Overcoming organic farming obstacles

Professors Eric Arnould, Melea Press and Jeff Murray, and Katherine Strand discuss their ongoing efforts to understand the factors preventing the transition to more profitable organic farming methods in the US

How did you each become interested in this area?

Melea, Eric and Katherine (Katie) all have a longstanding interest in agriculture, and Jeff in the role of ideology in marketing practice. Melea has worked on community-supported agriculture and farmers markets for over 10 years, as well as studying agricultural development in East Africa. Eric worked on Century Farms in Nebraska and on agricultural development in East and West Africa for many years. Finally, Katie comes from a ranching family in Wyoming, and is interested in tillage practice and agricultural management from both cultural and practical perspectives.

Have you collaborated or partnered with any other institutes or individuals?

Our colleagues in the natural resource management department at the University of Wyoming and the College of Business at Portland State University, USA, have been critical to the success of our project. In addition, the work would not have been possible without a grant from the United States Department of Agriculture (USDA) Organic Research and Extension Initiative.

What are the main strategic orientations, or ideologies, adopted by farmers in the US?

The two main strategic orientations can be referred to by many names, but we use ‘conventional chemical’ and ‘organic’. The former is associated with the 20th Century thrust towards ‘scientific agriculture’ with a reliance on petrochemical inputs and hybridised seed stocks. In recent years there has also been a trend toward no-till approaches, at least in the High Plains. Chemical systems rely on a complex institutional arrangement of government subsidies, corporate input suppliers and buyers, millers and processors. The organic approach in the High Plains employs traditional tillage using the mouldboard plow. Organic producers experiment with rotations and supplements, but these are in flux.

The key point is that the organic on-farm enterprise is not supported by the up- and downstream market infrastructure that supports the conventional chemical system. Both systems are regulated by federal rules and, in the case of the chemical system, by corporate guidelines on seed, tillage and chemical applications. The bulk of agricultural research is devoted to the conventional chemical system and not the organic system of production and marketing.

Why are personal beliefs so powerful that they prevent transition from conventional wheat farming – only profitable due to government subsidies – to organic wheat production, which has evident economic incentives?

Beliefs in chemical wheat practices are powerful because they are sustained by the entire structure of industrial farming. In the farming community studied here, there are strongly held beliefs in the sanctity of the family farm, the right of farmers to do what they think is best, as well as a deep suspicion of regulation. These beliefs, like all foundational beliefs, provide people with guidelines for how to live, and for how to run their farms.

Not only are chemical farmers raised in a system that seems to work from a production standpoint, that system is legitimised and supported both financially and logistically by the entire supply chain: the federal government that.
An ideological challenge

A collaborative research project led by researchers at the University of Southern Denmark and Hanken School of Economics, Finland, is facilitating a shift to more profitable and environmentally friendly farming methods by dispelling the myths surrounding organic production.

AGRICULTURE CAN BE broadly split into two forms: organic and chemical. Conventional chemical farming cultivates crops using inorganic chemical inputs like fertilisers and pesticides. By contrast, organic farming methods do not rely on synthetic chemical fertilisers or feed additives, instead using only organic-certified substances and natural techniques like crop rotation, compost and biological pest control.

Organic farming has experienced a boom in recent decades. Since 1990, the market for organic produce has grown rapidly, reaching US $63 billion worldwide three years ago. Of course, this has driven demand for organically managed farmland. According to the latest data on organic agriculture, in 2012 approximately 92 million acres globally were farmed organically, but this still amounts to less than 1 per cent of total world farmland. Despite the demand for organic food, it appears many farmers are reluctant to make the transition from conventional methods.

Recognising that this can impede agricultural progress, Professor Eric Arnould, a marketing expert from the University of Southern Denmark and Professor Melea Press from the Hanken School of Economics, Finland (both formerly at the University of Wyoming, USA), began a study of the reasons preventing farmers changing methods. Together with Professor Jeff Murray at University of Arkansas, USA, and Katherine Strand, a PhD candidate at McGill University, Canada, they set out to study organic commodity agriculture in America’s Northern High Plains.

Change is particularly important for this region. Farming is critical to rural communities in the High Plains, but many farms are under threat due to the rising costs of fuel and fertiliser. In 2002, 97 per cent of Wyoming farms had annual sales below $500,000. Farmers in this area are in urgent need of alternative production methods that reduce costs, increase profitability or add value. Organic production methods could be the answer. Because of their increased sale value, they can increase profit and alleviate financial difficulties. Arnould and his team thus aim to clarify the incentives and disincentives of adopting organic farming practices, and communicate that ideologies are not recognised as a barrier to making decisions that could be more profitable in the long term.

