

Sustainable aspirations

To find the right sustainable packaging option, growers need to understand both the growing and postharvest sides of their business.

Demand for plastic solutions is driving change in produce packaging.

BY JOLENE HANSEN

Recent years have heightened consumer awareness and demand for sustainability from brands. With expanded options in CEA-grown produce, consumer buying decisions increasingly rely on packaging and point-of-sale impact. But for growers and packers who strive for sustainability, the decisions surrounding sustainable packaging are complex — from

trends in materials and marketing to food safety, shelf life and plain old economics.

Matrix of packaging decisions

As founder of fresh food and produce testing laboratory Qfresh Lab and its consulting wing, JSB Group, Jeff Brandenburg is an expert in produce packaging technology, food safety, post-harvest physiol-

ogy and more. To evaluate sustainability options clearly, Brandenburg says you must understand what packaging does for your produce.

Food packaging's typical goal is to keep some things out and other things in — such as food, contamination, light, oxygen and moisture. But Brandenburg says fresh produce adds another level of complex-

ity: packaging something that respire, much like humans, and requires the controlled exchange of oxygen and carbon dioxide to optimize quality and shelf life.

Arriving at your optimal sustainable option requires understanding the postharvest side of your operation as well as the growing side, Brandenburg says. That means going beyond bag-or-clamshell basics to address quality retention, shelf life and other decisions that determine just how sustainable any packaging option truly is. “The more complex the required packaging functions, the more challenging it is to find sustainable replacements,” he says.

But consumers may not see it quite the same way. Food systems expert Christian Kanlian, a consultant with advisory service and tech firm Agritecture, says that many growers he works with — especially direct-to-consumer producers — feel frustration from customers regarding single-use plastics. That drives different choices, which are sometimes more costly and more labor-intensive for growers involved.

Brandenburg sees retailers putting pressure on the producer to develop solutions that consumers want. “The challenge is: a) do the solutions work, b) is it what the consumer wants and c) is it economically viable? Right now, retailers want these options, but do not want to pay more for them,” he says, adding that many consumers also aren’t willing to cover the added tab.

Material packaging challenges

With producers pressed for action, the quest for cost-effective, sustainable alternatives goes on. Brandenburg sees three primary trends among producers striving for sustainable packaging:

Packaging recyclability — either making it recyclable or increasing its recyclability

Bioplastics — alternative polymers not made from conventional petroleum-based sources

Fiber-based options — using paper fiber, rice husks or similar materials derived from sources viewed as more natural.

But true innovation and sustainability doesn’t come easily on any front. Take recycling infrastructure — or lack of it. “It’s not just about the technology of making something

Big Marble Farms uses a fiber-based alternative packaging. See article in the September 2022 issue of *Produce Grower* at bit.ly/big-marble.



DreamHarvest COO Leif Hickman says the company uses its packaging to convey to brand trust to consumers.



more recyclable. Technically, everything is recyclable. But very, very few things are actually recycled,” Brandenburg says. Ease of recycling rigid trays is one reason more companies are using them to increase their packaging’s recyclability.

Kanlian describes plastic as a Catch-22: It helps retain fresh produce quality, gets people to eat more fruits and vegetables, and gets recycled more than many alternatives. “I think that a lot of the force from the grower end and from the packer end is trying to make an attractive retail SKU that maintains product quality and



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COVER STORY

generates sufficient revenue for the retailer,” he says. “Consumers universally dislike plastic, but I think there’s not a great alternative answer.”

Biopolymers show promise, but it’s important to understand their full life cycle. Brandenburg notes that some require more energy to produce. Kanlian adds that some may result from repurposed monoculture corn or grain crops farmed using petroleum fertilizers. “I don’t see how that’s frankly any better than petroleum-based,” he says.

Fiber-based options visually appeal to sustainability-conscious consumers, but that same quality creates another challenge: consumers want to see their produce.

Kanlian says packaging options like cardboard trays combined with clear plastic sleeves, for example, overcome visibility hurdles and feel clean and safe. “When we’re talking about premium, high-value, convenient, fresh-to-eat products, I’m not sure consumers want that to just be sitting loose, having a bunch of people touch it. So, there’s always that fine line between not too much plastic, but enough plastic,” he says.

Messaging that conveys and compels

When consumers see your packaged produce at retail, most won’t understand what it took to get there sustainably. With packed market shelves, conveying your stance at the point of sale becomes crucial. “I think growers are doing their best to adapt to consumer preferences and are selectively choosing which aspects of their production model they emphasize on their packaging,” Kanlian says.

Brandenburg warns that today’s consumers are savvy about products and technology. “If you’re going to make the claim, you best have the science to back it up and understand what that claim means,” he says.

In its early direct-to-consumer days, Houston-based grower Dream Harvest delivered greens in reusable plastic containers. As the company and its sustainability efforts matured, so did their message to consumers. That growth led to the March debut of new labeling, a collaboration with brand strategy and design agency Good Stuff Partners.

The compelling result speaks to sustainability-minded consumers from Dream Harvest product lids. From the prominent Texas outline tagged with “Farm to Store in 24hrs” to less common declarations like pesticide-free, non-GMO, 95% less water and — a differentiator in any market — 100% renewable energy, Dream Harvest makes a strong, quick statement about its “unbe-leaf-able” greens, with a welcome dose of wit.

“Consumers are looking for brands that are transparent, authentic, optimistic, fun and focused on solving big problems within the food system, and that’s exactly who we are,” explains Leif Hickman, chief commercial officer of Dream Harvest. “To bring out our mission on the pack, we led with the straightforward benefits that matter to our consumers in their everyday life. We’d love for consumers to learn about how products farmed indoors are better for their health and better for the planet. Our packaging provides a window into that information.”

There’s no question that sustainable packaging — from materials to messaging — isn’t simple. But Brandenburg has a word of advice: “All of these challenges that I mentioned, which are all real, are also opportunities. That’s the way we look at it.” He and his group of scientists, engineers and educators encourage the industry to do the same.

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Give the customer what they want

Topline Farms gave a retail partner what it wanted: cucumbers that last longer and aren’t wrapped in plastic.

BY CHRIS MANNING