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15. Ecolabels: The Link Between Environmental Preferences and Green Practices?

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Ecolabels: The Link Between Environmental Preferences and Green Practices?

Audrae Erickson and Carol S. Kramer-LeBlanc¹

Introduction

Many consumers exhibit preferences for environmental amenities, either directly through polls or surveys, or indirectly, by participating in outdoor activities, environmental organizations or causes, or undertaking conservation, recycling, or other stewardship activities. Generally missing, until recently, has been the opportunity for consumers to cast meaningful votes in the market for goods and services, to differentiate among products on the basis of environmentally sound production and management techniques. Because consumers cannot know how goods were produced, information problems may result in inefficiencies and lead to social welfare losses.

On the supply side of the market, in the absence of a labeling program, producers' inability to capture the rewards of environmentally superior performance mitigates against its supply. At the same time, negative external effects associated with normal production may pass unnoticed due to information problems; an example is nonpoint source pollution. Finally, should producers attempt to self-certify or promote their own-products as environmentally responsible, they also face risks that regulatory authorities or rival competitors will challenge environmental claims in court or in the press. When market information problems result in significant inefficiencies and economic losses, theory suggests that welfare might be enhanced through "green" or ecolabeling programs provided that labels are factual and the benefits of labeling exceed its costs.

Thus far, the U.S. market for agricultural and food products has been relatively unaffected by "green" or ecolabeling, with the exception of organics, a type of ecolabel, discussed below. There are signs that this condition may change in the future, however. Producer groups and state agencies have begun to articulate an argument for designating environmentally friendly production practices and designing label and informational programs that would inform consumers about the link to environmental practices. U.S. firms realize that ecolabeling programs in other countries could affect U.S. exports significantly, including food and agricultural products. In response, U.S. agribusiness firms are developing information about the merits and weaknesses of some of the existing programs around the world and are beginning to lobby for federal support.

This paper discusses some of the economic issues associated with ecolabeling programs, examines consumer and producer interests in ecolabeling, identifies some categories of label-related costs and benefits, and describes selected ecolabeling programs from the international experience. The Economic Research Service has recently initiated a cooperative research effort to examine economic issues involved in using ecolabeling as the link between consumers' market choices and producers' adoption of certifiably sustainable practices in the agricultural and food sectors in the United States.

Consumer Interests in Ecolabeling

Consumer awareness of the environment and preferences for more environmentally benign products appears to be growing steadily around the developed world and in selected developing countries. Various U.S. polls indicate that the percentage of consumers with a strong degree of environmental awareness ranges from 37-96 percent (EPA 1994). The growth of certification programs around the world also suggests a rise in consumer preferences for environmental responsibility (Tables 15-1-15.3). Finally, market introductions of goods labeled to connote environmental superiority have increased in the 1990s. Claims include, among others, biodegradable or recycled materials; wood products from sustainably managed forests; energy efficient computers, vehicles, or appliances; reduced emissions; no-animal testing/cruelty-free beauty aids; and ozone-friendly aerosols. Two dominant environmental themes applied to agriculture relate to chemicals used in food production or processing, and to animal welfare. The growth of the organics market for food and fiber products produced without synthetic chemicals, most importantly, as well as intermediate products produced with “reduced” pesticides or Integrated Pest Management practices illustrates the former theme while “dolphin-safe” tuna, “free-range” poultry, or vegetarian foods, in general, illustrate the latter.

Although consumer preferences for environmentally superior products may have expanded, consumers’ ability to discern whether or not a product has been produced in an environmentally sound manner remains tenuous. In conventional markets, to inform themselves consumers rely on the organoleptically evident features of a product, on labels which contain nutrition or ingredient information, on advertising, or on referrals from other consumers or consumer education about the product or company’s practices. Rarely do they receive information about the product’s eco-characteristics. Producers, on the other hand, are often extremely knowledgeable about many aspects of their products including the production technology, input quality, product performance capabilities, and, sometimes, eco-characteristics. Knowledge is asymmetrically held and, in the end, imperfect. Even for producers, achieving a scientific understanding of the relationship among agricultural practices and healthy ecosystems (what is the indicator?) is not a trivial or a typical event.

