S.G.A.P. ACACIA STUDY GROUP
NEWSLETTER
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Hard Coated Seed Germination

A disappointing number of reports. A pity! It's a matter where we could really help if we could do a lot more experiments, and to prove anything, we want many tests done. One can apparently draw conclusions from an isolated test or two, but proof is much more difficult and takes a long time and some labour.

I realise that all are not particularly interested in this type of work and I can quite understand, yet for reasons I have previously given, notably the lack of other than the usual types of acacia as seedlings, growing from our own seed is absolutely essential. Our idea is to find out what the Society wants to know, namely which are the best acacias to be grown for garden use and under what conditions.

You will reply "But I can get a reasonable germination of the seeds of such and such an acacia – in fact any I have tried or want". Quite so, but what types have you tried out? My limited experience points out to me that there are some which germinate easily by several methods, but the majority of the lesser known are difficult not only to germinate, but to raise to the planting out stage. For instance, *Albizia lophantha* (I know it is a query wattle but nevertheless a hard seed variety) will give nearly 100% if tried in the conventional two ways. So will *A. longifolia*, so will *A. cyanophylla*. These three to my knowledge, and I suspect most of the popular types, likewise. One authority suggests that as these three varieties have been grown by nurserymen for many years, the seeds are more amenable to artificial germination. Could be – I don't know. But I do believe that the less known or not cultivated varieties are a problem to start by any method I have so far heard of.

Here are the results of the work done by members so far:

Mr W Tucker writes:

"Of the seed you gave me I planted without previous treatment 20 of each on 15/12/63 and as at today, 30/12/63, four *A. aneura* are up but as yet no sign of *A. vestita* or *A. polybotrya*. Six *A. deanii* are up. I wonder being hard-coated seeds, do they require some bottom heat to germinate successfully."

Mr Holliday writes:

"My results regarding acacia germination agree with your own findings. I use three methods:-

1. Soaking overnight in boiling water. Only seeds which had swelled were planted.
2. Nicking or sandpapering a small section of the hard testa.
3. The bushfires method – lighting a small fire on the surface of the seed bed after planting.

In all cases 5 inch pots were used thoroughly washed and sterilized in boiling water. Potting medium was coarse, washed, creek sand and peat moss 50-50. A mulch of fine gravel covered the seed bed. Seed of *A. accola* was used throughout and the seed was used after inspection so that apparently healthy seed was planted. Cases 1 and 2 each produced 50% germination in 12 to 14 days. No further germination after a further four weeks. Case 3 produced no results."

Later, **Mr Holliday** reports:

"I have since used Vermiculite as the potting medium, again using *A. accola*, and I ensured that the seed was fresh. I used No. 1 – the boiling water method, No. 2 – the nicking method. Case 2 gave 100% in twelve days, case 1, 100% in 20 days. Although I realize that this is only one experiment, the results were so good that I suggest that the combination of fresh seed and a potting medium such as Vermiculite which gives perfect drainage, without the presence of any organic substance could be the most successful way of germinating acacia seeds."

Mr Holliday did not mention the number of seeds used.

I next asked **Mr Holliday** to try out seeds of two (to me) previously unknown species, *A. extensa* and *A. filifolia*. His report:-

"Results were the same as before – 100% in approximately two weeks."

Mr Payne reports equally good results:

"Concerning germination trial, we are at a loss to see the problem. When I received the issue mentioning this I had just planted six species of acacia using boiling water until they expanded, and then planting in Vermiculite in 4 inch pots, sitting in full sun. I have often got 100% germination so did not bother to use any other methods."

Mrs Simmons:

"Three unidentified species of wattle said to grow about 12 feet high.

1. Four seeds in each of three pots filled with peat moss without previous treatment. No germination.
2. Three lots of four seeds in a seedbox after soaking in boiling water for two days on 27/9/63.
   Results: 3 seeds No. 1 pot
   2 seeds No. 2 pot
   2 seeds No. 3 pot
3. In seedbox after nicking with a knife, on 25/9/63. Three lots of four seeds.
   Results: 3 seeds No. 1 pot
   3 seeds No. 2 pot
   2 seeds No. 3 pot

My own results:

4/9/63. Seed treated with boiling water and planted in 3 inch pots with ordinary soil. All seed left for five weeks and using 10 seeds of each variety. Six (6) different types of seed including many unusual ones gave the following results:-

1. 90%, 100%, 60%, 10%, 40%, 40% - average 56%.
2. In seed box – after boiling water.
   40%, 40%, 50%, 60% - average 47%
   Seed box and cutting.
   60%, 10%, 40%, 10% - average 30%
   Mr Tucker's method
   In damp peat moss in a jam jar under warm conditions.
   Same wattles – this time 60%, 10%, 40%, 10% - average 30%.
3. On 22/11/63.
   Boiling water and seed box – 33%, 66%, 45%, 45%, 33%, 20% and 10%.
   Average 36%.
   Seed box and cutting – using the same seeds –
   16%, 50%, 66%, 45%, 33%, 10%, 10% - average 33%.
   Mr Tucker's method – 10%, 33%, Nil, 25%, 33%, and Nil.
   Average 17%.
   Equal quantities of loam and peat moss – in 3 inch pots.
   Boiling water – average 38%.
   Cutting the seed – average 58%.
4. Vermiculite – in 3 inch pots.
   In the first week placed in shade as recommended by the suppliers. I was not happy about this so transferred to a morning sun position, planted on 26/2/64.
   alata 10%, *cardiophylla* 20%, *boormanii* 30%, *complanata* 10%, *cochlearis* 10% and *brownii* 50% - average 22%.
   I tried again about the middle of March as I felt that on a couple of occasions the pots had become too dry, as follows:-
   oswaldii 30%, *hispidula* Nil, *fragilis* 50%, *alata* 10%, *acutifolia* 10% - Average 20%

I prefer that we think about the significance of these tests until the next Newsletter. In the meantime I would like an expression of opinion from those more mathematically minded than I. It would help me to make a summary.

We have another new member – Mr Michael O'Dwyer of "Morella", Swansea Rd, Montrose. Michael is an Economics student at the University of Monash – he is interested in seed germination and will assist me in these experiments.

A C Keane