Beyond Organic: Information Provision for Sustainable Agriculture in a Changing Market

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As organic agriculture evolves from a movement to an industry, the organic label is increasingly disconnected from the founding spirit of *organic*, which is now more associated with the broader term *sustainable agriculture*. Increased competition due to the "commodification" of organic agriculture poses challenges to sustainable organic farmers in the Northeast U.S. This paper discusses the options for creating and maintaining niche markets by providing information on "process" attributes to consumers who wish to support a more sustainable food system, including labeling alternatives and the role of government. It concludes with a discussion of the prospects for this movement and research needs for the future.

October 21, 2002 ushered in an important milestone in the history of organic agriculture. Beginning with the full implementation of the USDA National Organic Program (NOP) on that date, all foods labeled organic in the U.S. must be certified by an agency accredited by USDA. This has several important implications. First, a single definition of organic prevails: prior to the NOP, certification was handled by an array of independent certifying agencies with no harmonized standard. Second, it is now illegal (except for farms with annual gross sales less than $5000) to use the word "organic" on a food package unless the production, handling and processing was certified by an accredited agency. The days of "uncertified organic" labels on produce once seen in health food stores are now over. Small growers who rely on direct markets with an emphasis on face-to-face transactions and personal relationships with consumers (such as direct sales to restaurants, farmers' markets, Community Supported Agriculture, and farm stands) may choose to eschew the formality of certification with its monetary costs and paperwork burdens. This, of course, precludes their ability to obtain an organic premium on sales to processors, wholesalers, brokers, retailers, and other broader market channels.

The rise of organic agriculture is part of an emerging trend in consumer demand for food: a sense of "knowing where your food comes from." Caswell and Mojduska (1996) refer to these as "process" attributes (a term which will be employed repeatedly in this paper). Consumers buy organic, usually at a higher price, because they believe it is a premium product. They believe that organic foods are healthy and good for the environment (Lohr, 2002). Concern for farm-worker safety is another motive for buying organic (Conner, 2002). The NOP label, with its requirements of natural soil fertility and pest control, provides valuable information to consumers with concern for these issues.

NOP is apparently achieving its goal of increased access to organic food—the industry continues to grow at a healthy pace, and organic foods are increasingly available in mainstream retail stores. Survey results from central New York State indicate that these consumers are in broad agreement with the list of practices required or banned by the NOP, especially the decision to ban Genetically Modified Organisms, irradiation, and biosolids (Conner 2002).

Despite the successes and broad consensuses reached, however, anecdotal evidence highlights concerns within the organic community, focusing on the transition of organics from a movement into an industry, and similarly, from products to commodities. Large commercial growers and agribusiness firms have entered the market seeking profit opportunities, while not necessarily remaining true to the founding spirit of the organic movement. Shared values, such as local control of and participation in the food system, and the environmental stewardship ethic, are central to the movement's origins and are not guaranteed by the NOP regulations.

Many of these concerns are centered under the broader concepts of sustainable agriculture and food systems: the organic label may be the best proxy for sustainability, but it is an imperfect one. What is the relationship between organic and sustainable agriculture? For consumers and producers who want to participate in a sustainable food system, which

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aspects of sustainability are captured by the organic label and which are not? How can this information be provided to consumers who wish to support these values with their purchases? What role, if any, can and should government play in providing this information? This paper discusses these questions and outlines policy and labeling mechanisms to address these concerns and supplement the information provided by the organic label, to fill in the gaps between organic and sustainable. It begins with a discussion of the relationship between organic and sustainable agriculture, discusses the nature of the information inherent to the organic label as it pertains to sustainability, and outlines mechanisms, both ongoing and potential, to bridge this information gap.

Organic and Sustainable Agriculture

The origins of organic and sustainable agriculture (SA) are intertwined. Each, in a sense, began as a response to perceived flaws in the dominant industrialized agricultural system and was associated with "back to the land" types with strong environmental principles. Each began as little more than a curiosity and has risen to prominence as an important strategy for survival in this era of farm disappearance.