Adherents believe that providing additional information to consumers by labeling goods as environmentally sound or possessing environmentally superior characteristics can help minimize the asymmetry of information. Environmental labels may enable consumers to articulate their preferences for an embodied environmental characteristic of the good. Ecolabeling advocates presume consumers will pay price premia for goods with environmentally superior characteristics, thereby stimulating a supply response.

Various economists have conceptualized consumer utility and choice as based fundamentally on the attributes of a product. Lancaster’s (1966) characteristics approach to consumer utility and Hammitt’s (1986) hedonic method to estimate consumer willingness-to-pay premiums assume consumers derive utility from a good’s characteristics; for example, appearance, taste, and function. Goods usually possess multiple characteristics with many goods sharing the same characteristic. The hedonic method characterizes the price of the good as the sum of the good’s attribute values. Such models of consumer utility can be easily modified to include the consumer’s preference for goods with environmentally superior characteristics, with and without labeling. Only those consumers with environmental preferences will experience utility increases with the purchase of products perceived to be less harmful to the environment. Concerned consumers will base purchase decisions on the price premia associated with environmentally sensitive goods; they will purchase environmentally sensitive goods up to the point where the marginal benefits of environmental consumerism equal marginal costs, represented by the price premia.

In the presence of market information asymmetry, consumers must rely on product information to inform them of a product’s attributes. The challenge in designing ecolabeling programs is generating information that is, simultaneously, preferred by consumers, credible with respect to environmental claims made and the certification process used, nondiscriminatory in global markets (or at least GATT-legal), and cost-effective for producers.

TABLE 15.1 Overview of Environmental Labeling Programs (as of Mid 1996)

Program Name	Country	Date Founded	# of Product Categories	# of Products Awarded	Participation	Sponsorship
Seal of Approval						
(1) Blue Angel	Germany	1978	81	4,353	Voluntary	Public
(2) Environmental Choice Program	Canada	1988	47	1,500	Voluntary	Public
(3) Ecomark	Japan	1989	65	2,322	Voluntary	Public
(4) Nordic Swan	Norway, Sweden, Finland, Iceland	1989	40	287	Voluntary	Public
(5) Green Seal	U.S.	1989	20	245	Voluntary	Private
(6) Good Environmental Choice	Sweden	1990	26	695	Voluntary	Private
(7) Ecomark	India	1991	16	0	Voluntary	Public
(8) Ecomark	Korea	1992	12	0	Voluntary	Public
(9) Green Label Singapore	Singapore	1992	7	0	Voluntary	Public
(10) Environmental Labeling Programme	European Commission	1992	10	7	Voluntary	Public
(11) Stichting Milieukeur	Netherlands	1992	20	40	Voluntary	Public
(12) NF-Environnement	France	1992	2	0	Voluntary	Public
(13) Green Mark Program	Taiwan	1992	33	342	Voluntary	Public
(14) Flipper Seal of Approval	International	1992	1	8	Voluntary	Private
(15) SCS Forest Conservation Program	U.S.	1993	2	29	Voluntary	Private
(16) Czech National Program	Czech Republic	1993	12	150	Voluntary	Public
(17) Certified Eco Profile	U.S.	1991	Open	17	Voluntary	Private

Source: Nathan Denman. U.S. Department of Agriculture, Economic Research Service, June 1996.

