Sustainability Leadership in Action:
Christopher Cooke Advances Conversations about Biological Agriculture Methods---and Health---in Australia

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Questioning and experimenting: practices long associated with the scientific method. For many these activities comprise an essential recipe for living. For example, ask Christopher Cooke to sum up his collective life experience so far, and he may tell you (as he recently told me) that he sees it as a series of experiments in life-affirming sustainability. As founder and lead adviser of 5 Deep Integral, an educational and development consulting firm, Cooke looks at the world around him and asks difficult new questions about how we face the future. The beauty of asking difficult questions, of course, is that they invite us to look for answers along new pathways. In Cooke's case, a recent question---"How can we stimulate dynamically vital innovation to sustain the viability of the human immune system?"---has led to his current involvement with biological farming in Australia.

Biological Farming

Biological farming, with its focus on healthy soil, along with the nutritional quality of plant and animal produce that depends on it, reflects a strong and growing challenge to conventionally accepted farming practices in the developed world. More specifically, it seeks alternatives to the heavy reliance on chemicals used in the pursuit of high crop yields that characterizes much of the basis for modern farming techniques. For decades, this chemical paradigm has helped stretch yields, but at the price, many experts believe, of stressing the soil and related eco-systems.

The biological approach to farming rests on the principle that healthy soil is a critical link in the chain that connects healthy plants, animals and humans. From there it works backward to the inescapable conclusion that the lack of healthy soil can trigger dangerous consequences for the rest of the life chain. History's trail is littered with examples of agricultural collapse. [1] Though the causes have varied, a common culprit is a resistance to re-visiting old assumptions, indifference to keeping a long time horizon in view, and difficulty in developing agility in response to rapid changes. Unless we reverse culturally---and economically---entrenched patterns of behavior toward the natural resource we call soil, students of biological farming anticipate we will share the same fate.

Agriculture in the developed world however, relies largely on synthetic technologies---chemically-based fertilizers, herbicides and pesticides---that degrade and destroy the critical microbial biomass that exists within the layers of (tillable) soil. In fact, current conventional practices operate largely as if the intricate symbiosis at work in the soil were irrelevant to our efforts to farm it. The consequence: an endless cycle of production and consumption that demands ever larger chemical interference. Yet farmers paying attention to what has been happening year after year within their fields are starting to recognize that chemical dependence in pursuit of higher yields poses unsustainable risks.

Soil Regeneration

Soil regeneration techniques seek to redress the imbalance. Specifically, they aim to increase measurable standards over relatively short periods, within 12 months. These results help instill a new awareness of micro-organisms that trigger dynamic, healthy reactions in the soil itself. As importantly, they also foster an interest in how innovative solutions can emerge to address complex and local and global challenges. Indeed, that interest and awareness are essential components here. In other words, Cooke's experience tells us, soil regeneration is about much more than (just) microbial intervention to re-stimulate the land. It requires seeing the holistic connections that tie together farmer and soil; it encourages a new way of seeing.

Cooke became involved in biological farming as the result of an intensive review of technologies undertaken in 2008 by the Lifeworks Foundation, for which he was serving as the interim CEO. The goal, he says, was to identify technologies that could have the greatest impact on alleviating human suffering. Soil regeneration represented

[1] See, for example, Diamond, J. (2005) Collapse: How Societies Choose to Fail or Succeed, which references the collapse of Easter Island and other societies. Historians have also fingered environmental depletion as a factor in the disappearance of the Maya and Chaco Canyon/Anasazi cultures.

an integral technology that mimicked the dynamics of the natural world, one not yet undertaken on a large scale.

With the backing of private investors, a demonstration project to build a feasibility profile and establish credibility was launched among dairy farmers in Australia. The project now comprises some 20 farms averaging 160 hectares each. The project team has over 15 years experience in successfully converting over 5000 hectares of farmland to biological standard. Providing important input into the team's activities have been participating farmers, scientists, private investors and business people.

