rganic *in transition*

A discussion paper

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Executive Summary

This discussion paper is inspired by the need to find ways to support farmers during the transition to organic agriculture. Three general (and sometimes interrelated) ways of achieving this are in currently in practice.

a) Governments provide financial support for the conversion period. This is particularly the case in Europe, but a few programs exist in the USA and are under discussion in Canada. See Appendix 1 for more information on conversion support programs in Europe and the USA.
b) Companies that buy organic product provide supports to farmers in transition in order to build their supplier base. See section 3 for a fuller discussion.
c) Organic certification bodies (CBs) or collaborations of non-governmental and governmental agencies create "transitional" programs.

Historically, transitional programs and "in-transition" labels have been created to:
a) allow a step-wise approach to conversion that reduces the risks associated with the cold turkey effect of rapid transition;
b) build commitment to organic agriculture;
c) provide a fall back for livestock producers when there is a shortage of livestock feed;
d) create new market opportunities to improve the finances of transitional farmers;
e) create formal links to certifying agencies and to certified farmers during the transitional period which fosters better mentoring and information exchange;
f) provide, for transitional programs not linked directly with organic certification bodies, consumers some options if they feel organic is too expensive for them.

There are five main program options for achieving these objectives. They fall into two general categories: a) those that help farmers moving toward organic farming, but not necessarily convinced that organic farming is the end point of their transition (Integrated Pest Management [IPM] and no spray programs for crops, and "hormone and antibiotic-free" animal production programs): b) those that help farmers who are committed to organic farming, but have not yet attained that status (in transition to organic). The first three options are not, strictly speaking, organic in transition programs since organic is not an explicit objective of the program. However, they can serve many of the same purposes, so deserve some consideration.

Option 1: Integrated Pest Management (IPM) programs

Summary of the concept: Create an IPM program that has stature independent of organic certification, but is seen to be a transitional program because farmers progressively adopt many practices found in organic agriculture and are reducing their pesticide use. Provide incentives for farmers to continuously improve their IPM systems and encourage them to plan to move to organic.

Option 2: No spray programs

Summary of the concept: Farmers have achieved such a high level of IPM that they no longer spray synthetic chemicals. Their farming practice is distinguished from organic farming mostly by their use of synthetic fertilizers.

Option 3: "Hormone and antibiotic-free" livestock production

Summary of the concept: This program option parallels for animal producers the concept of a no-spray crop program. They are usually run by individual farm businesses, who both produce themselves and also market products for other farmers. A major difference between these and organic livestock producers is the reliance on conventional feed.

Option 4: Transitional organic program operated separately from an organic program

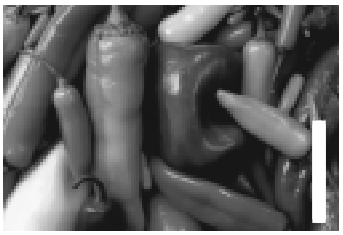
Summary of the concept: Private firms help farmers make the conversion to organic agriculture as part of their efforts to secure long-term supplies of organic product.

Option 5: A transitional organic label program that is fully integrated within an organic program

Summary of the concept: Certification Bodies (Cbs) help farmers through the transition period. The transition period is between 1-3 years depending on the CB and farm circumstances. Conversion programs emphasize the adoption of organic production practices. Often this involves a planned conversion program and timetable while meeting the certification standards of a specific CB. Advisors may or may not be used. One or more pre-certification inspections are usually required. Because the financial pressures during the adjustment period may be extreme, some CBs also have organic "in transition" labeling schemes to help improve market access and perhaps prices for the products of farms in transition.

Table 2 provides a summary of how the five program options perform against the 5 key reasons for having a transitional label program identified above. Transitional organic programs operated by certification bodies are the only ones to meet all the objectives. However, they are also likely the most challenging to implement because of the CBs' need to differentiate full organic status from transitional status. Other programs do not necessarily exercise the same degree of rigour in protocol design, inspection and verification.

Farmers or farmers' collectives considering developing an organic "in-transition" label must consider the cost and worth of such an investment because transitional status for any producer should only be temporary as they make the transition to full organic status. In-transition certification guidelines should not be (a) expensive to implement because they are temporary, and (b) they should be similar in scope and rigour to accepted guidelines for the conversion to organic.



Introduction

This discussion paper is inspired by the need to find ways to support farmers during the transition to organic agriculture. Three general (and sometimes interrelated) ways of achieving this are in currently in practice.

a) Governments provide financial support for the conversion period. This is particularly the case in Europe, but a few programs exist in the USA and are under discussion in Canada. See Appendix 1 for more information on conversion support programs in Europe and the USA.

b) Companies that buy organic product provide supports to farmers in transition in order to build their supplier base. See section 3 for a fuller discussion.

c) Certification agencies or collaborations of non-governmental and governmental agencies create "transitional" programs. For the purposes of this report, it is important to distinguish between "organic conversion" — the assistance certification agencies provide to farmers in transition — and "in transition" labeling programs, which are designed to make "transitional" products visible in the market place. Almost all organic certification agencies offer the first category of program, but fewer provide the second. Both may be useful for the Costa Rica project. There are also programs for farmers potentially on the way to organic agriculture that are not operated by organic farming agencies. All these different kinds of programs are the main focus of this report.

A. Defining organic agriculture

Organic farming reflects an awareness of both ecological and social realities. It involves design and management procedures that work with natural processes to conserve all resources and minimize waste and environmental damage, while maintaining or improving farm profitability. Working with natural soil processes is of particular importance. Organic farming systems are designed to take maximum advantage of existing soil nutrient and water cycles, energy flows, beneficial soil organisms, and natural pest controls. By capitalizing on existing cycles and flows, environmental damage can be avoided or minimized. Such systems also aim to produce food that is nutritious, and uncontaminated with products that might harm human health. In practice such systems avoid the use of synthetically compounded fertilizers, pesticides, growth regulators, and livestock feed additives. These substances are usually rejected on the basis of their dependence on non-renewable resources, potential for environmental disruption, and possible adverse impacts on soil organisms, wildlife, livestock and human health. Organic farming systems rely more on crop rotations, crop residues, animal manures, legumes, green manures, off-farm organic wastes, appropriate mechanical cultivation or minimal tillage to optimize soil biological and natural pest control activity, and thereby maintain soil fertility and crop productivity. In addition, resistant varieties, and biological, biorational, and

cultural controls are used to manage pests, weeds and diseases. Preventative health care strategies, such as dietary changes, increased exercise, and housing changes are employed to maintain animal health[1].

