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Breakout IIB Market Driven Sustainability Efforts

Nicole Johnson-Hoffman, Chief Sustainability Officer, OSI Group and President, Global Roundtable for Sustainable Beef
Charles Rice, Professor of Soil Microbiology, Kansas State University

Nicole Johnson-Hoffman identified two themes around what sustainability can mean for agricultural communities: 1) Transparency with consumers about how we are producing the food they eat and what costs we're imposing on communities as we do that. 2) Consumer values around, for example, animal welfare or protection of water or impacts on air. They want to understand whether agriculture shares those values.

As a business person, Nicole talked about sustainability with farmers and producers as a renegotiation of the deal with agriculture communities. In the past people outside the system raised concerns about how food was being raised. They weren't buying those products and were therefore dismissed. Over the last fifteen years more people want a full accounting of externalized costs, efforts to reduce them and those that agriculture plans to pick up. If those costs are quantified they are easier for the agriculture community to accept.

The big brands Nicole's company supports look at sustainability from the perspective of whether or not consumers are patronizing their business. They are not trying to get marketing claim or raise the price of the product. They are just testing the consumer's willingness to use their products.

Other brands look for a special sustainability claim that the product they are selling is raised under particular circumstances. These claims need to insure that farmers are properly compensated for their roles in that process.

Fast food brands are product agnostics. They are happy to sell whatever consumers want. They are purely market driven.

Industry's role is to see that their products continue to be sold. Their partnering with consumers is a smart choice for agriculture. Both are valid concepts but will be driven differently in the marketplace.

Roundtables. As of January 2018 Nicole is the President of the Global Roundtable for Sustainable Beef. The roundtable provides an opportunity for agriculture to engage directly with its critics (customers, stakeholders, retailers). This type of discussion keeps retailers on the same path instead of setting up their own sustainability criteria which becomes difficult for farmers to manage. Roundtables limit what farmers are asked to do and, if they do them, their critics will be satisfied.

These roundtables are currently dominated by participants from other countries who use different production techniques. Nicole encourages North Americans, whose production practices are often more efficient and sustainable, to participate in these roundtables.

Charles Rice said it is hard to put a monetary value on soils because they do so many things. Ninety percent of our antibiotics come from soils; 50 percent of anti-cancer drugs come from soils.

Average soil erosion is two to five tons per acre per year while the rate of formation is one-tenth to one-half ton per acre per year. NRCS "tolerable soil loss" ranges from one to five tons per acre per year. How is that tolerable or sustainable? Soil protection is not keeping pace with the impact of climate change, drought or floods. Economic impact is also not keeping pace. The US had \$1.8 billion in insurance claims in 2011 for crop yield losses related to drought and heat stress.

There are aspects of soil health that translate well to understanding the value of sustainability to the agriculture system. A soil strategy needs an effective monitoring system. We do not know the state of our soils. Canadians have better data than the US. They have developed a system that Rice would like to implement in the US.

The [Soil Health Partnership](#) has established a trial network of farm demonstration sites to look at standard and improved practices. It is tracking changes in soil health along with economic data to assess the effectiveness of these practices.

In 2002 an agriculture economist estimated the value of soil at \$20 trillion, twice the level of the global GNP. However, some companies are using metrics that do not involve the people in agriculture to create indices that are not appropriate.

Q&A

Are there alternatives to fertilizers that are more sustainable and environmentally friendly?

Rice: We will have to continue to use synthetic fertilizers. The advantage of synthetic/anhydrous fertilizers is that the application and release rates can be controlled and they have a short term effect. But, application requires equipment that causes compaction if overloaded or is run on wet soils. Anhydrous is caustic. Methamphetamine is becoming a safety issue for farmers. Recycling manure and sewage sludge, if checked for contaminants, is appropriate. There is no one size fits all. Charles likes to express it as intensifying and increasing the diversity and efficiency of agriculture.

What is the potential for microbial applications?

Rice: There is good and bad science behind this. There is a major investment in biologicals. Inoculating rice plant root zones is showing promise instead of general soil inoculants.

Is there a snowball/slippery slope of commitment for producers who concede to environmentalists demands? Can these non-government standards replace government regulations?

Johnson-Hoffman: The beef roundtable welcomes participants who can align with its mission to make the US a world leader in global sustainable beef production. World Wildlife Fund is such a participant in its support of the benefits of grazing lands in protecting prairie grasslands. The roundtable pushes NGOs to the margins who do not want constructive engagement. Placating groups who do not like intensive agriculture is a danger. Nicole believes efficiency and scale can drive environmental benefit but it isn't a moral obligation.

Comments from a Canadian attendee: Canada had a meeting with all its conservation groups last fall that shifted the dialogue. WWF had gotten all the attention with Meatless Mondays. The Nature Conservancy was buying land to take it out of production. Now they are coming to us. Ducks Unlimited has shifted to providing seed to put land into perennial grasses and managing nesting areas. They are encouraging more people to eat beef because this contributes to their goals. Our cows and fish program identified areas for creek gravel crossings and solar panels that power cleaner drinking water supplies for cattle.

How can legislators promote the benefits of soil health beyond the water quality issues that seems to be the focus of most public concern?

Rice: there are evangelical types, government agency and industry individuals who are making extreme claims using metrics before they are ready. Scientists need to understand the importance of communication findings to the public in a broader focus that thinks more systematically. It is difficult to put an economic value on all the many things soil provides. Illinois indirectly taxes soil because land that is more productive gets taxed at a higher rate. Perhaps crop insurance should consider discounting insurance or risk for healthier soils that better withstand drought and losses due to erosion.

Johnson-Hoffman: The roundtable discusses soil health in that proper grazing management improves and preserves soil health.

How do you address the "small is better" viewpoint?

Johnson-Hoffman: consumers don't understand the value of scale and intensification. They prefer the red barn model. We can use that model to illustrate how grandparents farmed and how it played out. We can point out the inefficiencies of tiny organic farms but need to accept that they will never love big agriculture. Transparency puts faces on operations and is blunt about what it does.

Roundtables on egg production threw out the science on cage-free chickens because of public opposition. Johnson-Hoffman: I treat these roundtables like corrals where everybody must stay in for a continuous listening process. Some folks will go their own way and that is a great example of what goes wrong.