PROPER WATERING TECHNIQUES – PART 1

In our last tech tips we discussed problems associated with improper watering. This leads to questions of how to water crops properly. There are several beliefs about the best method, depending on the grower you talk to. Some may classify themselves as 'dry growers', while others as 'wet growers'. Both techniques may work well for each grower, however below are some basics to help guide the decision of when to water.

When to Water: Knowing when to water is critically important. A good indicator for when to water is the color of the growing medium as it dries out. As peat-based growing media dries out, the surface turns light brown to tan in color and is a good indication that it is time to water. As a test, you can take some of the growing medium, squeeze it in your hand. If only a few drops or no water runs out and the media falls apart when you open your hand, it is at the right moisture content for watering. Keep in mind that crop type, time of day, seasonality and weather are all important factors in determining when to water.

Fall and Winter: As day length shortens into the Fall to the Winter months, plants are in a less active growth phase and require less water, therefore growing medium dries out much slower. Watering should only occur early in the day and when the growing medium has properly dried out. This avoids foliar disease and allows for some drying of the growing medium surface. Even if the media surface is tan and the plant starts to slightly wilt in the late afternoon, avoid watering the plant. As humidity increases in the evening, plants will come out of wilt and the foliage will not be wet going into the night. Early the next morning, water these plants.

In the winter months, relative humidity is often higher, since the greenhouses are not open and air exchanges are less frequent. Increasing air movement within the greenhouse will limit moisture condensation on the leaves and move moist air away from the canopy and growing medium surface. This will speed the dry down rate of the growing medium and reduce potential disease issues.

Spring and Summer: Watering in the late spring and early summer months is very different from that of the fall and winter. Day length, sun intensity, outdoor air exchanges, temperature and stage of plant development affect the rate that the growing medium dries out. During the long, sunny days of late spring, watering can be done almost any time of the day as the foliage and growing media will dry out rapidly. However, if the weather is cloudy and rainy, it is best to restrict watering to the next morning so foliage can dry prior to the evening. Even if the medium surface is tan in the middle of the day, it may be best to wait until morning to water.

How Much Water to Apply: The goal is to saturate the growing medium in each container. When applying water to a crop, there are two ways to do it. First is shallow, low-volume watering in which a little water is applied at frequent intervals so the growing medium does not become over-saturated. Second, is watering thoroughly to the point where a small amount of water runs out through the drainage holes of each container. Both watering techniques have their advantages and disadvantages. However, for either watering technique to work well, the growing medium must dry out between waterings.

Look for our next issue of Tech Tips, which we will cover water application and corrective measures for uneven drying issues.

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