

GROWERTALKS

Paul Talks Perennials

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Water Wise

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My family and I just got back from a wonderful family vacation. We travelled from Las Vegas to the Grand Canyon through Flagstaff, Sedona (travelling parts of the famous Route 66), Phoenix and Tucson. It was a fantastic trip—the flora and landscape were very different from what we see around our home in Michigan.

Many of our excursions took us into the desert where yearly rainfall is minimal; many of the perennials our industry relies on wouldn't survive these conditions. This made me think about how important water is to our industry, and although water is abundant for some growers, there are others who don't have this privilege and water is often scarce. One thing I've observed over the years is that most growers take water for granted and don't have any concerns until they experience a shortage for themselves.

Wetting agents

I've spoken with some growers in the past about using wetting agents during summer production to help stretch their supply of pond water only to have their ponds run dry during drought years, resulting in them having to decide which crops to let die because they didn't implement this strategy. I'm not saying the ponds wouldn't eventually go empty if wetting agents were being used during production, but wetting agents can play an integral role in lengthening the amount of time growers could utilize them.

I've personally conducted trials with wetting agents at different nurseries and have effectively demonstrated on multiple occasions that crops grown with wetting agents can be grown with 25% to 40% less total irrigation water than crops that had no wetting agents applied.

There are two main factors that contribute to this reduction of water: First, with better water distribution or wetting of the root zone, the amount of water required to bring the moisture up to container capacity is reduced. Secondly, wetting agents also improve the growing mix's ability to hold water longer, which results in longer intervals between irrigations.

Here's an example of the water savings wetting agents can provide: Consider a mid-size nursery that uses 500,000 gal. of irrigation water per day without wetting agents. By simply using wetting agents, the crops could be grown with 125,000 to 200,000 fewer gallons of water per day. In this scenario, the grower would use less water by 875,000 to 1.4 million gal. This is equivalent to 1.75 to 2.8 days of water.

Imagine if these savings were accumulated like in a bank account over time—over just one month, the use of wetting agents would save seven to 11.2 days of irrigation water. This is very significant, and in many cases, would be a huge step in allowing a grower to stretch the amount of time they can utilize their often limited water supplies.

10% challenge

Most growers tend to over-irrigate their crops. I often challenge growers to reduce the times of their irrigation cycles by 10%.

For example, if 30-minute irrigation cycles are being applied, the time of the cycles are reduced by three minutes resulting in new 27-minute irrigation cycle times. In most cases, the pots are still at container capacity following this little challenge and many growers can even reduce their irrigation times further.

Other methods to reduce water

With its lower cost and ease of installation, overhead irrigation is the most common method of delivering water to crops. Were you aware that at least 70% of the water doesn't go into the containers when applying overhead irrigation? This is a staggering amount of water. Although overhead irrigation is the most common method of irrigation, it's also the most inefficient. If water is in short supply, consider utilizing a different method of applying it. Sub-irrigation, drip tapes and irrigation mats can all be used to more efficiently deliver water to your perennials.

Bottom line

Even if water isn't anticipated to be in short supply, doesn't it make sense to grow crops with less water? Several beneficial side effects of growing plants with less water include the reduced costs of water for growers who have to pay for it, reduced electricity and maintenance due to less pump running times, less leaching of nutrients and reduced fertility expenses, and fewer pathogens and fungicides/bactericides required to control them.

I challenge you to seriously look at your irrigation practices, take the 10% challenge and find methods of growing your plants with an appropriate amount, and hopefully, less water than you've done in the past. I encourage you to be "water wise." **GT**

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