TABLE 15.2 Certification Characteristics of Environmental Labeling Programs (as of Mid 1996)

Program Name	Certification Fee	Certifier	Foreign Products Certified	Recognizes Foreign Certifier	Threshold Quantity
Seal of Approval					
(1) Blue Angel	300 DM for application; annual fee of 350-3980 DM based on turnover of the labeled product.	National	Yes	No	N/A
(2) Environmental Choice Program	\$2000 CDN application fee; 0.5% on the first \$1,000,000 CDN sales; 0.1% on the remainder.	International	Yes	No	20%
(3) Ecomark	License and annual fees from 40,000 to 100,000 yen. Both fees depend on price of product.	National	Yes	No	N/A
(4) Nordic Swan	Application fee of \$2000 U.S. and annual fee of 0.4% of estimated annual turnover of product.	Multi-national	Yes	No	N/A
(5) Green Seal	Evaluation costs vary on product being certified.	International	Yes	Yes	15-20%
(6) Good Environmental Choice	One time \$5000 SEK for the first product and \$1500 for each additional product.	National	Yes	No	10-15%
(7) Ecomark	Small licensing fee. Average testing fee of \$1700 U.S.	National	Yes	No	N/A
(8) Ecomark	Manufacturer pays a fee ranging from 300,000 won to 1,000,000 won depending on sales.	National	Yes	No	N/A

(continues)

TABLE 15.2 (continued)

Program Name	Certification Fee	Certifier	Foreign Products Certified	Recognizes Foreign Certifier	Threshold Quantity
(9) Green Label Singapore	Manufacturer pays \$20.00 a year. May be exempt for first 3-5 years.	National	Yes	No	N/A
(10) Environmental Labeling Programme	500 ECUs and 0.15% of annual volume of sales.	Multi-national	Yes	No	20%
(11) Stichting Milieukeur	Annual fee.	National	Yes	No	Limited
(12) NF-Environnement	Registration fee of 12,500 Francs. Annual royalty payment of 0.1% of the product sales.	National	Yes	No	N/A
(13) Green Mark Program	Application fee of U.S. \$725 per application per company: 0 annual fee.	National	Yes	Yes	None
(14) Flipper Seal of Approval	Annual licensing fee.	International	Yes	No	N/A
(15) SCS Forest Conservation Program	Costs based on time and materials expended in administering the evaluation.	International	Yes	Yes	80 Points
(16) Czech National Program	Application fee 7,000 Czech Crowns and a percentage of the production volume or annual sales.	National	Yes	No	N/A
(17) Certified Eco Profile	Testing fees only.	International	Yes	Yes	Report Card

Source: Nathan Denman. U.S. Department of Agriculture, Economic Research Service, June 1996.

TABLE 15.3 Other Environmental Labeling Programs (as of Mid 1996)

Program Name	Country	Date Founded	Participation	Sponsorship	Certifier	Foreign Products Certified	Recognizes Foreign Certifier
Single Attribute Certification							
Energy Star Computers Program	U.S.	1992	Voluntary	Public	Manufacturer/Importer	Yes	N/A
NutriClean	U.S.	1984	Voluntary	Private	SCS	Yes	No
Chilean Ozone Seal of Approval	Chile	1996	Voluntary	Public	Nat. Corp. for the Env.	Yes	N/A
Negative Labeling							
Pesticide Labeling	U.S.	1975	Mandatory	Public	Manufacturer/Importer	Yes	N/A
Toxic Substances Control Act (TSCA) Labeling	U.S.	1976	Mandatory	Public	Manufacturer/Importer	Yes	N/A
Proposition 65	California	1986	Mandatory	Public	Manufacturer/Importer	Yes	N/A
Household Hazardous Product Shelf Labeling	Vermont	1991	Mandatory	Public	Retailer	Yes	N/A
Ozone Depleting Substance (ODS) Label	U.S.	1993	Mandatory	Public	Manufacturer/Importer	Yes	N/A
Information Disclosure							
Energy Guide	U.S.	1975	Mandatory	Public	Manufacturer/Importer	Yes	N/A
Fuel Economy Information Program	U.S.	1975	Mandatory	Public	NVFEL	Yes	No

Source: Nathan Denman. U. S. Department of Agriculture, Economic Research Service, June 1996.