B. Organic certification

Organic Certification Bodies (CB) have been in existence since the early 1970s. Successful CBs establish standards, and certification, verification and control procedures. Standards are based on the principles of agroecology, although a number of factors, such as the state of the regional farm economy, and different schools of thought in organic production, can lead to regional differences. Most standards, however, are based on guidelines prepared by two international agencies, the Organic Trade Association (OTA) based in the USA and the International Federation of Organic Agriculture Movements (IFOAM), headquartered in Germany. This ensures a basic consistency in the standards from one location to another.

IFOAM and OTA are responsible for establishing minimum standards for the production, processing, storage and transport of organic food, body care and textile products. IFOAM also provides accreditation services to certification bodies, particularly as an aid to international trade[2].

Other important organizations include the Codex Alimentarius Commission, a body in charge of the FAO/WHO Food Standards Program, which recently drafted guidelines on Labelling and Import/Export Inspection and Certification of organic foods. As international trade in organic food expands, we can expect current regulations to be standardized and harmonized to permit easier and more straightforward trade.

Certification Bodies (CBs) are of three main types: (a) farmer run organizations like the Organic Crop Improvement Association (OCIA) that operate on a not-for-profit basis; (b) private farm-based organizations like Farm Verified Organic (FVO) which produce food and have expanded into commodity trading and processing; and (c) private, for profit certifiers such as Quality Assurance International. The principal concern is that each system have independent, third party certification, including independent inspection, a certification committee that is not compromised by commercial interests, and controls over the use of its mark.

Most certifiers have developed protocols to certify both large groups or small holders such as coffee growers in Mexico. It is essential for certified organic export commodities that a CB is accredited to export into foreign markets. For example, Europe has traditionally been the most progressive region in developing organic agriculture and it remains the largest market for organic food. There are numerous CBs in Europe, but in the past ten years the European Union has developed its own standards to regulate the import and export of organic food. Certification Bodies wishing to export organic food to Europe must be accredited to do so. Some countries such as Argentina and Canada have developed national organic standards specifically to meet EU accreditation criteria. For many CBs, however, especially those serving local and regional markets, accreditation is not necessary.

C. Benefits of certification

Certification has several advantages. Certification guidelines protect organic farmers against rampant misuse of the term by other farmers and protect consumer against fraudulently labeled organic foods. Growers can expect improved market access for their products as the demand for certified organic food continues to increase. In many cases, growers can expect premium prices for their products. Less tangible benefits are

membership in an organized network of growers who can share crop improvement information. The value of fellowship and solidarity should also not be underestimated.

D. Costs of certification

As the value of organic food increases and the distance between producer and consumer increases, especially in the context of international trade, inspection and certification play an increasingly important role. The use of independent third party inspectors has been an important step in maintaining the integrity of the certification system. The job of the inspector, however, is becoming increasingly demanding because they must demonstrate not only knowledge of agriculture but other skills such as expertise in processing and audit control (professionalism). Consequently, inspector training is becoming more costly and these costs are being absorbed largely by the growers. Moderate inspection fees in Canada are approximately $100 per farm plus costs. Fees of $300-$500 US per day (plus costs) depending on the certifier are not uncommon in the international inspection trade. Groups rates are usually available for farmer cooperatives, but the daily fees may still be steep. Those CBs that have gone to the trouble and expense of international accreditation may be expected to charge more for inspection services.

E. Determining the need for certification

Three questions need to be asked by a farmer, commodity group or processor to decide whether certification is important:

1. Is the expected market for the product local or outside the region? Local markets for organic produce often function well by cultivating direct relationships between the farmer and consumer. Trust and "a handshake" will often serve as ad hoc certification. Products for export, especially transactions made through middlemen, will often be more saleable and more valuable if certified by an accredited agency. Farmers may still prefer a certification process for local products for the sake of recognition and personal satisfaction. Likewise, even buyers in local markets (i.e restaurants and health food stores) often prefer purchasing certified organic products. Any food that is certified organic helps maintain and expand the credibility of organic agriculture. Some CBs, such as Maritime Certified Organic (based in eastern Canada) provide inexpensive certification services because they have a policy of supplying local markets only.

2. What is the scale of the enterprise? A 1 ha market garden will have more difficulty absorbing certification fees than a 20 ha farm. Similar, a microprocessor may find the fees more onerous that a large processing firm.

3. What is the value of the crop? The cost of certifying high value crops, even on small acreages, will often provide a monetary advantage in the marketplace.

The concept "organic in transition"

The transition to organic farming generally proceeds along two lines (although combinations are also common). Some producers proceed by following what's known as an efficiency / substitution / redesign progression on a field or whole farm basis[3]. For example, a grower may first band chemical fertilizers instead of broadcast, or reduce fertilization levels on all parts of the farm (efficiency). In the next phase, if the results are promising, manure or compost will be applied (substitution). In phase three, legumes are undersown and a planned rotation is put in place (redesign). Alternatively, the grower may go right to the redesign stage, but start with only one field and progressively adopt the new design for the whole farm. With this approach, it is generally advisable to start on a small part of the farm, perhaps 10% of the cultivated area, although some recommend up to one-third[4]. Farm structure and soil fertility often determine the speed and extent of transition. For example, pastures that have received little or no synthetic fertilizers and pesticides can convert quickly to the redesign stage, especially when they are part of a beef operation. Whole-farm transition (cold turkey) to redesign is not usually advised because the adjustments are usually traumatic and may, in fact, lengthen the transition period because of unanticipated side effects[5].

For many farmers the transition to the redesign stage usually takes from 3 - 6 years, although from 1 - 3 years is more common if a farmer is converting within the framework imposed by a certification agency. One proposed explanation for the length of time is that the toxic residues associated with conventional methods of production may prevent certain biological processes from reaching a new, necessary equilibrium. Decomposers of organic matter in soil and natural controls of pests may be affected by these and other impacts, and this can translate into yield and income losses for up to six years. As the farm is reaching its new equilibrium, pests (especially weeds) may be significant problems.

Producers wishing to convert, regardless of the stage, benefit from a detailed plan that, although being specific to their situation and needs, includes at least the following elements: agrichemical reduction strategies; soil improvement measures; manure handling methods; development of a crop rotation; fertilizer/ manure applications; tillage alterations; livestock stocking-rate adjustments, if animals are involved; weed, pest, and disease control techniques; mechanization, housing, and storage requirements; marketing opportunities; labour requirement estimates; yield estimates; financial estimates and implications; and a timetable for transition[6]. See Appendix 2 for references to conversion planning guides.

