



With light pollution becoming an increasingly important issue, using double screening products can reduce light emission to as little as 0.1 percent.

7 WAYS YOU COULD BE USING SCREENS (BUT AREN'T)

HOW CAN YOU GET MORE FROM YOUR GREENHOUSE SHADING APPLICATIONS?

By Mauricio Manotas

You may be familiar with greenhouse screens for their traditional uses to shade, conserve heat and even diffuse light. But could you be getting more from your curtains?

Creative production reaps huge rewards, often in alternative uses for curtains that go beyond the original development.

If you can add some value and pile on the productivity for your operation, why not take advantage? For your consideration, here are seven ways you aren't using your greenhouse screens (but should be).

I. Higher Plant Density

High light diffusion screens give you the power to increase your plant density. Compared to direct light, diffuse light is much softer and penetrates much more deeply, such as through the thick canopy of a plant. This better coverage of the canopy activates more photosynthesis, translating to better growth. Light is more evenly distributed with fewer shady spots and hot spots.

If you increase your plant density by just 1-2 percent, with 5,000 plants, then you're getting \$10 per plant and making a significant impact on your bottom line.

You can double your poly life when using screens on the outside of the greenhouse.



2. Screens on the Outside

Double your poly life for the whole summer when you use screens outside your greenhouse. Growers are finding plastic lasts longer when paired with knitted screens, which tend to stick to the poly and stay close. Growers report the constant

motion of the cover against poly 24/7 creates a rugged surface that makes it easy for algae to grow and become prone to breakage.

Your poly lasts longer when paired with the soft, woven texture of a screen instead of a traditional cover, which is made for a flat surface that doesn't rub against anything. You'll immediately give your poly a longer life expectancy.

3. Keep Workers Happy

Especially in the southern portion of the country, where you can have six to seven months of the year of 110° F temperatures inside your greenhouse, worker comfort takes on new emphasis. Screens can help exponentially. Using high-diffusion screens can decrease interior greenhouse temperatures by 5-10° F almost immediately. Reflective shades at the 60 percent level can reduce heat gain by 30 percent, compared to black shading.

It's good for plants, and it makes a big impact for people, both at the production and retail levels. We've talked to several Florida growers who report they haven't lost a single person since they installed diffuse light screens. It's climate control for people.

4. Humidity Control

Because of the composition of knitted screens, they breathe much more than traditional coverings. Plastics, for example, won't let water pass through, so humidity is contained within the greenhouse and condensation builds. You end up with disease problems, and save pennies to spend dollars undoing the damage. Screens significantly reduce excess humidity because of their composition.

5. Light Remediation

As the country becomes more populated and greenhouses are increasingly found in and around urban areas, light pollution is an issue of increasing importance. Running a lot of supplemental lighting with no screens is a recipe for bad neighbor relations, not to mention wildlife and aviation disruptions that can draw attention. Putting in 1,000 lamps creates issues for airplanes, without a doubt. Today's screening products can block 99.5 percent of light through dual top and bottom white reflective layers around a black core layer. And double screening systems can reduce light emission to as little as 0.1 percent. Screens can

Perovskia Caspian™ Blue



Perovskia Caspian™ Blue is a compact form of Perovskia reaching a garden height of 18 to 24 inches (46 to 61 cm). This variety has large tubular flowers for increased color in the landscape. Caspian™ Blue is more columnar in its growth form reducing the tendency for lodging.



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High light diffusion screens give growers the opportunity to increase plant density.



easily prevent light from seeping out of your greenhouse and into your community.

6. Insurance Breaks

A little-known benefit of screens — they may get you a break on your insurance. Fire-rated products, which resist or lower the risk of fire, are an appealing add-on for many insurance

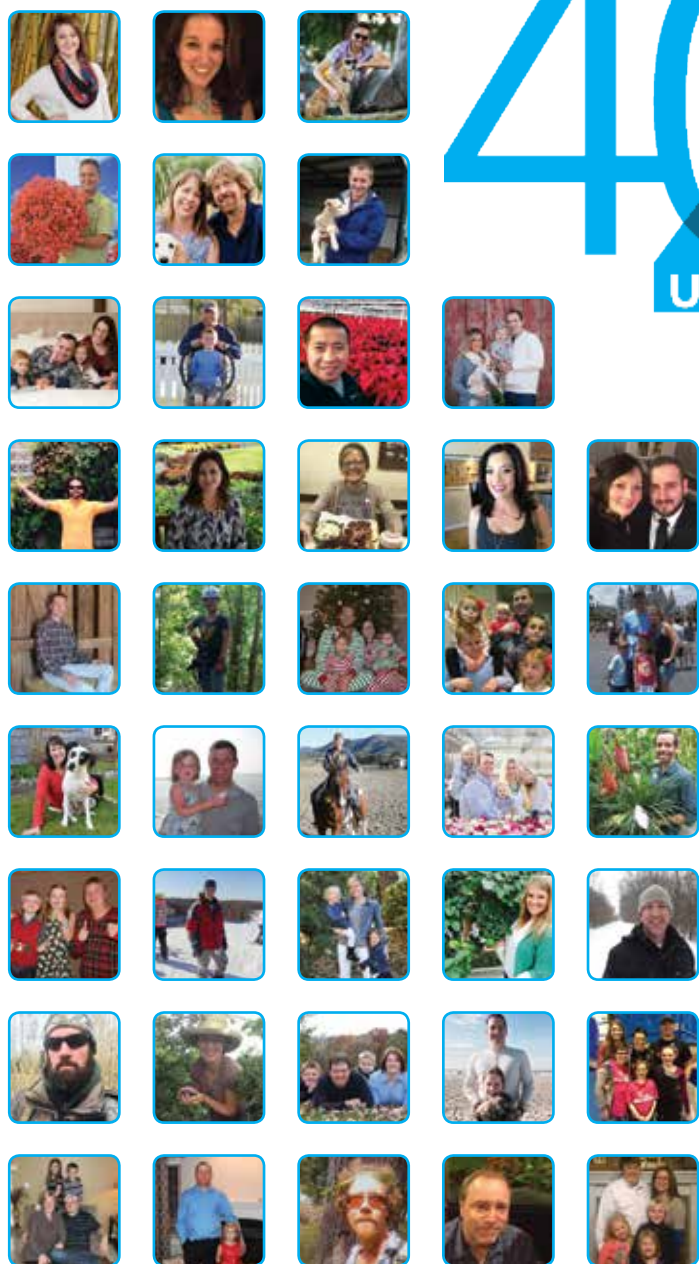
adjustors analyzing a greenhouse business. You put it in for energy savings, but it's worth asking if you can get additional benefits in another area!

7. Double Screening

Vegetable growers in particular are seeing huge benefits from double screens. It's next-generation growing that's taking production in new directions by keeping humidity down, while making it easier for growers to judge when to remove screens and control the climate. Studies on pepper greenhouses in Holland have shown energy savings up to 47 percent, and one tomato grower says he aims for a reduction in gas consumption of 9 cubic meters per meter per year. The high energy savings that result with double screen systems translate to payback for growers in just a few years.

With screens, the ultimate goal is always creating the best climate possible in your greenhouse, for every season. Take the time to see how much more you could be getting from your curtains. [g](#)

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40 UNDER 40

Celebrating the next generation of horticulture

The May issue of GPN will feature 40 men and women whose career accomplishments have moved them to the forefront of the horticulture industry. We will recognize those individuals whose professional track records have helped to establish them as some of the brightest stars in the horticulture industry — before their 40th birthday!

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