



## Growing tropical plants from seeds

### **Germination**

Seeds need water and oxygen to germinate, so are best started in a light, loose soil that will not compact, get soggy, or crust over. Free flow of water & air are a must. Large seeds can be soaked overnight and planted singly. Barely cover small seed, and sprinkle fine seed on the surface and water by misting. Lightly tamp soil to insure good contact with the seed, unless heavy. Keep soil moist, not soggy, and do not allow to dry out.

### **Scarification**

It can be even necessary to nick the coat (outer shell of the seeds) with a file or to use sandpaper. Sometimes the coat needs to be cracked or cut in order to let water in and so enable the embryo to break through the coat. All this is not to say that the seeds will not germinate if these measurements are not taken; it will only take longer. So it is clear that these extreme hard seeds have a long shelf life!

### **Temperature**

These are tropical seeds we are talking about and they need tropical conditions to germinate! The soil temperature range should be 80 - 90° F and there must not be much variation in this. The surrounding air should also be in the mid-seventies. When growing of the seedlings occurs, the temperature can be somewhat lower at about 75° F. during daytime and 60 - 70° F. at night.

### **Soil**

The best thing to use is soil-less seed starting mixture; they have the best pH, retain water, have good air penetration and are sterile so that the possibility of attracting fungi is minimized.

Use special nursery flats with clear plastic lids if possible for the seeds starting mixture.

### **Light**

If you try to germinate seeds indoors, the use of grow lights can be of tremendous help; start positioning these low (8" above the top layer) and when growing occurs raise the lights accordingly.

When grown into small plants, reduce the amount of light to 12 hours a day.

### **Time until germination**

Average range of time to germinate is usually given in weeks. A seed that takes 2 - 3 weeks will usually come up fairly evenly; one that takes 1 - 12 weeks will tend to straggle in irregularly. Time varies with temperature, so expect considerable variation. Don't give up too soon- many who have given up and sown another seed in the pot end up with two types of plants in the same pot!

### **Plastic bag method**

Best for very slow to germinate seeds, very tiny dust-like seeds that can't be allowed to dry out, and very slow-growing seedlings. Small clean pots are filled with damp, sterile, soilless mix. Milled sphagnum or a light dusting with powdered charcoal discourage fungi & algae. Seeds are sown and the whole pot is sealed in a plastic bag and placed out of direct sunlight. This creates a mini greenhouse and the soil will not dry out and the seeds are protected from mice, etc. Pots can be left for years with no care other than regular checking for seedlings. As soon as seedlings appear, begin hardening off. Bagged pots may be kept under fluorescent lights without overheating.

### **Paper towel method**

You can germinate seeds in a paper towel. This method is tricky; it's easy to ruin roots if they dry out, or are planted too late after germinating. Paper towels dry out REAL FAST! Place paper towel in a bowl, saturated with weak nutrient solution (not too much!), and cover with plastic wrap to keep it from drying out. Put bowl in a warm area; top of the gas stove, water heater closet, or above warm lamps. Cover with black paper to keep out light. Check every 12 hours and plant germinated seeds with the grow tip up (if possible) in a growing medium as soon as the root coming out of the seed is 1/16" or longer. Use tweezers, and don't touch the root tip.

If you are sowing seeds in furrows or flats, transplant individual seedlings into cell packs when the first true leaves appear or when they are large enough to handle. Seedlings started indoors should be fertilized regularly with a dilute (1/4 strength) water soluble fertilizer. This will help to produce stockier transplants provided enough light is available.

Before planting in the garden, gradually acclimate transplants to the outdoors. Start by putting them outside on cloudy days or in a shaded location then after a few days work them into more light and exposure. Overcast skies or late afternoon is the best time to plant in the garden. Water immediately after transplanting. If plants wilt, provide some protection with an open milk carton or a board for a few days.

Don't forget to label!