AN AGRICULTURAL PUZZLE

The researchers’ investigations of the challenges and opportunities for organic producers in the High Plains forms part of a three-year US Department of Agriculture-funded project. As part of these activities, in November 2014 they released a groundbreaking report published in the Journal of Marketing, which analysed the production and marketing strategies of commodity producers – those who provide basic inputs to commonly prepared foods. Using wheat farmers in the High Plains as their subjects, they assessed the challenges to strategic change in agriculture, specifically asking why chemical farmers resist converting to more profitable organic methods.

Indeed, the economic incentives are clear. Over the past 30 years, organic wheat production has consistently yielded profits. On average, price premiums have been 47 per cent above chemical wheat production. Organic wheat production is profitable, while chemical production is only profitable due to government subsidies, but it still represents only 1 per cent of the overall market. The researchers want to know why this is.

In answering this question, the team focused on ideology, a rarely addressed aspect in this type of research. “Widespread business practices exhibit features that social science would attribute to ideologies, and can therefore be thought of as such,” they explain. The researchers revealed a clear link between the two, as ideologies have a measurable impact on business decisions. These in turn have significant social and economic consequences. As ideology is so closely linked to strategic orientations, considering personal beliefs...
or attitudes may help explain why moving to new production methods is so challenging in agriculture.

CONCEPTUAL ROADBLOCKS
To directly understand the barriers, interviews were conducted with producers and other actors in the High Plains, including both chemical and organic farmers. By speaking to the farmers multiple times over several years, they found that both groups had passionate and often competing beliefs underlying their choices.

The dialogues identified a number of reasons why chemical farmers resist the transition to organic methods. Many were related to cost: “Organic certification has measurable economic benefits, but it also comes with costs that are not factored into a standard balance sheet,” reveals Press. However, the main roadblock was general conservatism towards organic agriculture, viewing it as an environmental movement or novelty. Associated with this is social pressure, as farmers in small rural communities tend to know one another. These prejudices can be manifest in the form of name calling, but can also result in social sanctions with more tangible outcomes. “One very successful organic farmer in our study tried to purchase land from a chemical neighbour, but he refused to sell to an organic producer,” elaborates Press.

It appears that obstacles to the organic transition are not technological or material, but instead are primarily based on ideological tensions. Murray believes that until these are resolved, the transition will remain in a stage of crisis. The study concluded by explaining the value of understanding the influence of ideology on farming methods. If agricultural managers recognise conflicting belief systems, they are more likely to encourage successful strategic change. Such understanding can be a route to finding new ways of inspiring farmers to embrace change, for example, linking new strategies to cultural beliefs.

PROTECTING THE FUTURE OF AGRICULTURE
With this landmark study, the team showed that strategic orientations can be thought of as ideologies. Deep-rooted beliefs, which are legitimised by normative, cultural and regulatory sources, constrain farmers from making rewarding shifts in strategy.

By understanding the ideological tensions, these ideologies can be managed. It is hoped that agricultural extension workers in the US will use the findings to consider the ideological basis of different agricultural production and marketing strategies, and, crucially, address the myths surrounding them. Concurrently, new models developed by agroeconomic specialists that overcome the drawbacks of current organic strategies for organic farm enterprises, and new approaches to rotation and fertilisation are also needed. In turn, farmers may be able to see the benefits of change. This realisation is vital, as the future of agriculture requires farmers to adapt to new realities.

ADDRESSING THE DIALOGUE
Arnould describes the competing ideas of chemical and organic farmers in the High Plains as an ‘ideological map’

Conventional chemical farmers tend to believe that organic farming represents the negation of the following ideas:

- Pride in planning
- Scientific farming
- Weed and pest control
- Yield as a key measure of good farming
- Chemical approaches are needed to make money

While organic farmers may think that chemical farming negates these:

- Rotations, not chemicals, are the key to sustainable farming
- Chemicals are hazardous for land and people
- Profit is a better measure of success than yield
- Time in the field is a mainstay of good farming
- Farming is about tradition – ‘farm like grandfather’

However, both share an ideological commitment to the following:

- Passing on the farm to future generations
- Hard work
- Stewardship of the land
- Independence
- Staying out of debt