Solar Shrink touting 'next gen' mulch film

By

Tim Linden, editor at large

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Solar Shrink, a patented mulch film, offers great advantages to growers including being a “greener” product that is easier to use, cheaper to apply and more effective.

“The industry needs a fully recyclable product that doesn’t make the grower suffer in terms of costs and use,” said Neil Weisensel, marketing manager of consumer and industrial segments at Charter Next Generation, which is the manufacturer of the product.

Simply stated, he noted that Solar Shrink offers better performance than conventional mulch film at an equal or lower cost. And it is also less expensive to use and retrieve from the field, and has improved recyclability.

Weisensel said the key to the mulch film is the unique production process that uses a new resin to produce a lighter weight film that “tightens” when exposed to the sun as it is being laid in the field. The lighter material allows for more feet per roll, which reduces both fuel and labor costs as it means fewer roll changes when covering a field. The lighter weight, but stronger, material uses less plastic and is more readily retrievable at the end of the season.

“There is a 40 percent reduction in weight and it is incredibly stronger,” he said. “It’s four to six

times stronger than conventional film.”

The CNG executive said the strength allows the material to be retrieved in better shape than the traditional film. “This is important,” he said. “Ground plastics are typically so degraded that recyclers don’t want them and they have to go directly to the landfill. Solar Shrink has improved recyclability.”

Weisensel explained that the proprietary product uses a higher grade of resin, which gives the film its strength and recyclability: “It’s a completely clean material that can be recycled into food grade products.”

He added that the properties of Solar Shrink (lightweight, stronger and tightening in the sun) improve the performance in the field in a number of different ways. As the film is a laid in the field and exposed to the sun, it shrinks a bit which allows it to conform to the contours of the field. This reduces the flapping in the wind, which can cause plant damage. That tight fit also allows for a better transfer of heat to the soil.

“That’s our biggest visual selling point,” he said. “It’s the most impressive part of our field demonstrations.”

Weisensel said thicker polymers that are weaker are more difficult to apply, requiring more skilled labor and perfect weather conditions. He added that the overall cost of using mulch film increases if the film degrades, as it makes it difficult to retrieve and must be taken to a landfill site.

He noted that CNG is helping to create a circular economy by investing in a new manufacturing plant in the Upper Midwest that will recycle Solar Shrink and other plastic films and packaging materials into post-consumer recycled products, such as slip sheets. The newly constructed Myplas facility is in Rogers, MN, and is expected to be fully commercial by mid-summer 2023. CNG is one of a trio of companies involved in the project.

Weisensel said the ability to turn recyclable plastics into post-consumer products is the key to reducing the environmental impact of plastics on our planet. If plastic products can be recycled and kept out of the landfills, it’s a win win. He admits that there has to be the will and commitment to make the circular model work. Oftentimes the post-consumer products are a bit more expensive, causing potential users to back off. “We have to try a little bit harder,” he said. “The products produced may not be the lowest cost.”

He said there is a lot of research being conducted making plastics more recyclable and increasing the amount of recycled product that can be used in a post-consumer product without sacrificing performance.

Weisensel also revealed that CNG is touting Solar Shrink film over bio-degradable films because it believes that it offers a better, greener alternative. “Bio-degradable films are hard to ignore,” he said. “We have a product that is bio-degradable, but we are promoting Solar Shrink.”

He explained the jury is still out on how the bio-degradable material impacts the soil. “We don’t really truly know what is happening to that material that bio-degrades,” he said. “Where is it going? There is no proof that plastic is totally eliminated. We know plastic is winding up in the oceans and our drinking water.”

CNG clearly believes using a recyclable plastic and turning it into another product when it’s first use

is finished is clearly the better option.

Solar Shrink was invented in Australia in 2014 and brought to the U.S. market in 2020. Weisensel said the company is increasing its U.S. production of the material and it is currently ready to expand its business in the United States. He added that the early adopters in the U.S. market have been melon growers. “We have had a lot of success in melons, including watermelons and cantaloupes. They were the first crops to try it,” he said. “Consequently, our business in Texas, Arizona and California has picked up quite a bit.”

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About Tim Linden | 

Tim Linden grew up in a produce family as both his father and grandfather spent their business careers on the wholesale terminal markets in San Francisco and Los Angeles.

Tim graduated from San Diego State University in 1974 with a degree in journalism. Shortly thereafter he began his career at The Packer where he stayed for eight years, leaving in 1983 to join Western Growers as editor of its monthly magazine. In 1986, Tim launched Champ Publishing as an agricultural publishing specialty company.

Today he is a contract publisher for several trade associations and writes extensively on all aspects of the produce business. He began writing for The Produce News in 1997, and currently wears the title of Editor at Large.

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