The USDA definition of SA, lacking measurable standards or clear allowed/prohibited practices like organic, poses difficulties for certification. Other models and definitions of SA usually take a "three-legged stool" approach: economic and productive efficiency, ecological stewardship, and community control and participation (e.g., Douglass 1984).

It is important to note that one does not imply the other. Organic captures much of the ecological component of SA and, with its price premium, perhaps part of the economic one, but even this is arguable—wholesale substitution and/or careless use of organic inputs to replace chemical ones does little to address the ecological damage of industrialized agriculture or to efficiently use on-farm inputs and minimize use of nonrenewable resources. Economic survival based solely on a price premium susceptible to supply and demand changes outside the growers' control is not a sustainable strategy. Most notably, organic methods do not guarantee the local participation and control, community spirit of cooperation, or creation of social capital and relationship-based commerce integral to the concept of sustainability.

One can easily envision a farm that is organic but not sustainable, and vice versa. To give extreme cases, a mono-cropped farm that substitutes organic for chemical inputs and trucks its produce across the continent would meet few criteria for sustainability, whereas a dairy farm that relies on rotational grazing and serves local markets but sparingly uses banned inputs cannot sell the milk as organic but would be widely considered sustainable.

Much of the evolution of organic agriculture (from movement to industry) can be explained by the Product Life Cycle (Kotler 2000). Kotler states that products enter four distinct stages over time: introduction, growth, maturity, and decline. In the introduction phase, organic production and processing was mostly performed by small firms, many with a strong commitment to ecological and social ethics. Lacking a well-defined market, they relied on a network of informal contacts, direct market channels, and health food stores for sales. As the market entered its growth phase, larger firms entered, converting large acreage to organic production and buying up small- and medium-sized processors. The maturity and decline phases, when reached, are likely to pose other challenges and lead to a search for options.

Sustainable organic farms can only survive by differentiating their products in the eyes of consumers by providing information on process attributes beyond the organic label. Linking these producers with consumers who want to support this type of agriculture has many benefits. First, matching of supply and demand for these goods has direct (e.g., consumer surplus) benefits. Second, sustainable food systems have many external benefits: environmental (local food travels shorter distances, consuming less fossil fuels and creating less pollution), social (increased local control), economic (food expenditures remain in the community longer with a greater multiplier effect), health (local foods can be consumed closer to harvest time, preserving nutrients) and aesthetic (farms provide open space and scenic landscapes). Third, from a food-security standpoint, maintaining local capacity for food production decreases vulnerability of the food supply in the event of disruption of infrastructure or fossil-fuel flow. Given the importance of these markets, how is this differentiation though information best accomplished? Below is a discussion of private and public initiatives to facilitate this process, outlining pros and cons.

Private-sector Strategies

Many farms use market channels such as Community Supported Agriculture (CSA), farmers' markets, farm stands, U-pick, etc., that allow face-to-face contact between growers and consumers and the opportunity to ask about or even inspect growing conditions. The growing popularity of such channels is evidence of their success. However, limitations exist. These channels are prevalent in certain geographical areas, less so in others. Only certain types of food (e.g., fresh produce) are commonly available. Buying strictly through these channels limits one to foods produced locally (no coffee, bananas, pineapples, etc. for consumers in the Northeast) and seasonally. Finding and using these channels requires search and transport time and costs.

Another possibility is for certifying agencies to require higher standards than those of the NOP if demanded by consumers. Under this model, NOP standards are a floor—anything labeled organic must meet this minimum requirement. Qualifying for hypothetical Agency X's standards of organic may require additional steps such as only local sales, fair labor treatment, community service, etc. Such an approach has been suggested by some certification agencies (Johnston 2002). However, such extra requirements by agencies are not allowed by the NOP and would undo the unified definition of organic that led to the NOP's creation in the first place. It is possible under NOP rules, however, for these agencies to certify other requirements that are translatable into voluntary label claims (Jones 2002), as long as those extra requirements are not required for qualification for organic certification.