A. The meaning of "organic in transition" for certifying agencies

For CBs, the transition period can be defined as the conversion period required for a parcel of land between conventional and organic production in order for the land to be certified to produce organic crops. The transition period is between 1-3 years depending on the Certification Body (CB) and circumstances specific

to the application in question. Some CBs such as the Soil Association in Britain refer to the transition period as the "conversion to organic" period. Conversion programs emphasize the adoption of organic production practices. Often this involves a planned conversion program and timetable while meeting the certification standards of a specific CB. Advisors may or may not be used. One or more pre-certification inspections are usually required. Some organizations such as the German CB "Bioland" insist on mandatory attendance at growers meetings and educational workshops before producers can apply for certification.

Because the financial pressures during the adjustment period may be extreme, some CBs also developed organic "in transition" labeling schemes to help improve market access and perhaps the price for the products of farms in transition. In the 1970s and '80s, when the market for organic food was expanding much faster than the supply, many CBs had "in-transition" labels. They were responding to a market which believed that partly organic food (i.e., no artificial fertilizers or pesticides) was better than no organic food at all. Government funded conversion programs were relatively unknown at this time and CBs saw such labels as an opportunity to help transitional farmers in the absence of other forms of assistance. More recently, as the supply of organic food has increased and consumers are becoming more discerning about the origin and quality of organic food, the idea of "you're pregnant or you're not" has been applied to distinguish certified organic food products from other ecological foods in the market.

These "in-transition" labeling programs are fairly rudimentary. A CB will develop a transitional label and farmers earn the right to use the label on their products if they operate in accordance with accepted organic standards of the CB in question. The in-transition labeling program is distinguished from full organic certification because:

a) In-transitional labeling is temporary, usually to a maximum of 3 years. Full organic certification can be applied in perpetuity.
b) Transitional labels are usually clearly differentiated from labels of fully certified products and may not include the word organic.
c) Differences between transition programs may be considerable. For example, eligibility of land for certification according to cropping history (pesticide use, GMO use or drift) may vary. On the other hand, standards for full organic certification are becoming more consistent and uniform between CBs.

B. What opportunities do "in-transition" labeling programs offer farmers?

"In-transition" label programs provide an opportunity for organic farmers to (a) improve market access and (b) obtain a price premium over the same product marketed conventionally but not yet certifiable. Transitional labeling is particularly useful in expanding organic markets where demand for certified product outstrips supply. The market will often absorb conversion products verified to be free of prohibited fertilizers and pesticides in the year of production. While forage crops from a conversion period may be relatively easy to convert to organic production, other crops such as apples are very difficult to market during the transition because of poor quality and visual appeal. In-transition certification, for example, often makes it easier to market apples for processing into cider. Price premiums may be available. In the case of livestock feed, transitional product is preferred to conventional product in times when fully certified feed is in short supply.

Kinds of transitional programs

Historically, transitional programs and "in-transition" labels have been created to:

a) allow a step-wise approach to conversion that reduces the risks associated with the cold turkey effect of rapid transition:
b) build commitment to organic agriculture;
c) provide a fall back for livestock producers when there is a shortage of livestock feed;
d) create new market opportunities to improve the finances of transitional farmers;
e) create formal links to certifying agencies and to certified farmers during the transitional period which fosters better mentoring and information exchange;
f) provide, for transitional programs not linked directly with organic certification bodies, consumers some options if they feel organic is too expensive for them.

There are five main program options for achieving these objectives. They fall into two general categories: a) those that help farmers moving toward organic farming, but not necessarily convinced that organic farming is the end point of their transition (IPM and no spray programs for crops, and "hormone and antibiotic-free" animal production programs): b) those that help farmers who are committed to organic farming, but have not yet attained that status (in transition to organic programs). The first three options are not, strictly speaking, organic in transition programs since organic is not an explicit objective of the program. However, they can serve many of the same purposes, so deserve some consideration.

Option 1: Integrated Pest Management (IPM) programs

Summary of the concept: Create an IPM program that has stature independent of organic certification, but is seen to be a transitional program because farmers progressively adopt many practices found in organic agriculture and are reducing their pesticide use. Provide incentives for farmers to continuously improve their IPM systems and encourage them to plan to move to organic.

In the past 10 years, a number of IPM programs have been created in North America and Europe. Biointensive IPM and organic farming are two distinct yet related approaches to farming. Many practices are common to both systems. They differ in the degree to which agroecological theory defines the farming system, with organic farming occupying a more ecological place on the spectrum. In practical terms, synthetic pesticides that may be used in biointensive IPM may not be used in organic farming. Consequently, IPM programs can be seen as a transitional stage.

Biointensive IPM in agriculture is defined as — "A systems approach to pest management that is based on an understanding of pest ecology. It relies on resistant varieties and promoting plant health, crop rotation, disrupting pest reproduction, and the management of biological processes to diversify and build populations of beneficial organisms. Reduced risk pesticides, including biopesticides, are used only as a last resort and only in ways to minimize risks."[7]

Although biointensive IPM represents the most advanced end of the IPM continuum and is not specifically defined by the degree of reduction in the use of pesticides, to achieve it requires extensive adoption of pest prevention practices, and significant reductions in pesticide use. It is only at this end where adopting IPM is sure to lead to reductions in pesticide use. In the system developed by Consumers Union[8], which compares adoption of pest prevention practices to the number and toxicity of pesticide treatments, biointensive IPM systems have at least five times greater reliance on prevention relative to treatment compared to farming systems that do not use IPM. This generally means that synthetic pesticide use is very limited relative to conventional farming.

In some cases, to support the marketing of their product, farmers, wholesalers or retailers will have pesticide residue testing carried out on their product. This testing is designed to reassure consumers about the safety of their product. The most visible program offered in the United States is NutriClean, run by Scientific Certification Systems[9]. NutriClean®'s goal is to "purchase produce directly from those farmers who show a consistent ability to outperform government pesticide residue standards and are committed to reducing pesticide use in their fields." The produce is then distributed to participating markets. NutriClean®'s detection limits at 0.05 ppm are consistent with rapid screening techniques. Their products are sold in many large supermarket chains, particularly on the US west coast where they are based.

A variety of different IPM programs are presented in Table 1. Most of them are collaborations between non-governmental agencies (NGOs), farmers and other players in the food chain. The collaborative nature of these initiatives reflects the difficulties involved in breaking into the conventional food marketplace. Typically, NGOs bring environmental credibility to the initiative, which farmers, processors and retailers believe will enhance their ability to make their products visible to consumers. As well, because volumes are frequently small at the beginning, and segregation from conventional product is critical, the food chain players which would normally have a more competitive relationship are prepared to cooperate to work through the new systems that such ventures demand. In almost all cases, the players provide supports to the growers that are not normally provided by companies operating solely in the conventional food system.

Option 2: No-spray programs

Summary of the concept: Farmers have achieved such a high level of IPM that they no longer spray synthetic chemicals. Their farming practice is distinguished from organic farming mostly by their use of synthetic fertilizers.

