

THE USE OF SAWDUST AS A GROWING MEDIUM

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The word "sawdust" is simple, but complexities arise when the grower finds that variables are present when using sawdust, and that one cannot copy another grower's "recipe" and have immediate success (not usually anyway). Some of these variables are:

Initial pH of the sawdust; age source, i.e., tree type and area from which it comes; particle size; sensitivity of the crop to be grown in it; length of time the plant is to be grown in it before planting out, etc.; pot shape (surface area in relationship to depth); temperature of medium at planting time; composting procedure; mixing procedure; local environment conditions, e.g. evaporation rate, rainfall, etc., and quality of irrigation water; and, very important, the method and approach of fertility maintenance.

When one discovers these variables from practical experience, it must be realized that the grower should be prepared to put into operation his own experiments. Much good information has come from various research workers here in Australia and overseas, and their findings and recommendations must be treated with high regard and respect, but unfortunately, I've never yet used their exact recommendations with complete success. The reason for this failure is simple. The research worker usually does not have your exact sawdust, your water supply, your local conditions, your range of plants, your pots, etc., so therefore, the grower must learn from the researcher and set up his own experiments. I will list a few points which I believe to be of importance to successful plant culture in containers:

1. Water supply. A knowledge of your water supply pH and salinity, etc. If it is too far from neutral, you must find out what is in it before you can formulate a base mix.

2. A basic knowledge of plant nutrition.

3. A basic knowledge of the fertilizer elements added to a medium and some idea of how they are held or leached from the medium.

4. The medium (sawdust). Does it drain properly when placed in the container which you have chosen to use? Does the lower part of the container stay too wet for too long? Does the top dry out too quickly? Does it need some other well aerated aggregate in the base of the container or should it be mixed through the entire medium?

SUGGESTED EXPERIMENT

- (a) Deliberately over-lime a measured amount of the medium, and label all the containers that have been treated in this way, and place them in your growing area (with a plant in it, of course).
- (b) Under-lime a measured amount of medium and treat as above.
- (c) Measure out and lime correctly a given amount of medium and leave out a major plant element:
 - 1. One for nitrogen
 - 2. One for phosphorus
 - 3. One for potash
 - 4. One for magnesiumLabel these securely and carefully, and place in growing area, but away from the possible inadvertent addition of the element in which we wish to observe a deficiency.
- (d) You may now proceed to experiment with all the test media in appropriate ways.
- (e) Over-limed ones may exhibit micro-nutrient deficiency. Try foliar sprays, etc., of the different metals that are suspect.
- (f) The under-limed ones may exhibit toxicities and deficiencies. Experiment with the surface addition of lime etc., but weigh or measure and record the materials used in each experiment.
- (g) Experiment with the ones where elements have been deliberately omitted with small and progressive amounts of the elements to determine their effect on your crop.

All your results will be visible and, what is more, you will now be able to formulate your medium to suit your crop, in your own growing conditions, and based on sound practices.

PREPARATION OF BARK POTTING MIXES

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We first started using bark as a component in our potting mix in a small way, using a shovel to mix it by hand. As it proved to be a successful mix and its usage increased, a paddle type cement mixer was used for mixing. Finally we have gone to a front end loader for mixing to fulfill our own requirements and for custom mixing of media for others.