

# GROWERTALKS

## Features

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## Water: Little-Known Benefits of Wetting Agents

*Kathleen Conard*

At the Ohio Short Course in July there were many valuable seminars that offered advice on “best management practices” for proper fertilization and pest, disease and water management. There’s another tool that offers a multitude of benefits: wetting agents.

Wetting agents, also referred to as media surfactants, have been used since the 1960s to improve initial wetting ability of soilless media, such as peat and bark mixes. Many of you know that wetting agents help mixes wet more uniformly, but did you know that there are several other benefits that can help you keep more money in your pocket?

### Improve water, irrigation and fertilizer efficiency

Most commercial mixes have a “starter” charge of surfactant to allow the mix to wet up quickly and uniformly when it’s first potted. But just like you reapply fertilizer, you also need to reapply wetting agents throughout the production cycle. As plants grow, they need adequate amounts of water and nutrients, and mixes, which tend to develop water repellency, can keep your plants from being able to absorb what they need. Wetting agents can prevent repellency, improve uniform movement and distribution of water and allow the root zone to maintain the correct level of moisture throughout the growing cycle. They allow water to go uniformly into the root zone instead of running off, and if the water is able to penetrate the root, soil-directed fertilizers are, too.

When water runs off, it takes with it fertilizer and other additives. With the rising cost of fertilizers, it’s important to maximize performance and minimize waste. By applying a wetting agent throughout the production cycle you have more control over where water goes after it leaves the spray nozzle or drip emitter and where that water takes your fertilizer. More water is available for the plant to use, and irrigation efficiency is optimized. You can easily comply with best management practices for water management and conservation. You can save up to 50% on water, energy and labor costs. University research has proven and grower experience has verified that plants thrive when a wetting agent is consistently applied throughout production.

### Disease management and prevention

Probably the most dynamic component influencing plant health is water. Making sure plants have the correct amount of water is critical, because most, if not all, of the basic plant functions, including photosynthesis,

hormone activation and movement, plant metabolic functions and gas exchange all tie back to adequate water supply for the plant to utilize.

Several diseases find their mobility in water, and yet others grow because of over-moist root zones or soil surfaces. If you overwater and saturate the soil, you're not only wasting water but you're giving certain pathogens a place to breed, survive and a means to spread. You apply fungicides in order to control disease; it's important that these fungicides are carried to the roots and distributed uniformly, with water being the carrier. If water is distributed evenly, so is the fungicide, therefore increasing your chances of fighting off the disease in a constant and reliable manner. Wetting agents not only allow water, fertilizer and fungicides to be distributed evenly, they also help prevent oversaturation and they increase air-to-water ratios in the root zone to help maintain adequate air and moisture levels in the soil. This reduces plant stress and leads to healthier, stronger plants that are better able to resist disease.

#### Plant quality and sales at retail

One of the greatest challenges to selling plants at retail is the retail environment itself. It's often difficult during the busy season to keep staff on hand who are adequately trained in the watering needs of different plant types. Because of this, plants are often either overwatered or underwatered, causing stress that can impact the number of plants that remain saleable. Compounding this problem is the water-repellent behavior of soilless mixes. Once allowed to dry, mixes containing peat, bark and coir are difficult to rewet, and plants wilt and die. Statistics show that anywhere from 2% to 10% of plants are lost in the retail environment due to poor care or conditions.

Wetting agents protect your plants—and profits—from the stresses of the retail environment. They reduce water and labor needs and ensure the wetting ability of plants, even when they're allowed to dry out. When water is applied, it penetrates quickly and uniformly into the mix, supplying plants with the water they need to withstand dry conditions longer and to recover from wilt more quickly. You can drench plants prior to shipping and alleviate problems associated with water stress, ensuring greater plant survival and visual quality at retail. OR the retailer can apply a wetting agent treatment through a hose-end or backpack sprayer to increase plant quality, survivability and increase profitability. Wetting agents are safe and effective for use on bedding plants, vegetables, pot crops, hanging baskets and nursery stock, just to name a few.

#### Sustainability, conservation and the environment

Another less-talked-about advantage of wetting agents is that they help with water conservation and sustainability. Sustainability is the hot buzzword right now in the industry, but what does it mean? Simply put: Sustainability is the ability of an industry to maintain its needs today and still leave enough resources to meet the needs of the future. Many think of organic products as sustainable, but in fact most plants that are grown efficiently and with the environment in mind (think water conservation, avoiding chemical run-off, etc.) could be considered to be grown in a sustainable fashion.

Because wetting agents allow you to produce quality plants using less water and help to reduce run-off, as well as improving fertilizer efficiency, it makes sense that wetting agents can be included as a viable tool in sustainability. The results obtained from using a wetting agent help to sustain and protect the environment.

#### Are they worth the cost?

For fractions of a penny per pot you can inject a wetting agent along with your fertilizer treatment or drench

product and get better plant quality even during stressful conditions.

**There are several advantages to using wetting agents:**

- Save up to 50% on water use.
- Maximize performance of soil-directed fungicides, insecticides and fertilizers and reduce their runoff.
- Manage moisture and air to better manage disease.
- Maintain quality for more saleable plants at retail.
- Comply with water restrictions as well as fertilizer and chemical regulatory mandates.

Because the bottom line is the most important factor of your business, it makes sense to consider including wetting agents in your growing program. You might just save money and grow more profitable plants, all while conserving water and protecting the environment.

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