A variation on the IPM program theme is the no-spray program. Farm use of natural pest controls and cultural practices may have evolved to the point where no herbicides, insecticides, fungicides (or some combination of these) are applied. The programs are not organic because the full range of cultural practices of organic agriculture may not be employed and the farm still relies on synthetic chemical fertilizers for

Table 1: IPM marketing programs in Canada, the USA and Europe

IPM PROGRAM	GEOGRAPHY	PRODUCT RANGE	PARTICIPANTS	FARMER BENEFITS	MARKETING
Wisconsin Potato growers	Wisconsin	Primarily potatoes	WPVGA, WWF-USA	Technical support, verification	General publicity, packaging label
Stemilt	Washington State	apples, cherries, pears	private firm	Technical support, protocol, research, verification	Lady bug sticker and package label, eco-marketing
EcoTerra	Global	full range of fruits, vegetables, some grains	private firm	Marketing, technical support, protocols, verification	Profiles farms on POP materials for stewardship
The Farm Alliance	primarily US west coast	fruits and vegetables	growers, farm workers, ENGOs processors, packers, educators, distributors	Technical support, research	Eco-label
Wegmans	NY state and other parts of the NE USA	processed and fresh vegetables	Cornell Univ., processors, grower coop, Wegman's retail chain	technical support, guidelines, verification	IPM logo, POP materials
Core Values NE	NE USA	apples	ENGOs, growers, Cooperative Extension, state dept. agriculture, produce brokers, retailers	Protocol, technical support, verification	
WWF-Canada	Ontario, PEI	apples, potatoes	retailers, processors, farmers, WWF	Protocol, deal making, marketing	Sentence on label with WWF's name
Partners with Nature	Massachusetts	fruits and vegetables	Umass extension, Mass. Dept Agr., USDA	technical support, verification, funding for scouting, protocols	Logo, state publicity, consumer listings, promotional materials
Integrated Fruit Production	Many countries in Europe, especially Germany and Italy	Primarily apple and pear			logos, publicity

Sources: US EPA. 1998. Food Production and Environmental Stewardship: examples of how food companies work with growers. USEPA, EPA 231-R-98-001. Washington, DC.
Web sites: www.pmac.net • www.nysaes.cornell.edu • www.thefoodalliance.org • www.corevalues.org • www.massgrown.org • www.stemilt.com

fertility management. Farmers are, however, able to claim that they do not use a particular class of or any pesticides which in some cases gives them recognition in the market place and even a small premium for their product, generally no more than 10%.

A new Canadian non-profit organization, Pesticide-free Production Canada[10] is preparing protocols and marketing strategies to help farmers follow pesticide-free production. They are focusing on wheat, durum wheat, oats, barley, malting barley (for small breweries), dry beans, confectionary sunflowers and lentils. Also some companies, such as the American Pop Corn company sell a popcorn labeled "Grown without Chemical Pesticides". They have a 15 step protocol that growers must follow and they do test for residues. Growers are paid a 15% premium. Stahlbush Island Farms in Oregon has a similar kind of no-spray program for pumpkins and squash, although they do not have a no-spray label[11].

Option 3: "Hormone and antibiotic-free" livestock production

Summary of the concept: This program option parallels for animal producers the concept of a no-spray crop program. They are usually run by individual farm businesses, who both produce themselves and also market products for other farmers. A major difference between these and organic livestock producers is the reliance on conventional feed.

This program option has its roots in the "natural" foods movement which evolved in parallel with organic production, particularly in the USA. The term natural, which implied that limited chemicals were used in production and processing, and that foods were minimally processed, has been discredited over time for the lack of rigour associated with the claims. The one part of the market that has remained reasonably vibrant is the hormone-free, additive-free meat market, in large part because organic animal production and marketing has not advanced as quickly as organic crop production. The big challenge of organic livestock production remains the availability of organic feed.

Most programs are operated by private firms, often livestock producers that have branched out and brought into their program other producers who want to market under their label. These private companies have a protocol, some quite detailed, others vague. Usually, however, the protocols are considered proprietary and only those producers who participate in their program have access to them. Coleman Natural Meats[12] is one of the largest natural meat operations in the United States, working with over 450 ranchers in the US west and mid-west. They pay higher prices than the commodity markets and this has contributed to rancher loyalty. Eberly Poultry Farms in Pennsylvania started in the 1980s buying chicken from poultry producers who agreed to produce without stimulants, then moved to free-range growing and then finally converted to organic in 1985 when they found a steady supply of organic feed for growers. They visit producers regularly and pay a price premium even thought they have not been able to identify their product as organic because of USDA labeling rules[13].

Option 4: Transitional organic program operated separately from an organic program

Summary of the concept: Firms help farmers make the conversion to organic agriculture as part of their efforts to secure long-term supplies of organic product.

Some companies buying organic product also support farmers in transition. They do this to ensure they have long-term supply. The farmers are usually, but not always, following the transitional programs of a CB. The company buys their product for their conventional product lines, often pays a premium, and may provide some technical support.

For example, the Seymour Canning Company, based in Wisconsin cans organic vegetables under store brand private labels. It provides technical assistance, and rents specialized equipment for growers to experiment with for a year. It pays a 30% price premium to its organic growers under contract. Since the company believes that organic will expand, it also supports growers in transition, including providing them with a 10% premium. Their product is sold within their conventional product line.

Option 5: A transitional organic label program that is fully integrated within an organic program

Summary of the concept: This option is the most common and has already been discussed extensively in section 2.

Certification agencies have approached such programs in a variety of ways.

The 1989 IFOAM Minimum Standards state "Certification organizations may allow plant products to be sold as "produce of organic agriculture in process of conversion" or a similar description... conversion labels should be clearly distinguishable from the full organic label."[14]

California Certified Organic Farmers has offered transitional certification for parcels of land since 1996 provided the last prohibited material was applied at least one year before the planting of an annual crop and one year before bud-break of a perennial crop. Growers may use a transitional label calling their product "CCOF transitional," but cannot call the product "transitional organic" or use the "Organic" word with the "transitional" term.

Bioland-Bundesverband (Germany) allows the producer to label "Bioland — in conversion." This standard is in accordance with European Union (EU) regulation 2092/91. It reads "12 months after the beginning of the conversion period the harvest may be labeled as "in conversion." It covers only plant products, not animal products. It is restricted to so-called mono-products and is not applicable to processed products with more than one ingredient of agricultural origin[15].

DEMETER International provides "In conversion to DEMETER" certification if the complete farm is cultivated at least 12 months according to Demeter guidelines. In case of conventional pre-cultivation the full certification can be issued after 36 months (harvest of permanent crops) or for annual crops sown after 24 months. In case of an extensive or organic pre-cultivation it is possible to reduce the conversion time. The Society for Biodynamic Farming and Gardening in Ontario certifies in three categories leading up to DEMETER certification: organic, biodynamic and DEMETER[16].

