

# **Growing Media**

## **Calculating Air Filled Porosity In-house**

Why do you need to know the physical properties of your growing media?? Having visited more than a couple of nurseries over the years it becomes readily apparent that there are as many growing media recipes as there are growers who use them. This may become an issue if a grower from one nursery decides that they prefer the growing media of another nurseryman or if a particular grower decides he wants to change their media for whatever reason.

Changing your growing media recipe, especially if the main ingredients are being changed is a big decision and must be carefully considered and trialed extensively for the life of your crop(s). The implications for rushing into a change without all the necessary information and trialing can be catastrophic. However if the proposed growing media recipe change is tested and compared against the previous media over the life of the crop a grower can easily evaluate their advantage(s) or otherwise.

There are three main areas that need to be fully considered

- The physical properties of the media
- The chemical properties of the media
- The biological properties of the media

### **Characteristics of a good growing media**

- It is well drained, this means the air filled porosity is suitable for your container and cropping
- It re-wets easily.
- The media does not shrink away from the sides of the container when it is dry
- It has the optimum weight, not too heavy to lift, not too light to blow over
- It has and can maintain a suitable pH range over the duration of the crop
- It is free of pests, weeds and plant pathogens
- It can be stored for periods of time without significantly changing the physical and chemical properties
- It is readily available in your area
- It is reasonably priced. Remember that freight costs can be a significant factor to those growers who are long distances away from the manufacturer.

### **One method for calculating air filled porosity**

- Select your growing media to be tested, again I emphasize test the new Vs the old
- Select the growing container to be used for the growing, it must be the same container size and shape for both tests

- Line the growing containers with a plastic bag
- Fill this with water to the usual height of your growing media. Pour this volume out into a graduated container, this is your **Total Pot Volume**
- Now fill this empty lined pot with your growing media, again to the same level as the water previously
- Now add water slowly to each pot until there is a film of water evident at the growing media surface
- Carefully remove the bag from the pot. Place the bag over your graduated container and pierce the bottom of the bag, allowing it to drain into the container.

**Air Filled Porosity** = Water volume drained from mix / Total pot volume

It is that easy, so come on, what are you waiting for, go out and test your growing media.

Ryan Taylor

Farm Management System Officer

Mobile: 0488 996 009

Email: [fmso4@ngiq.asn.au](mailto:fmso4@ngiq.asn.au)