Emerging Ecolabels for Food Products

David Granatstein
Center for Sustaining Agriculture and Natural Resources
Washington State University, Wenatchee, WA

The environmental impacts of modern agriculture are well-documented (NRC, 1989), including soil erosion, water pollution and pesticide resistance. Society is sending a strong message about environmental protection and pesticide reduction. In response, growers, researchers and industry continually develop, test, and implement new techniques and tools to reduce these impacts without sacrificing productivity or profitability. However, there are many examples of new farming practices that address the impacts but do cost more. The use of pheromone mating disruption for control of codling moth in apples is a good example. The technology is well tested, very effective, and widely available. Yet it costs about $150 per acre more than the standard organophosphate control (Williamson et al., 1996). So society's environmental values are in conflict with the market realities of food production, creating disincentives to change.

In response to this dilemma and the inability of many regulatory approaches to effectively address non-point source problems from agricultural production, a number of initiatives have been launched around the world to link growers and consumers, providing information about specific production techniques and their environmental consequences. The goal is to provide consumers a channel to "vote with their dollars" for their environmental values in terms of food production. Such schemes are generally known as "ecolabeling" for their attempt to convey environmental attributes about the food product.

Many ecolabel initiatives are in the formative stage, without enough market experience or critical evaluation to know whether the desired outcome of encouraging change on the farm has occurred. The one obvious exception is organic farming. Various certification programs for organically labeled foods have been in place for years. With the passage of the U.S. National Organic Foods Act in 1990, a uniform set of standards for the nation will soon be in place. Organic food sales have been growing at least 20% per year for the past 5 years. This in turn has spurred a commensurate increase in acreage managed with organic production techniques.

Certain consumers have developed their own valuation for what organic production implies, and they are willing to pay price premiums ranging from 10-200% over conventional products. While organic food sales and acreage are expected to grow further, surveys of the general population indicate that a price barrier limits broader participation much beyond 10% of the total population. And organic production is not a good fit for certain crops in certain regions, or for many growers. Thus, to have significant environmental impact, other strategies are needed to involve more acres. Ecolabeling is an attempt to meet this perceived need.

Examples of Ecolabeling Initiatives

European nations have led the development of ecolabels for many years. In addition to a strong organic identity through IFOAM (International Federation of Organic Farming Movements), the concept of Integrated Production (IP) was launched in the early 1970s by the International Organization for Biological and Integrated Control of Noxious Animals and Plants (IOBC). This group, primarily scientists, developed a set of guidelines for Integrated Production that were

generic enough to cover all crops and livestock (IOBC, 1993). The primary focus has been on pome fruits and grapes, and this has resulted in more crop specific guidelines for Integrated Fruit Production (IFP) (IOBC, 1994). Actual implementation on the ground is carried out by local and regional groups, generally a combination of commodity, non-governmental, and governmental representatives. Participating growers must comply with the rigorous standards, including avoidance of certain practices and agricultural chemicals. Inspections are carried out, and only those who pass are allowed to display the IFP or IP identity on their product. By 1994, nearly 40% of the pome fruit acreage in western Europe was certified by an IFP program.

However, the market experience in Europe for IFP products has been mixed. Major supermarket chains have carried IFP fruit, but have not been able to provide much of a premium, if any, to the grower. In some cases, IFP certification has become a new requirement for market access with little benefit to the grower. Consumers have accepted IFP, and at least 10% of the German population is familiar with the term. Production practices have shifted towards less environmental impact. In one Italian growing district, a packing house agreed to a premium for IFP fruit, as the use of pheromones was necessary and more expensive (Waldner, 1995). The packer needed IFP fruit to retain access to key markets, even if it could not recoup the premium they paid the growers.

In the Netherlands, a public/private consortium launched the Agromilieukeur label for food products in 1995. Dutch policymakers are encouraging various "green" marketing programs to achieve environmental stewardship in a variety of ways that can be inclusive. Also, the country exports food to markets in Germany, England, and Scandanavia where consumers are increasingly demanding food produced with some indication of environmental stewardship. The Agromilieukeur program uses environmental yardsticks (pests, nutrient, waste, energy) to evaluate farms and determine whether they meet program standards. After two seasons, about 4% of potato production and 3% of pome fruit production were included under the program (Matteson et al., 1996). The program expects to cover 60% of sugarbeets, 25% of potatoes, and 10% of pork, dairy and vegetable products in the next few years. Consumers in this case are typically paying a small premium (up to 10%) for these products.

Stemilt Growers, Inc., a large fruit packer in Wenatchee, WA, instituted an in-house IFP program several years ago called "Responsible Choice®". They blended concepts from the European system with developments in environmental assessment, most notably the Environmental Impact Quotient (Kovach et al., 1992). The program encompasses aspects of both field production and packing. It focuses on the four core areas of Integrated Pest Management (IPM), worker safety, environmental safety, and consumer safety, within the boundaries of market economics.

Each pest management action is assigned points based on eight factors: efficacy, dermal LD_{50}, leaching potential, soil sorption, post harvest interval, soil half life, beneficial insects, biological disruption (Reed, undated). The company collects field records from each grower and enters the information into a central database. Point totals by crop and year are calculated, allowing a picture of overall change for the whole company as well as for individual growers. For example, average point totals for apples have declined by about 30% over 5 years, while pears and cherries show no trend. According to Derek Carlson, a fieldman with Stemilt, the Responsible Choice logo on a box of apples brings a premium of $1 to $3 over the unlabeled fruit (Hansen, 1997).