The Soil Association (UK) has a minimum two year conversion scheme which enables licencees to use the wording Soil Association Approved Organic Conversion. Completion of the conversion leads to full Symbol Status; otherwise use of the symbol on in-conversion products is prohibited[17]. The Soil Association uses the term "approved organic conversion" on its "in transition" label.

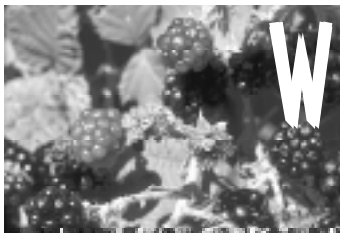
Farm Verified Organic (USA) will perform in-conversion certification, but claims the demand for transitional products is fading[18].

Garantie Bio in Quebec has offered transitional labeling in the past. However, new provincial government regulations will no longer permit transition labeling.

However, some CBs do not support "in transition" programs. The Organic Trade Association (OTA) in the USA does not support transitional labeling, claiming that a transition program must be unique to every farm. One transitional farm may contain pesticide or Genetically Modified Organisms (GMO) residues while others may not. OTA also believes protections must be in place which prevent a transitional farm from returning to pesticide use in, for example, its third year and then becoming transitional again for two years. On-again, off-again transition is not acceptable[19].

KRAV-Ekonomisk Foerening (Sweden) does not support labeling of transition/conversion products because it creates confusion in the organic marketplace. Normal conversion time is one year, but depending on past land use, it can be longer. However, unlike the U.S. model which usually calculates conversion from the time of the last use of prohibited materials, KRAV members must apply before the conversion time is calculated and there is at least one inspection visit in the first year[20].

The Organic Crop Improvement Association (International) does not allow products to carry the OCIA seal unless a full conversion period has elapsed. There is no OCIA in-conversion labeling[21].



What are the challenges of implementing transitional label programs?

A. Protocols

Regardless of the type of program, a good protocol is important to both guide growers in production practices, and to provide assurance to the market place that the production system is different from conventional practices.

For IPM programs, protocols can be difficult to set. IPM practices exist along a spectrum of activities[22], from the near conventional to the bioecological, so it is difficult to determine where along that spectrum the protocol should fall. As well, in contrast, to no spray and organic programs, some chemicals are permitted under certain kinds of circumstances. Defining those circumstances and the preventive practices that will reduce reliance on synthetic pesticides is part of the challenge. Factors that are usually taken into consideration include:

- The current state of knowledge of IPM with the crops being produced. For example, apple IPM is well developed, but canola IPM is at an early stage of development.
- The economic circumstances of farmers participating. When prices for crops are low, it becomes more difficult - psychologically, if not financially - for farmers to participate in such programs. Some crops, by the way the market place works, provide some insurance in the event of problems adopting a protocol. For example, many fruits and vegetables have processing markets that don't require the cosmetic perfection of fresh table markets. The prices, of course, are significantly lower, but significant crop loss can at least be partly compensated by prices available in processing markets.
- The availability of IPM advisors. When government extension agents or private crop consultants work in an area, farmers generally have more comfort with a more challenging protocol.
- The degree of IPM market development. In well developed IPM markets (which are now emerging in parts of the USA and Canada and have existed for some time in some crops in Europe), there is more demand for an IPM protocol that falls on the bioecological end of the spectrum. In some European markets, IPM is now the industry standard.
- The degree of government support for IPM. In Europe, there are significant financial supports for IPM so a more demanding IPM program is the norm. In Canada and the US, financial support for IPM remains at a low level, making it more difficult to implement bioecological IPM programs.
- The knowledge, experience and comfort of the participating farmers themselves. They play a critical role in setting the protocol, so their approach to IPM programs will have an impact on the protocol design. However, since they are not necessarily familiar with the demands of the marketplace, it is important that their opinion be balanced by those who understand the market.

No spray program protocols are somewhat easier to set because no synthetic pesticides are permitted. However, as with IPM programs, it is important for the growers to have a fully elucidated protocol of preventive practices that will reduce reliance on pesticides. Hormone and antibiotic - free animal production programs are like no spray programs in crops with similar challenges.

Transitional organic programs are actually the easiest to set protocols for since they do not differ substantially from the requirements outlined by individual certification bodies for conversion to certified organic. For example, CCOF considers land assigned transitional status equivalent to land assigned "certification pending."

An on-going problem of all transitional protocols is that growers may be reluctant to move to the next stage. Recent experience with a "field to table" IPM potato project sponsored by the World Wildlife Fund in Prince Edward Island, Canada, has shown that growers are reluctant to change their cropping practices once the most elementary steps towards organic or ecological husbandry have been taken. Companies and organizations may have to work hard to convince growers to keep moving towards more ecological practices.

B. Inspection

Transitional protocols must still involve inspection programs to ensure the integrity of the product.

For organic in transition programs, inspections should be conducted by independent, third party inspectors preferably trained by the International Organic Inspectors Association. These individuals are the most qualified to monitor for implementation of the protocols. In addition, inspectors should have in-depth knowledge of certified organic production and crop improvement in order to ease the transition to certified organic. CCOF requires that two inspections take place before transitional status can be assigned. A parcel may be eligible if the last prohibited material application was made one year before planting of an annual crop and one year before bud break of a perennial crop.

For most IPM, no spray, and hormone and antibiotic free programs, inspections are not as rigorous as they are in organic production. This is largely because there has been less pressure than organic production has received over the years to prove the integrity of the program. As well, many of the programs are operated by private firms that are reluctant to provide what they might consider proprietary information. However, as these programs expand, in both volume and geographic reach, there is increasing pressure for the inspection process to be more rigorous. And as more kinds of green food products enter the marketplace, retailers and consumers will become more discerning and demand greater verification of claims.

C. Creating a market identity

Organic producers have long worried that the term organic was insufficiently instilled in consumer's consciousness and that transitional marketing programs or IPM marketing would generate confusion and detract from the development of the organic market place. Retailers, in this view, would prefer IPM or transitional organic labels to organic because it would be less challenging to merchandise and of lower cost to consumers. In earlier stages of organic market development, this was likely true. Today, however, the organic market place is dramatically larger, and there are a larger pool of consumers who consider themselves green shoppers.

There has also been concern about price premiums. Price premiums for both full and "in transition" organic products are reduced in a saturated market. For example, as supplies of certified organic coffee, bananas

and cocoa increase worldwide, market competition is driving down price premiums. Accordingly, transitional products are increasingly difficult to sell because adequate organic supplies are available at moderate prices.

