipment used.

DRYING

Seeds collected in the field will naturally be at a range of stages of maturity since fruits tend to ripen and mature over the plant at slightly different times. When making a collection, the aim is for an average maturity, whereby the majority of the material collected is mature. By drying correctly, all the seeds are subjected to similar conditions. Careless handling at this early, critical stage, can impact on the overall quality of the collection. In general, mature material (that is, material at the time of natural dehiscence), should be dried evenly and slowly from the point of collection onwards. A cool, mild, even temperature and a dry environment with good ventilation are the best conditions for drying seeds of the majority of species. These conditions will ensure the immature seeds continue to reach full maturity and the balance of the collection begins to dry evenly for storage and maximum longevity.

Cool and dry conditions are not common in an Australian summer, but the humidity is often low, and by drying in the shade, avoiding direct sun, good results are obtained. Where the humidity tends to be high during the day, in tropical areas, for example, it is important to get seeds to an air-conditioned environment as quickly as possible. This is especially important for seeds destined for long-term storage, and slow reduction of moisture content may need to be achieved by using a purpose-built drying room. Removal of moisture using a desiccant in a controlled environment is also a good option if humidity is high.

In some instances, seeds that are very immature can be held at higher moisture levels until mature. This may be in a loosely tied plastic bag or an enclosed container, opened daily to ensure air circulation. If the seeds are too damp and there is evidence of rotting, they should be dried and then returned to the container. These practices may be necessary when a species is harvested early to coincide with a window of opportunity for collecting the species.

Many seed collections are not being made for long-term storage, so drying and subsequent storage do not need to be rigorous or complex. Much can be done to