Stage 5 Agricultural Technology: Plant nursery production

Practical: Water retention and drainage of potting mixes

Aim:

To investigate the differences in the amount of water held by a range of potting mixes and potting mix components, and the amount of water that passes through them.

Materials:

Potting mix(es) and potting mix components, e.g. sand, peat, coconut fibre, garden soil, compost
Pots, ice cream containers or large beakers
Measuring cylinders

Method:

1. Place potting materials into pots and firm the material down, ensure the pots are filled to the same level in each pot.
2. Support each pot above a collection vessel (ice cream container or beaker). See figure 1.
3. Add a measured volume of water to each pot (the volume will depend upon the amount of potting material, so some prior testing is necessary).
4. After the pots have stopped draining, measure the volume of water in each collection vessel.

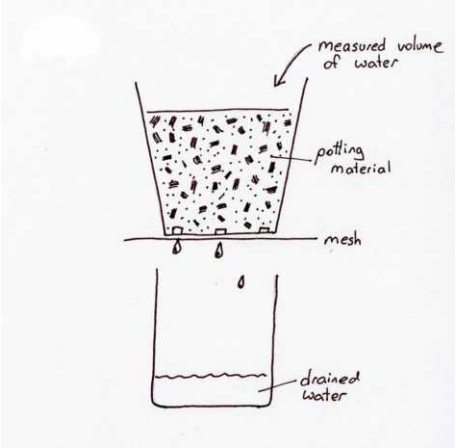

Figure 1

Results:

Fill in the amount of water *held* by the different materials tested, and calculate an average for each.

	Potting material					
Replication 1						
Replication 2						
Replication 3						
Average						

Questions:

1. Rank order the materials from the one that holds the most water to that which holds the least.
2. What features do the best water holding materials all have in common?
3. What applications require a potting material with high water holding capacity?
4. Identify horticultural situations that might need materials with low water holding capacity.