Given expanding global demand for organic, "in-transition" labeling programs may be able to ride the coattails of the organic phenomenon, without compromising the organic market.

- Cuba[23] and Iceland[24] are implementing policies and programs for 100% conversion to organic agriculture.
- Sweden, Austria and some German states have set a target of 10% by 2000. The Bavarian State government in Germany actually has plans to have 25% of their agriculture converted to organic production by 2000[25]. France, Norway and Finland have set a target of 5%[26]. In Sweden's case, although this target is not likely to be achieved, between 150,000 and 200,000 hectares are farmed organically or are under conversion, 5 - 7 % of the total arable land.
- Denmark anticipates that organic will occupy 15-20% of market share by the year 2000, with 7% of agricultural land in organic production[27]. Organic milk already occupies 20% of the market and is expected to rise to 50% by 2005[28].
- UK Cultivated acreage in organic production has risen 5 times in the past year, inspired in part by government supports provided through the EC's agri-environmental programme[29]. Major food retailers and the UK Soil Association have called on the U.K. Government to set a 10% organic target for food produced in the UK by 2005[30].
- Within the European Community as a whole, organic foods are projected to reach 2.5% by the year 2000. Since the mid-80s, the market has grown at a rate of 25% per year. There are now more than 50,000 organic farmers in the EU[31].
- No government in the USA has set targets, but the nation has experienced a 20-30% increase in organic sales since the beginning of the decade and the entire sector now sits at $5 billion in retail sales[32], somewhere between 1 and 2 % of the food retail market. In the USA, between 1 and 8% of farmers use organic farming methods. These include organic grain operations of 3000 acres, and ranches of over 7000[33]. Over half the states in the US have laws or rules governing the production and marketing of organic foods[34].

The market dominance of mainstream agricultural enterprises appears to be increasingly threatened by these kinds of developments. According to Hartman[35], "The 'green' consumer is now mainstream .... A majority of American consumers are willing to buy environmentally-friendly products and a significant segment — 23% — are frustrated that there are not more opportunities for them to buy green .... The market potential is enormous .... at least 52% of consumers want to buy earth-sustainable food products, but most don't because they can't easily find earth-sustainable products that meet their core purchase criteria". A host of other surveys in the North show that consumers are concerned about pesticides[36] and are also willing to accept product with slight cosmetic damage if assured that pesticide residues are lower or lower levels have been used[37].

In this kind of market, there may well be room for the products of all 5 options. Estimates from Hartman and the Food Marketing Institute[38] suggest that up to 50% of US consumers may be interested in buying food from IPM systems, and may be willing to pay up to a 10% premium for such foods[39]. A review of IPM marketing studies found that consumer awareness of IPM is generally low until a short definition is

provided, especially with in-store communications, and then interest in buying IPM products rises dramatically to most consumers. As with the Hartman study, this one also found that a very high percentage (85%) were willing to pay 10% more for pesticide-reduced produce[40]. Similar results have been found by World Wildlife Fund Canada in their focus group research on IPM apples[41].

As the market for green food products grows and becomes more sophisticated, firms are exploring the marketing of both organic and pesticide-reduced products[42]. Some companies, recognizing that IPM and organic occupy different niches, are now selling both products and actively working with farmers to help them make the transitional to both IPM and organic. For example, EcoTerra, a company based in California sources IPM product globally, and has also just launched an organic line through a subsidiary. Stemilt growers have both organic and IPM lines. Retailers like Wegmans (NE USA) started IPM programs because their experience selling organic led them to conclude there was a significant market for IPM that organic could not fill[43].

Although, organic foods now have fairly high recognition in North American and European markets, transitional products are far less visible. For example, Wegmans, when starting its IPM program, found that only 20% of its consumers understood the term[44]. One of the most significant barriers to making the consumer concern identified in surveys a reality at the cash register is the absence of food information systems that alert consumers to the type of production system used to produce the food. Studies examining consumer behaviour in the supermarket have found that when provided with fuller information on production histories, consumers will choose more frequently food from reduced-pesticide production systems[45]. Because of this, many companies do more than provide a label. They invest significantly in in-store promotion, including point of purchase display material and in-store demonstrations. At least one company — EcoTerra — actually profiles in the store with personal posters the growers who are supplying the store.

Labeling, however, is still the core of product identification. Labels serve two main purposes in certified organic production: they identify the product for consumers, and the certification agency's seal serves as a guarantee to consumers and control system for the agency and farmers. Labeling of transitional organic products is, however, more problematic for certification agencies and as a result may not clearly identify the product in the eyes of consumers. For example, CCOF does not allow the word "organic" to be used in association with "in transition" and has developed its own in-transition seal that is separate from its organic seal. The Soil Association does not permit use of its symbol on transitional products at all. This is done to protect the integrity of fully organic products, but makes transitional products more difficult to identify.

IPM, no-spray and "natural" foods can be identified in a variety of ways. Depending on what national labeling regulations will permit, products may be identified with phrases describing the production system. Some products will actually use a symbol with the term IPM, no-spray or natural within it. Others use a visual symbol, like Stemilt's lady bug, to represent the production system. The range of labeling approaches is a mixed blessing. It allows companies to create their own identity, but ultimately likely reduces the capacity of these products to have recognition in the marketplace because there is no consistency. These labels, unlike organic certification symbols, do not provide consumers with the same guarantee that the claim is legitimate.

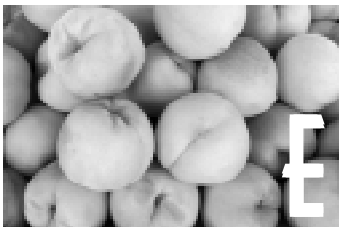
Conclusions and recommendations

Table 2 provides a summary of how the five program options perform against the 5 key reasons for having a transitional label program. Transitional organic programs operated by CBs are the only ones to meet all the objectives. However, they are also likely the most challenging to implement because of the CBs' need to differentiate full organic status from transitional status. Other programs do not necessarily exercise the same degree of rigour in protocol design, inspection and verification.

Farmers or farmers' collectives considering developing an organic "in-transition"label must consider the cost and worth of such an investment because transitional status for any producer should only be temporary. In-transition certification guidelines should not be (a) expensive to implement because they are temporary, and (b) they should be similar in scope and rigidity to accepted guidelines for the conversion to organic. It is essential that growers understand when they begin to implement the protocol that they are working towards the goal of certified organic production. Otherwise, growers may feel they have accomplished their goals after implementing only the first steps of the transition.