Results

Cooke reports that the results have been striking, with quick returns appearing in as few as 17 days after the technology is introduced. Overall, he says, nutritional density has increased substantially. In pastureland, for example, results have shown a fivefold increase over control levels. Protein levels in wheat crops have risen 30 percent, with sustained increases in energy and trace element content, as well. Animal husbandry benefits, measured according to by-products of increased pasture and feed quality, have also been notable. Farmers have reported increases in milk yields as high as two liters a day, along with recovery from mastitis, a significant reduction in pig and calf mortality, and changes in animal behavior that suggest elevated levels of contentment. The results, Cooke says, have been affirming for biological farmers on the team who have not experienced the challenges other agriculturalists have faced. Many reported ridicule when, in the past, they have shared their results with advisory bodies that express skepticism about their figures: another potent example of the contrast between what we think we know versus what we don't.

Willingness to Experiment

Certainly the technology has been critical to this initiative. Yet equally so is the human component, a reminder that, if the movement toward sustainability requires asking difficult questions and a willingness to experiment, it will also require close attention to how learning occurs, and the conditions that foster it.

In the case of the Australian project, Cooke says, it has been important to identify the attributes that make for especially effective farming partners. He catalogues useful criteria that have emerged in the course of his experience so far. The list begins with farmers who share a fundamental concern with their own health and that of their families. Effective partners are also those with a willingness to innovate as long as they can see results and contribute to demonstrating the value of new and effective farming practices to the farming community as a whole. Skeptics, says Cooke, who can look, see and taste the benefits for themselves, often tend to promote innovative practices more powerfully than farmers who begin as ardent supporters guided by a strong idealism. So, too, can those who grasp the link between positive financial results and changes in farming practices.

The strongest source of resistance, Cooke reports, proves to be---unsurprisingly---the status quo. His experience shows this to be a good reason to consider carefully the conditions that might support large-scale change. One possibility: seek out opportunities for international collaborative efforts to develop and disseminate innovative farming solutions in a visible way, perhaps by engaging with multi-national partners. “We have to re-examine how we run businesses in this field,” Cooke says---an indicator that this is a new-era leadership issue at least as much as a technological issue.

The central question such collaborations might ask: How might we influence a shift in thinking that builds upon nature's resilience and adaptability? “It is clear that our domination of nature is leading to increased 'life-fragility,'” Cooke says. “We are embarking on a new and inspiring era, one that challenges the most basic assumptions about how our societies operate, and the extent to which we risk starvation, even with full stomachs, through rampant disease---biological and psychological---as a result of massively degraded immune systems. As a species, we appear to have a role to play in creating our future---I would like us to have a chance to discover what it is!”

Observations and Comments:

Cooke demonstrates how ***assuming responsibility*** for his choices and actions throughout his professional career has contributed to his intention to fully participate in creating a purposeful, life-affirming, life sustaining world. His story illustrates efforts to find effective ways to challenge current frames of accepted

farming practices in the industrial world and offer innovative alternatives.

Cooke reveals an ability to recognize and influence the ***holistic interconnections*** among environmental, sociological and economic interests. In this case, these include soil quality; nutritional crop/animal produce; human food consumption; the human immune system; human health at all levels; economic advantage for farmers and farm-related businesses; multinational business partnerships for expanded use of soil regeneration technology world-wide.

While the story does not elaborate on Cooke's interactive engagement practices, it reveals an ability to ***facilitate constructive interaction*** among those with diverse interests and background that may not initially be aligned including, in this case, dairy farmers, scientists, business people, private investors, and others. Within the context of these interactions he likely recognized and helped others to ***engage with creative tension*** resulting from conflicting points of view that helped to expand understanding and knowledge leading to innovative breakthroughs.

Even as Cooke describes his own life experience as a "series of experiments in life-affirming sustainability," he is revealing a spirit of curiosity and inquiry that underlies the sustainability leadership principle of ***experimentation, learning and adaptation*** as he navigates through natural, inevitable complexity in search of elegant solutions *with* others.

While this story highlights Cooke's leadership philosophy and capabilities, the farmers participating in this initiative can also be described as sustainability leaders. Perhaps a future story can further elaborate on their leadership-in-action.

References:

Diamond, J. (2005). *Collapse: How Society Choose to Fail or Succeed.* NY: Viking.

Cooke, C. (Oct., Dec. 2010; Jan, 2011). Personal Interviews and Electronic Communication.

Sustainability Leadership Relational Model (2009): http://www.sustainabilityleadershipinstitute.org/atomic.php