Depending on the price premium of the ecolabeled good and consumers' willingness to pay, ecolabeling could result in increased revealed demand for ecosensitive products. Ecolabeling advocates believe that increased demand for ecolabeled goods may result in a positive supply response leading ultimately to increased use of environmentally sound producer practices and a better environment. On a more negative note, an excess supply of ecolabeled goods could result in a bidding away of any price premium, or an excess demand for environmentally inferior or unlabeled goods (Mattoo and Singh 1994). In other words, the dynamic outcome of mismatched supply and demand could be perverse.

Producer Interests in Ecolabeling: Supply Considerations

Anecdotal evidence suggests that agricultural producers hold mixed views about ecolabeling. Recently, some agricultural groups informally requested the Department of Agriculture to support an environmental labeling program in cases where domestic producers are required to comply with Best Management Practices to improve the environment. These producers wish to receive market recognition for "green" practices or investments in technology. They also wish to differentiate their products from imports not meeting the same criteria. On the other hand, some producers have voiced concern that even a voluntary Integrated Pest Management certification program (piloted in Massachusetts) could evolve into a mandatory certification program as did the organics program.

Any producer confronting a market where consumers demand ecosensitive production must decide whether to adopt the technology and whether and how to certify. Management decisions depend on start-up and operating costs associated with the new technology, the assessment of market potential, and likely regulatory action in the short and longer term, including the costs of certification and labeling. In addition, some businesses risk legal costs from competitors if they are forced to verify claims in court. In agricultural markets such as the organic market, significant costs associated with transition from conventional to environmentally sound practices may discourage producers from converting. Ongoing costs of production may compare with or surpass conventional methods. Other program-related costs include labeling, packaging, certification costs, and ecolabeling fees. In the longer run, ecolabeling may elicit possible changes in producer practices and increases in the availability of green technology. The key issue for the firm is market viability, and positive effects on long-term profitability. In a recent review, EPA found that in selected cases, environmental certification strategies had been successful for the firms that adopted them (EPA 1994).

Ecolabeling Programs

Not surprisingly, the interaction of consumer and producer concerns around the world has spawned a multitude of labeling and certification program designs proliferating across sectors and nations.

International Experience

Since Germany's national Blue Angel Program began in 1978, more than two dozen additional programs have started. These include national programs in Canada, Japan, Sweden, New Zealand, Netherlands, France, Taiwan, Australia, India, Korea, and Singapore. Multinational programs are established in the European Union and several Nordic countries. The structure of ecolabeling programs differs markedly across countries and sectors with respect to the level of government involvement and the participation of private interests. Some programs are administered entirely by government—an example is FIFRA pesticide certification by the EPA in the United States—while others mix public and private administration. The U.S. Department of Agriculture is issuing final rules for National Organic

Standards. An example of a mixed program is Canada's Environmental Choice program. This program was established by Canada's Ministry of the Environment but has been turned over to a private organization, Terra Choice. Programs run entirely by private sector companies or associations include both international and domestic examples. The United States has two privately managed ecolabeling and certification programs: Green Seal and Scientific Certification Systems (formerly Green Cross). In some instances the government attempts to influence the market through its own procurement policies: President Clinton has charged the EPA to issue guidance for executive agencies when purchasing goods and services (Executive Order 12873, Federal Acquisition, Recycling, and Waste Prevention, Sections 201 and 503). The EPA certifies computers with its Energy-Star. The European Union recently issued an eco-label for copy paper for which, U.S. papermakers say, few non-European papers qualify but which could hurt foreign manufacturers if the E.U. buys only eco-labeled paper.

Some environmental labeling programs cover individual products or technologies and are run by private concerns: an example is the "Dolphin-safe" label coordinated by the Flipper Seal of Approval Program.

Perhaps the most important development relating to ecolabeling programs will be the standards established by the International Standards Organization, ISO 14000. ISO is comprised of representatives of 120 countries' national standards organizations. Voluntary standards covering environmental management systems, auditing, performance evaluation, labeling and Life Cycle Analysis are being established by ISO 14000.