Much of this information can be conveyed at the retail level. Retailers can create a niche by emphasizing or exclusively selling items that meet stated sustainability standards. Point-of-purchase materials can promote food with the desired traits. Many cooperative health food markets already limit what they will sell, based on health, environmental, and social-justice criteria. Others categorize products by adherence to certain criteria or place emphasis on educating consumers. This approach has the obvious advantage of putting the effort of gathering information on one individual or group, rather than requiring each consumer to do so. Potential problems include a lack of agreement between the cooperative's members on the exact criteria for inclusion/exclusion and the opportunity cost of lost sales (if suitable products are unavailable, more expensive, etc., and consumers shop elsewhere for lower-grade or cheaper versions).

Small producers have used growers' cooperatives and/or marketing clubs to overcome economy-of-scale disadvantages they face. Such arrangements can also provide information to consumers if they create brands which require and promote desired sustainable traits. Potential challenges include exact definitions and specifications, enforcement, verification, etc.

Other labeling schemes can provide information to consumers and niche markets to producers: naturally grown, family farm, local, fair trade. Each has its own set of advantages and disadvantages—for example, a tradeoff between the rigor of standards (and hence the meaningfulness of the label) and its cost.

The plethora of so-called eco-labels and related voluntary claims (including ones mentioned above) indicates that markets exist for products emphasizing process attributes, but also suggests two words of caution. First, there is a danger of information overload, "label fatigue," etc. Second, many terms on eco-labels have no consistent meaning or way to verify standards, lack transparent organization structure, etc. (Consumers Union 2002). This implies that consolidation of eco-labels under unified, transparent standards (such as we see under the NOP) would bring broad benefits to consumers and producers as long as broad agreement could be reached between interested parties. Such an approach is suggested by Clay (2002).

What must be done to create a sustainable agriculture or "civic agriculture" (Lyson 2000) labeling system, addressing the broad array of issues neglected by the NOP: the social and economic "legs" of the "stool"? This system could take one of many forms. Sustainable or civic could be an all-or-none designation, like organic. Growers could be given an overall score (e.g., 1–100) or grade (A, B, C, D, F) on their sustainability, or scores/grades for specific aspects (broader environmental impacts, community involvement, local control/democracy, contribution to local economy, labor treatment, etc.). The grading option is similar to the green/yellow/red light system discussed by Caswell and Padberg (1992) for health information.

With all mechanisms, a degree of consumer familiarity is required. Consumers must be motivated

to look for the label and must understand its meaning. This degree of prior knowledge and/or commitment to consumer education is particularly vital to private certification/labeling efforts, whose revenue ultimately comes from firms who believe that the agency's label will increase their sales. Given the complexity of the issue, some sort of explanation of the evaluation process should be accessible via a toll-free number, web page, etc.

Roles for Government

The appropriate role for governments in providing information has been the subject of much scholarship. "Perfect" information is a key assumption in the competitive market and its ability to lead to socially optimum outcomes; however, information provision is costly and involves public good/free rider problems. Most of the process traits associated with sustainable agriculture are credence traits (Darby and Karn 1973); goods produced with such methods are perceived to be of higher quality. Antle (1996) states that markets function well for experience and search-good traits, less so for credence attributes. If a given producer or industry lacks the reputation for higher quality and no reliable certification mechanism exists, low-quality goods chase out high (what Antle 1996 refers to as Gresham's Law [p.1244], similar to Akerlof's "lemon" problem).

The proper provision of information can solve these problems, moving us, as Caswell and Mojduska (1996) state, from an Akerlof to a Grossman world, transforming credence into experience goods, creating a market for higher-quality higher-priced goods. They posit four possible remedies, each with different roles for government: mandatory disclosure, controls on voluntary claims, provision of public information, and subsidies for information provision.