The Food Alliance (TFA) program, based in Portland, OR, began its work by forming a group of food system stakeholders to develop a stewardship program for farms that would be linked to an environmental marketing effort. Products are planned for entry into the market in early 1998,

beginning with fresh fruit. The program concept applies to individual farms, as well as to entire programs, and is aimed at creating a common, unified message to consumers about food ecolabels, what they mean, and why they should be supported. Endorsement from TFA requires demonstrated achievement in pest management, soil and water conservation, and human resource development. In addition, applicants must submit a plan for continuing improvement towards environmental stewardship.

Examples of other programs are listed in Table 1. A good review of food ecolabels was written by Lisa Lefferts (Lefferts and Heinicke, 1996). The literature on food ecolabeling is rapidly expanding at the current time. In addition to developing and implementing programs, ecolabel efforts face various nternational trade issues (Dawkins, 1996).

Table 1. Examples of food ecolabel programs.

Program	**Location**	**Details**
Agromilieukeur	Netherlands	Underway in supermarkets with a variety of products
Eco-O.K.	Central, South America	Underway on bananas, coffee
Oregon Country Beef	Oregon	Underway in targeted markets.
Partners with Nature	Massachusetts	Underway for direct marketing; IPM label
Wegman's IPM	New York	Underway in Wegman's supermarkets; company initiated
CORE Values Northeast	New England, NY	Underway in limited markets with apples
IFP	New Zealand	In start-up phase, nationally coordinated
IFP	South Africa	Underway on fruits
IFP	Hood River, OR	In start-up phase on apples and pears
Salmon Safe	Oregon	Underway on farms in salmon watersheds
Responsible Choice	Washington	Underway on apples, pears, cherries
The Food Alliance	Northwestern U.S.	Start-up phase on fruits, vegetables, meat

Challenges Ahead

Ecolabel programs face a number of common challenges. First is consumer education. What messages will resonate with a large enough number of consumers to create meaningful market demand? Will these messages represent enough "value" to consumers so they will purchase ecolabeled foods at premium prices? The opportunity to communicate with consumers during the shopping experience is extremely limited, and the issues that an ecolabel may represent tend to be very complex.

Organic certification relies on a fairly comprehensive audit and inspection system to provide third-party credibility. The current price premiums are able to cover the costs of certification procedures in most cases. But with the limited premiums, if any, expected for ecolabeled foods, a credible but low cost quality assurance mechanism is needed. Ecolabel program guidelines tend to be more flexible, and thus vague, than organic standards. There are efforts to produce better quantitative assessment tools, such as the yardsticks and the EIQ, but no consensus exists on their relative merit.

With the increasing number of distinct ecolabel programs, consumers may become confused by all the separate messages. In the timber sector, the Forest Stewardship Council has led the effort to harmonize standards, programs, and messages across countries and regions to deal with this

problem. Harmonization of food ecolabels may be needed to deal with international trade issues. This will become particularly problematic when comparing products from different production regions. For example, an apple produced in New York State will have intrinsically higher impact points than one grown in Washington State, due to climatic differences. If programs are based largely on this criterion, versus on how much "improvement" a farm has made, then there will be some major barriers to market acceptance.

While Wegman's Supermarkets has launched its own IPM label, many grocers are concerned about another product category, and the implications of having an ecolabeled product next to one without that claim. Obviously, this situation now exists with organic, and there is little evidence that conventional food sales have suffered. Since the greatest growth in grocery sales is in the natural foods category, ecolabels may offer retailers new options to capitalize on this trend.

The biggest challenge is to actually deliver a positive incentive - financial or otherwise - back to the farm. Most ecolabel programs seek improved environmental stewardship as a primary goal. This means there must be some functional feedback loop from consumer to farmer to drive change on the ground. In addition to price premiums, other possible incentives include regulatory relief, reduced state insurance or tax rates, preferred access to markets at peak price periods, and access to non-market financial incentives such as cost-share or loan programs. With the heightened interest in non-regulatory solutions to public policy problems, the fate of food ecolabels stands to influence our collective approach to addressing the public good.

References

Dawkins, K. 1996. Ecolabeling: consumers' right-to-know or restrictive business practice? GETS Paper #95-3, Institute for Agriculture and Trade Policy, Minneapolis, MN. 80 pp.

Hansen, M. 1997. Growers share goal of reducing pesticide use. The Good Fruit Grower, March 15, 1997. p. 6-7.

IOBC. 1993. Integrated production: principles and technical guidelines. IOBC/WPRS Bulletin 16(1):1-40.

IOBC. 1994. Guidelines for Integrated production of pome fruits in Europe. IOBC/WPRS Bulletin 17(9):1-8.

Kovach, J., C. Petzoldt, J. Degni, and J. Tette. 1992. A method to measure the environmental impact of pesticides. New York Food and Life Sciences Bull. No. 139. NYS Agr. Expt. Sta., Geneva, NY.

Lefferts, L. and M. Heinicke. 1996. Green food labels: emerging opportunities for environmental awareness and market development. Mothers and Others for a Liveable Planet, New York, NY.

Matteson, P., L. den Boer, and J. Proost. 1996. Green labels in the Netherlands: careful negotiations and clearer choices. Global Pesticide Campaigner 6(4):3-5.

NRC (National Research Council). 1989. Alternative Agriculture. National Academy Press, Washington, D.C. 448 pp.

Reed, A.N. undated. Responsible Choice: a systems approach to growing, packing, and marketing fruit. Unpublished paper, Stemilt Growers, Wenatchee, WA.

Waldner, W. 1995. The success of integrated fruit production (IFP) in the South Tyrol, Italy. Compact Fruit Tree 28:115-122.

Williamson, E.R., R.J. Folwell, A. Knight, and J.F. Howell. 1996. Economics of employing pheromones for mating disruption of the codling moth, *Carpocapsa pomonella*. Crop Protection 15:473-477.