Ecolabeling Program Types

Ecolabeling programs can be characterized along different dimensions (U.S. EPA 1993). Producers (and consumers) may have mixed reactions to these depending on whether they are compulsory or voluntary, private or public, single or multiple attribute, costly or inexpensive, and whether they reflect the heterogeneous needs that producers may confront due to distinct commodity conditions or natural resource characteristics of their own producing regions.

With voluntary programs, producers may choose between first- or third party certification. In the former case, producers self-certify, resulting in a type of advertising or environmental marketing. Commonly, proliferation of environmental claims leads to movement toward either voluntary or mandatory third party certification, as the public demands clarification and substantiation of confusing product claims. In the U.S. agricultural market for organics, nonuniform state and private certification programs led to a push for national organic standards, which is only now being realized. In contrast to organic labels which connote voluntary disclosure of practices believed to be positive environmentally, a different ecolabel approach is the mandatory warning labels required on pesticide packaging under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).

Another distinction among programs is whether they base criteria on a single or on multiple attributes. Seals of approval (ecoseals) tend to concentrate on a single attribute with the ecoseal logo awarded to product manufacturers that meet a specific criterion concerning reduced environmental impacts. Examples include specifying energy efficiency ratings, or "CFC-free," or "containing recycled paper." The seal becomes a recognizable symbol to consumers that the product contains an environmentally friendly (though limited) characteristic. Multi-attribute certification, termed "report card" or "eco profile" ecolabels, by contrast, attempt to categorize and quantify various impacts of the product's manufacture, use, and disposal on the environment. These may employ a "life-cycle" analysis, discussed below. Report card ecolabels resemble some aspects of now familiar nutrition labels found on food packages. The report card approach provides the consumer with more information than a single-attribute logo and attempts to better indicate the overall environmental impact of the product.

Many of the ecoseal programs are based on life-cycle analysis (LCA) which attempts to reflect the net effect of a product's impact on the environment throughout manufacture, use, and disposal. LCA

methodology has not reached a state of consensus yet, however, and remains highly controversial in the scientific community, which has not determined if and how such an analytical system could be broadly operationalized. In the meantime, seal of approval programs based on LCA may result in disputed or misleading claims and leave open the potential for antitrust lawsuits. Firms offering noncolabeled goods could easily raise a legal challenge to the hard-to-measure scientific approaches used for life-cycle analysis labels.

Policy Considerations

Ecolabeled goods convey a message to the consumer that the product was produced under environmentally sound conditions. Consumers purchase the product with the belief that using the ecolabeled product instead of the noncolabeled good will benefit the environment. Producers, on the other hand, seek to differentiate their product and capture market share in the growing consumer popularity of ecolabeled goods. Producers may make strategic environmental claims even though they are not well versed in the science behind the eco-certification process. Alternatively, they may rely on third party certifiers to furnish the scientific verification for the ecolabel.

Even single attribute claims are subject to litigation. In 1990, the Federal Trade Commission charged a major supermarket chain in southern California with misrepresentation to consumers by falsely claiming that its produce was pesticide free. As part of the legal agreement reached, the supermarket chain agreed not to misrepresent future pesticide claims or the effects of pesticides used in the food it sells unless it had competent and reliable scientific data to substantiate its claim.

Between August 1990 and March 1996, the FTC investigated and won 32 environmental claim cases. Many involved single attribute claims such as “biodegradable,” “CFC free,” and “recyclable.” However, the FTC also brought suits against broader claims including “environmentally safe,” “environmentally friendly,” and “environmentally responsible.”

In its Guide for the Use of Environmental Marketing Claims (1992), the FTC advises how to avoid violations of Section 5 of the FTC Act which prohibits unfair or deceptive advertising claims. Four basic principles are highlighted: that claims be sufficiently clear and prevent deception; that they clarify whether or not they pertain to the product; that they not overstate an environmental attribute or benefit; and that comparative claims be presented clearly so as to avoid consumer deception.

