Processing Sustainably

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The food industry is ramping up its efforts to increase the environmental sustainability of production, and Green Research has introduced a new benchmarking tool to help manufacturers produce food more sustainably. *Food Manufacturing* spoke with David Schatsky of Green Research to discuss how processors can most efficiently increase their sustainability.

Q: What are some of the various sustainability goals food manufacturers designate as most important?

A: The number of specific goals companies have announced is an indicator of the level of importance they place on an issue. By this measure, the most important issues are reducing greenhouse gas emissions, reducing energy consumption and reducing water use. Our recent study looked at the following nine companies: Archer Daniels Midland (ADM), Bunge, Danone, General Mills, Kellogg, Kraft Foods, Nestle, Tyson and H.J. Heinz.

Over half of the sustainability goals those companies have announced deal with one of those three issues, with greenhouse gas emissions reductions being number one. All but two of the companies have at least one greenhouse gas reduction goal. Other issues the companies are focusing on include reducing waste, reducing packaging and improving the sustainability of the agricultural practices of their suppliers.

Q: What are food companies doing to achieve these goals?

A: In most cases, companies start with measuring their environmental impacts. This gives them a baseline they can use to help set targets and against which they can measure progress. The measurement process itself can be complex and time consuming, especially the first time the data is collected. Well managed companies assign responsibility for achieving goals to specific individuals to ensure accountability. And they report on progress frequently.

An increasingly important analytical tool that helps companies prioritize their efforts is life cycle assessment. It can reveal a product's environmental impacts across its entire life cycle, from the extraction of raw materials, to production, through to distribution, use and disposal. Life cycle assessment can help companies pinpoint which life cycle stages account for the major environmental impacts, and focus their efforts on improving those.

As far as the specific initiatives companies undertake, the range is fascinating. To reduce electricity usage, companies have installed energy management systems to provide better monitoring and control over the electricity used by key equipment. They have upgraded equipment to more energy-efficient models. Companies have wrung efficiencies from their transportation systems by analyzing and optimizing their distribution routes and by shifting freight from carbon-intensive modes, like trucks, to less carbon-intensive modes, like rail or ship, where possible. They've reduced waste by focusing on recycling rather than disposal; in some cases, that requires little more than changing the contractor used to pick up waste. Other companies have made it easier for employees to recycle by putting bins in key locations in facilities. Reducing packaging is a design and engineering challenge that packaging engineers seem to relish. In this area, companies set package reduction goals and designers rise to the challenge to create innovative designs that are as functional as before but use less materials. Companies are also switching to cleaner fuel like natural gas, incorporating renewable energy into their mix of energy sources and using co-generation to gain both heat and power from energy sources, among other approaches. Water savings initiatives have included things like treating waste water and reusing it for irrigation or other industrial processes, harvesting rainwater and redesigning processes to make more efficient use of water. The list goes on. The exciting thing is that challenge of improving environmental performance can unleash immense creativity.

Q: Your reports indicate that 87 percent of the sustainability goals of major food processors deal with their own internal operations. What types of goals are these companies setting regarding their internal operations?

A: Our framework for analyzing sustainability goals categorizes goals by the *issue* they address and the *area* in which they are tackled. The issues are things like greenhouse gas emissions, water use, paper use and so on. Areas include operations, product and packaging, supply chain and customers, among some others. The reason the area is important to consider is that sometimes environmental impacts of a given issue are relatively minor in one area but significant in another. If they analyze the full life cycle of their business, companies

often find that the major environmental impacts may be occurring upstream with their suppliers, or downstream with their customers' use of their products, rather than from their own internal operations.

So leading companies are working on lots of the right issues in their internal operations. But they need to start broadening out and influencing their supply chains and their customers, too, in order to achieve the greatest benefit.

Q: The reports indicate that few companies are working to improve sustainability through their supply chain or packaging. What actions should food processors take to improve their sustainability throughout their supply chain?

A: It's important to note that suppliers are separate companies and food processors' influence over them may be limited. Or it may be significant. Most companies serious about improving the environmental footprint of their supply chain put programs in place to communicate with suppliers about environmental goals. They may begin to request detailed information about their suppliers' environmental impacts. They may develop a scorecarding system, in which suppliers are rated on the basis of their environmental (and possibly social) performance. Higher-performing suppliers may receive preferential treatment, while low-performing suppliers may be culled. Some food processors have worked with farmers to help them implement more sustainable agricultural practices. This benefits both parties and society as a whole.

To improve the environmental performance of their supply chains, food processors need to engage with their suppliers, develop targeted communications programs, set standards, audit performance and share technical expertise where appropriate.

Q: What sustainability trends do you see impacting the food industry the most in the future?

A: Water management is an issue of increasing salience. Leading companies are doing a good job in acknowledging the issue, assessing risk and beginning to put programs in place. But there is still a lot of room for improvement, and this will occupy the food industry for a good while. Advancing sustainable agriculture practices is another area of focus, especially among companies facing shortages of critical ingredients such as cocoa, or which rely on ingredients such as palm oil which are sometimes produced in environmentally unsustainable ways. A new sustainability frontier for the food industry is looking at the health of the products they produce. Some companies are starting to talk about how to shift their products toward healthier formulations and their product portfolios toward a healthier mix. It's a bit early to say, but this could be an important trend that could have a big impact on public health, a different sort of sustainability issue.

For more information, please visit www.greenresearch.com *[1]. Interview by Lindsey Coblentz, Associate Editor,* Food Manufacturing *[2]*

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