

CHAPTER 6

Conclusions

1. *A. xylocarpa* and *S. oleosa* were the most suitable species for direct seeding among those tested by this study. They had relatively high percent germination (>80%), short dormancy (MLD <30 days) and acceptable establishment rates (>40%). In contrast, *E. cumini* and *F. racemosa* were *not* recommended for direct seeding. *G. arborea* had intermediate percent germination with biosolids+fertilizer (39%) and biosolids (38%) and a relatively short MLD (20 days). The species also grew very well, considering the harsh conditions with high RCD, height and crown development after 1 year. Therefore, this species could also be considered for direct seeding.
2. Treatments had no effects on germination establishment and growth, so it may not be necessary to apply such treatments, which would reduce costs. Instead of applying such treatments around each seeding spot, general replacement of top soil over the whole site may be more effective.
3. The nursery study identified several more candidate species that should be tested in future field trials i.e. *A. xylocarpa* with high percent germination (>50%) in the compost treatment and reasonably short MLD (31-43days). Although dormancy was prolonged compared with previous data from FORRU (MLD >180 days) for *S. pinnata*, *I. malayana* and *C. spathulifolia*, their percent germination was high, averaging >47%, >41% and >40% across all treatments. So they could also be candidates for field trials.
4. In line with previous research, this study found that tree species with large seeds with a tough seed coat generally performed well e.g., *A. xylocarpa*, *S. pinnata*, *I. malayana* and *C. spathulifolia*.