A reasonable conclusion for producers to draw concerning ecolabels is that claims should be science-based and verifiable. Specific claims made for a particular product should be clear, pertain explicitly to the ecolabeled product only, and not be misleading or deceptive to consumers. Employing green labeling as a competitive strategy, without well-founded scientific knowledge, may be easily discredited and risky for firms to undertake. Providing general information as many ecoseals do could be misleading to the consumer and potentially result in lawsuits by competitors seeking damages.

Controlling the Supply of Ecolabels

Administrators of ecolabeling programs must determine how to establish standards and the resultant effects of product criteria on the supply, demand, and market-clearing conditions for ecolabeled goods. A recent study postulates that awarding ecolabels to more products than those for which there is demand by environmentally concerned consumers could result in excess demand for noncolabeled goods and a resulting, if perverse, increase in the supply of environmentally inferior goods (Mattoo and Singh 1994).

Some established programs control the supply of ecolabels at a threshold quantity. Both Canada’s Environmental Choice Program and the European Union’s Environmental Labeling Program limit

ecolabels to 20 percent of products in a qualifying product category. Ecolabels granted by Green Seal in the United States and Good Environmental Choice in Sweden are also awarded to only 10 to 20 percent of products. Ideally, policymakers would consider consumer preferences and the likely demand and supply schedules for “green” versus conventional goods when denoting ecolabeling criteria and awarding seals to assure that ecolabels awarded per product category are in rough alignment with demand by environmentally concerned consumers.

International Trade and Ecolabeling: Current Policy Discussions

Many of the current international ecolabeling programs focus on national products and national environmental standards. As a consequence, they may discriminate, unwittingly or intentionally, against foreign imports. With the reduction of subsidies and import quotas ratified in the Uruguay Round of the GATT, there is a greater concern that countries will adopt nontariff barriers to replace these previously legitimate barriers to trade. Among the possible nontariff trade barriers likely to be implemented are packaging and labeling standards.

The potential for environmental labeling schemes to result in unnecessary and undesirable obstacles to trade has prompted consideration of ecolabels by the World Trade Organization’s Committee on Trade and Environment (CTE). Countries represented on the committee are concerned that foreign producers will face higher costs of participation, inadequate access to information, inconsistent product labeling requirements across countries, and an inability to participate in the development of product criteria. In addition, the incorporation of life-cycle analysis based on evaluations of country-specific production or processing methods could reflect unique national production factors or technologies and become barriers to entry for foreign products. Such barriers could be a source for potential protectionist abuse and trade discrimination.

The U.S. delegation to the CTE tabled a proposal in February 1996 to allow interested parties to participate in the development of labeling programs and criteria, with the purpose of increasing the transparency of ecolabeling programs and reducing the potential for trade discrimination. The proposal would provide for timely public input in the design of ecolabeling programs, the selection of products and product criteria, the development of scientific analysis used in criteria development, and the methodology by which foreign producer practices are taken into account when determining product eligibility. Increased transparency and public participation during the formative stages of programs and criteria could mitigate trade disputes involving ecolabels and increase the legitimacy of ecolabeling programs.

Some producer groups are concerned that transparency alone will not ensure that ecolabeling programs are not used for protectionist ends, however. To further protect foreign producers from trade discrimination, the Coalition for Truth in Environmental Marketing Information, an association of 2,900 U.S. manufacturers consisting of grocery, chemicals, textile, cosmetic and fragrance, forestry, aluminum, plastic, electronic, packaging, and soap and detergent producers, is seeking WTO enforceable rules on ecolabeling. Included in these proposed rules are principles that promote transparency and participation in each stage of ecolabeling criteria development, nondiscrimination between domestic and foreign producers, and ecolabeling claims that are truthful, substantiated, scientifically tested, and not misleading to consumers.

Several countries favor mutual recognition of ecolabeling programs and international harmonization of procedures to mitigate the trade impacts of ecolabeling. Although these objectives are not likely to be achieved in the near future, increased transparency remains the most achievable short-term outcome of the CTE.