Table 2: Summary of program options and how well they meet transitional label program objectives

RATIONALE FOR TRANSITIONAL PROGRAMS	IPM	NO SPRAY	HORMONE / ANTIBIOTIC - FREE	TRANSITIONAL ORGANIC (INDEPENDENT COMPANY)	TRANSITIONAL ORGANIC (CB)
stepwise approach to conversion	but organic not always the end point	but organic not always the end point	but organic not always the end point	organic end point required	organic end point required
Build commitment to organic	not necessarily	not necessarily	not necessarily		
Fall back for livestock producers					
Formal links to certifier				not necessarily	
Less expensive consumer options					but not necessarily the objective of the CB



Endnotes

1 MacRae, R.J. et al. 1990. Farm-scale agronomic and economic conversion to sustainable agriculture. **Advances in Agronomy** 43:155-198.

2 Gunnar Rundgren. 1998. **Building Trust in Organics**. IFOAM, Theley-Tholey, Germany.

3 In the efficiency stage, conventional systems are altered to reduce consumption of costly and scarce resources, e.g., by banding fertilizers, monitoring pests, optimal crop siting and timing of operations. In the substitution phase, resource-dependent and environmentally impacting products are replaced by those that are generally more environmentally benign, e.g., synthetic nitrogen fertilizers by organic sources, pesticides by biological controls, moldboard plows by chisels or discs. Finally, the redesign stage is achieved when the causes of problems are recognized, and thereby prevented, being solved internally by site and time-specific design and management approaches instead of by the application of external inputs, e.g., the farm is made more ecologically and economically diverse and therefore also more resource self-reliant and resilient.

4 MacRae, R.J. et al. 1990. Farm-scale agronomic and economic conversion to sustainable agriculture. **Advances in Agronomy** 43:155-198.

5 Patriquin, D.G. et. al. 1986. Observations on a mixed farm during the transition to biological husbandry. **Biological Agriculture and Horticulture** 4:69-154.

6 MacRae, R.J. et al. 1990. Farm-scale agronomic and economic conversion to sustainable agriculture. **Advances in Agronomy** 43:155-198.

7 Benbrook, C. 1999. **Measurement System Changes and Progress Toward Meeting WWF-WPVGA Pesticide Risk Reduction Goals: a crop year 1988 status report**. June 1999. Available at www.pmac.net.

8 Benbrook, C.M. et al., 1996. **Pest Management at the Crossroads**. Consumers Union, Yonkers, NY.

9 Their web site: www.scs1.com.

10 Their web site is www.pfpcanada.com.

11 US EPA **1998. Food Production and Environmental Stewardship: examples of how food companies work with growers**. EPA231-R-98-001, Washington. .

12 The Coleman Natural Meat web site is: **www.colemanbeef.com.** For an online directory of natural food companies, see http://www.ecodirectory.com/suppfdmeat.html.

13 US EPA 1998. **Food Production and Environmental Stewardship: examples of how food companies work with growers**. EPA231-R-98-001, Washington.

14 IFOAM. 1989. **Basic Standards of Organic Agriculture**. IFOAM, Theley-Tholey, Germany.

15 Reiners, Eckard, Bioland-Bundesverband (German Certification Body), personnel communication, February 2000

16 Demeter. 1994. **International Guidelines for the Certification of Products from Biodynamic Agriculture**.

17 The Soil Association. 199x. **Standards for Organic Agriculture**. The Soil Association, Bristol, UK.

18 Jacobsen, Terry, Certification Committee, Farm Verified Organic (US Certification Body), personal communication, February 2000.

19 Hutcheson, Tom. Policy Coordinator, Organic Trade Association., personal communication, February 2000.

20 Mattson, Eva. Standards Officer, KRAV (Swedish Certification Body), personal communication, February 2000.

21 Organic Crop Improvement Association International, Inc. 1999. **International Certification Standards**, As Revised: February 1999.

22 For more on the IPM spectrum, see Benbrook, C. et al. 1996. **Pest Management at the Crossroads**. Consumers Union, Yonkers, NY.

[23] Rosset, P. and Benjamin, M. (eds.). 1994. **The Greening of the Revolution: Cuba's experiment with organic agriculture**. Ocean Press, Melbourne, Australia. Note that the Cuban model of organic agriculture would not be acceptable under IFOAM or OTA guidelines since there is no verification process and no restrictions on genetically engineering.

[24] Motavalli, J. 1994. Agrarian Nation: can Iceland become the first all-organic country? **E Magazine** 5(6):25-27.

[25] Tate, W.B. 1994. The development of the organic industry and market: an international perspective. N.H. Lampkin and S. Padel (eds.). **The Economics of Organic Farming: an international perspective**. CAB International, Wallingford, Oxon, UK. Pp. 11-26.

[26] Lampkin, N.H. et al. 1999.**The Policy and Regulatory Environment for Organic Farming in Europe**. Organic Farming in Europe: Economics and Policy, Vol. 11. University of Hohenheim, Stuttgart, Germany.

[27] Anon. 1995. Danish organic market sizzles. **New Farmer and Grower** 47:6.

[28] Institute for Agriculture and Trade Policy. 1999. **Marketing Sustainable Agriculture: case studies and analysis from Europe**. IATP, Minneapolis.

[29] **Reuters Wire Service**, August 2, 1999.

[30] Cooper, M. 1999. Stores call on government to support organic farms. **PA News** July 5 /99

[31] Lampkin, N. 1996. Impact of EU Regulation 2078/92 on the development of organic farming in the European Union. **Working Paper #7, Welsh Institute of Rural Studies**, Aberystwyth, Wales.

[32] Welsh, R. 1999. **The Economics of Organic Grain and Soybean Production in the Midwestern United States**. Henry A.Wallace Institute for Alternative Agriculture, Beltsville, MD.

[33] Duram, L. 1999. Factors in organic farmers' decisionmaking: diversity, challenge, and obstacles. **American Journal of Alternative Agriculture** 14:2-10

[34] Fernandez-Cornejo, J. et al. 1998. Organic vegetable production in the US: certified growers and their practices. **American Journal of Alternative Agriculture** 13:69-78.

[35] Hartman, H. 1996. **The Hartman Report, Food and the Environment: a consumers' perspective.** Phase I, Summer, 1996. The Hartman Group, Seattle, WA.

[36] See, for example, Sachs, C. et. al. 1987. Consumer pesticide concerns: a 1965-1984 comparison. **J. Consumer Affairs.** 21:96-107; Public Voice for Food and Health Policy (PVFHP). 1993. **What Americans Think About Agrochemicals: a nationwide survey on health, environment and public policy**. PVFHP, Washington. April; O'Beirne, D. 1988. A corresponding viewpoint: some food safety and quality issues in the European community. In: K.L. Clancy (ed.). **Consumer Demands in the Market Place**. Resources for the Future, Washington. Pp. 177-187.