The current U.S. policy is to follow Caswell's (1998) idea of regulation as a floor (e.g., regulations on pesticide use and labor treatment, prohibitions or limits on corporate ownership of farms by certain states, etc.) with voluntary labeling schemes to label products with better process attributes. Government generally limits its role to verifying the truthfulness of voluntary claims. Government also funds research into sustainable agriculture (e.g., the SARE program) and incentives for improved environmental stewardship—e.g., Environmental Quality Incentives Program (EQUIP)—although these efforts may be outweighed by a perceived overall bias favoring industrialized agriculture in U.S. policy decisions (Dahlberg 1993; Jennings 1991; Osteen 1993).

Conclusions

The organic and sustainable agriculture movements have grown to their current statures with little direct help from government. The private sector has proven to be very innovative and nimble in responding to consumer preferences and creating niche markets with marketing and labeling schemes. Voluntary labeling programs and transactions based on consumer-producer relationships will continue to give vital information to those with demand for credence-process traits.

However, government, in cooperation with the private sector, can do a great deal to provide dependable information to facilitate this market, by creating and verifying a sustainable agriculture label. It is important that the standards be designed and overseen by grass-roots groups, not profit-seeking firms that wish to exploit this growing niche by designing the rules so that their current practices can be called sustainable without truly following the sprit of the movement. Specifically, this label must avoid the danger of "green" or "social washing" that plagued the green products movement and currently threatens ethical trading schemes like "Fair Trade" (Renard 2003; Raynolds 2002; Tallontaire 2000; Murray and Raynolds 2000). If government does not get involved, a coalition of private grassroots interests should take the lead in creating the label, designing standards and cooperate on promotion and publicity.

When designing standards, it is important to set the bar high and not cave in to political pressure. The integrity of organic standards have already been threatened by the events surrounding Fieldale Farms in Georgia and its attempt to change the rules to allow them to use non-organic feed and still label their products organic. (The rules were changed but later reversed back to original requirements requiring 100% organic feed.)This case demonstrates an important point: it is vital to enforce strict standards and let market forces adjust prices to supply and demand of products, rather than bend the rules for temporary shortages.

Government, producers, consumers, and aca-

demia all have vital roles in determining what kind of agricultural system we desire and how to best accomplish this. A broad consensus is needed to articulate the policy goals. One could argue that the current system is the result of such a choice—the market has reflected consumers' preferences articulated by their purchases, and policies to shape the system have resulted from the people's will through our democratic processes. But one may also counter that the combination of a number of factors—market failures (asymmetric information, market power, and externalities) and free-rider problems associated with ecological and social impacts, the cognitive limits of processing all of the information about how an item was made and how these process attributes impact the world at large, and the failings of democracy—cast doubt on such an assumption. For example, it is not clear to what degree consumers will trade off lower price, convenience, year-round availability, and other attributes of the current system with drawbacks such as erosion, biodiversity loss, groundwater depletion, pollution, etc. Carefully framed questions, guided by rigorous scientific research on the real magnitudes of such tradeoffs, are needed to determine the future direction of our food system. Such research will permit the question to be transformed, in Knight's terms (discussed in Antle 1996), from one of uncertainty (unknown probability of outcomes due to lack of reliable tests) to one of risk (known probabilities of outcomes). As Antle (1996) says about links between diet and health, more science is needed on the links between agricultural systems and broad social, ecological, economic, and health impacts.

More research is also needed to determine whether and how sustainable farmers benefit from the NOP and other voluntary labeling schemes. Has the NOP resulted in a "commodification" of organic foods and a race to the bottom, where the market is dominated by firms that adhere to the lowest permissible standards rather than the founding spirit, or even, as some have attempted, lobby to lower the standards so that they can gain the organic premium without changing their practices? How can a standardized "sustainable" or "civic" agriculture label and program avoid the same problem? How much do or would sustainable farms benefit from using or developing other labeling schemes?

Given the importance of sustainable farms and local food systems to the overall well-being of rural communities, research is needed to ensure that private and public initiatives contribute to rather than detract from their ability to differentiate their products from rival commodities if they are to survive, and to create an environment where consumer/citizen's preferences for the food and agricultural system, and community in general, are supported, not opposed by, their purchasing decisions.

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