Environmental Labeling in Agriculture—The Case of Organic Practices

Prior to 1989, the organic foods market was a small, slowly growing segment of the agricultural sector. The demand for organic produce stemmed largely from environmentally conscientious consumers, environmentalists, and advocates of organic farming. Agricultural research efforts during this time did not address organic farming issues and agricultural policy distinctly favored conventional farming. Natural food cooperatives were the primary suppliers of organic produce.

Awareness of agricultural chemical use in the nation's food supply changed in 1989 as a result of food safety scares associated with apples contaminated with Alar, and tainted Chilean grapes. Consumer concern about pesticide residues in food reached a climax and a dramatic increase in the demand for organic foods ensued. Following these incidents, the supply of organic foods extended beyond food cooperatives to include farmers' markets, major grocery stores, and dedicated organic food chains. However, grocery stores were unable to stock sufficient supplies of organic produce, which caused organic prices to rise, curtailing demand. Organic prices exceeded the price premium that consumers were willing to pay. Shorter shelf-life and a higher rate of cosmetic defects, coupled with a declining demand, caused grocers to allocate less and less store space to organic produce.

With respect to labeling, prior to 1990 many producers used the terms "natural" and "organic" on their produce and processed foods quite liberally. Inconsistency, misconceptions on the part of consumers, and even fraudulent claims by suppliers to earn the price premium associated with organic produce, brought standardization and certification issues to the forefront. Some states established laws regulating the use of the term "organic," employing the term "certified organic" to regain consumer confidence in the label and to signify a standardized certification process. However, inconsistency between states persisted. In addition, producers in states without organic labeling laws often self-certified. The need for consistency in organic labeling led to provisions on organic labeling in the 1990 federal farm bill. Stringent rules regulating the use of the organic label with significant fines for violations were to come into effect October 1, 1993 as a result of the legislation. Final implementation of the legislation has taken considerably longer, but appears imminent at this writing.

Lessons for Agriculture

The history of green labels is relatively short, and their application to agriculture and food markets has been relatively limited. Nevertheless, the dynamic nature of program growth and experience worldwide as well as the organic case suggest some possible hypotheses as well as challenges for agricultural ecolabeling.

The potential market for "green" food products is currently largely unknown. Probably more is known about the market for organic foods than any other type, but even here information is extremely limited. Whether market promise exists for an ecolabel associated with local production—for example, "Everglades-friendly tomatoes"—is unknown.

Furthermore, applying environmental labeling to agricultural and food products is not simple. Many practices and technologies affect environmental quality, but these vary over the landscape. Chemical use is frequently highlighted, but the risks associated with chemicals are to some degree product, site, and practice specific. Similarly, nutrient use and recycling have adverse impacts in some locations but not in others. What becomes necessary is to develop sets of appropriate best management practices which can be tailored to natural resource conditions and environmental needs.

On the positive side, the Department of Agriculture is working to promulgate standards for organics. Similarly, it is working to promote acceptance of IPM on 75 percent of crop acreage by 2000, although neither uniform specification of IPM nor a labeling and certification program is envisioned. Finally, in environmentally sensitive ecosystems, the Clinton Administration has proposed numerous policy boards

to coordinate policies so that ecosystems can be better managed in a holistic manner to maintain or restore system health. Some decision makers have at least broached the possibility that a program identifying Best Management Practices could be coupled with a certification and labeling program to permit producers to compete on the basis of environmental stewardship. Likely, the challenges of developing a recognized labeling scheme based on application of heterogeneous practice standards will be formidable.

Policy development in the United States thus far suggests that developing such a label or such guidelines will depend on achieving agreement and success on the relevant environmental practices, the validity of the claims, and the manner in which consumers can use such information to make meaningful decisions. The Federal Trade Commission, with the support of the Environmental Protection Agency, has tended to favor using product claims that can be substantiated rather than simple seals of approval.

From an international trade perspective, the use of substantial and verifiable claims in ecolabeling programs is certain to surface in deliberations of the Committee on Trade and Environment in the WTO as well. However, foreign and domestic producer participation in each stage of an ecolabeling program is the most likely short-term outcome for multilateral agreement.

Note

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