

Is local best? Insights on seed sourcing for restoration from provenance trials

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Decisions on the source of seed can have significant impacts on the success of ecological restoration. “Local is best” is a widely accepted benchmark and starting point. Numerous alternative strategies have recently been proposed. A key concern is climate change, and “climate-adjusted” seed sourcing has been advanced as a solution. However, few empirical tests of the various sourcing strategies exist, especially in an ecological restoration, rather than forestry, context. Reciprocal provenance trials are a powerful tool to assess fitness and the relative merits of these seed sourcing strategies. Here, I present results from multiple reciprocal provenance trails established over the past decade in south-west Australia. One trial utilizes a model system in *Stylidium hispidum* to measure life-time reproductive success (total seed production for each plant) for a powerful test of the fitness effects of provenance. Another trial with *Banksia menziesii* enabled the intact recovery of roots from post-mining sandy soils for an accurate measure of total plant (including below-ground) biomass. A repeat of this trial with *B. menziesii* enabled a unique opportunity to assess provenance performance results across multiple establishment years. In each case, there was no evidence in support of benefits from climate-adjusted seed sourcing. Rather, these trials provide strong support for the “local is best” seed sourcing strategy.