[37] Conklin, N.C. and Mischen, P.A. (undated). **Quality Standards and Pesticide Use: a review of research**. Prepared for the Agricultural Marketing Service, USDA. Arizona State University, Tempe. See also studies cited by Eom, Y.S. 1993. Self-protection, risk information and the ex ante values of food safety and nutrition. In: J. Carswell et al. (eds.). **Valuing Food Safety and Nutrition**. Conference organized by the NE-165 Regional Research Project: "Private Strategies, Public Policies and Food System Performance". June 2-4, 1993. Alexandria, VI.

[38] Food Marketing Institute. 1997. **The Greening of Consumers: a food retailer's guide**. Food Marketing Institute, Washington, DC.

[39] WWF market research and other investigations (see, for example, Anderson, M. et al. 1996. Consumer response to integrated pest management and certification. **Agriculture, Ecosystems and Environment** 60:97-106) have come to this conclusion.

[40] Anderson, M.D. et al. 1996. Consumer response to Integrated Pest Management and certification. **Agriculture, Ecosystems and Environment** 60:97-106.

[41] Russ Christianson, Rhythm Communications, personal communication, February 2000.

[42] For a US account of this phenomenon, see US EPA 1998. **Food Production and Environmental Stewardship: examples of how food companies work with growers**. EPA231-R-98-001, Washington. On the Canadian side, WWF has been negotiating with half a dozen major retailers and manufacturers about launching IPM products.

[43] US EPA 1998. **Food Production and Environmental Stewardship: examples of how food companies work with growers**. EPA231-R-98-001, Washington.

[44] US EPA 1998. **Food Production and Environmental Stewardship: examples of how food companies work with growers**. EPA231-R-98-001, Washington.

[45] Collins et al. 1992. Consumer attitudes on pesticide treatment histories of fresh produce. **J. Sustainable Agriculture** 3:81-98.

Appendix 1: Other strategies for improving the financial health of farmers during transition[1]

Governments in Europe and the United States are looking at strategies to support farmers making environmental improvements. They recognize that the market is not always able to reward farmers for the environmental benefits that they provide to the public at large, so they are willing to make payments to farmers that partly compensate for that market deficiency.

1. Paying farmers for environmental services

This approach is practiced in Europe. In the 1990s, there has been a movement in Europe away from commodity price supports to policies that support rural areas as producers of environmental services and agricultural products[2]. "The farmer is no longer only a food producer but also becomes a care-taker of the environment, countryside and environment"[3]. Pesticide reduction and organic farming have become key dimensions of these new support programs. The rationale has been that both biointensive IPM and organic farming lessen environmental problems and the need for government programs to clean up problems. They also permit greater dependence on market revenues leading to lower reliance on commodity payments.

In 1992, the EEC adopted regulation no. 2078/92, known as the agri-environment programme. It replaced other EC programs and also subsumed many of the national programs that had existed prior to its enactment. Both national governments and the EC had programs related to input use reduction and environmental protection, including taxes on production inputs. As well, between 1987 and 92, Austria, Denmark, Finland, Germany, Norway, Sweden and Switzerland had all introduced organic conversion aid schemes and other supports to help spread organic farming. These programs produced significant increases in acreage under organic management, and their experiences were part of the inspiration for the EC regulation.

The regulation covers a wide range of environmental programs, but particularly significant for this discussion, programs exist "to reduce substantially [farmers'] use of fertilizers and/or plant protection products, or to keep to the reductions already made, or to introduce or continue with organic farming methods."[4] As well, European states can establish under the regulation programs to improve the training of farmers and for demonstration projects.

These programs are designed mostly around management agreements with farmers. Farmers agree to achieve specified outcomes for which they receive payments. For the components of particular relevance to this report, management agreements are usually for a 5 year period. The EU co-finances these programs at 75% for those regions lagging behind in economic development, and 50% in the other areas.

The EC recently evaluated Regulation 2078/92[5] and agricultural economist Nic Lampkin[6] has performed an evaluation of the organic farming and related provisions of the regulation. The most positive results of the regulation, according to the EC evaluation, have been on reducing inputs and organic farming. Where programs have been widely applied, there have been substantial reductions input use overall.

The evaluations reveal:

- Twenty percent of EU agricultural land is now covered by agri-environmental programming, exceeded the initial 15% target[7].
- Regarding input reductions, programs can set limits on how much input is applied (even to zero), and they may also specify methods of input application and rotation patterns to be followed to help with input reduction. Some countries have made significant use of this component.
- Not all input reduction program components were successful.
- A study for the evaluation showed that a 50% reduction in plant protection chemicals is possible with the input reduction measure. Monitoring is in many instances ensured by farmer participation in third party established guidelines and verification systems (e.g., Integrated Fruit Production). Most member states do random annual checks of 5% of farmer participants.
- In organic farming, practices are specified by an existing regulation (EC Reg. 2092/91) that provides organic standards, certification and verification systems[8]. Farmers participating in the measure must meet the requirements for transition to organic as laid out in this regulation, including having a relationship with a recognized certification body. Many state organic support programs are open to both existing and converting organic farmers. Support for existing producers is seen to be important because they are an important source of information for converting farmers, they already provide environmental services, and as more farmers convert, price premiums may fall and affect those already in operation[9]. Organic farming is supported with payments for the conversion period, usually 2-3 years, and then sometimes on-going support. As well, programs provide some money for training and demonstration.
- The rapid increases in organic acreage, outlined in an earlier section, owe much to the existence of organic aid schemes. Total expenditures on organic farming through the regulation likely exceed 200 MECU / year, between 5 and 10% of total environmental regulation expenditures[10]. By far the largest percentage of payments are directly to farmers for environmental services. However, there is widespread agreement that a number of components need correction to increase their effectiveness, including setting the payment levels. The effectiveness of payment levels is also determined by the existence of other services - research, training, extension and market development. Training of farmers in good environmental management and organic agriculture are also provided, with grants to farmers for attending courses and traineeships; and grants to organizations for organizing programs and preparing materials; and money for demonstrations that can be integrated with the training efforts. The Netherlands and Belgium have established organic demonstration farm networks. About half the states provide for training in organic, and about 1/3 provide for advice. However, according to Lampkin, the Agri-environmental program has been generally weak on encouraging the provision of training and information services. Germany, Denmark, Sweden, Finland, Austria, and the Netherlands have full-time state-funded advisors in organic farming, but most organic farmers still rely on private sector consultants, often in limited supply. There is insufficient training available for organic advisors. Demonstration projects have only been taken up in a limited way. Budgetary expenditures on these elements have been minimal.

- One of the most far-reaching benefits of the agri-environment programme may be the shifts in public attitudes towards farming that occur with programme uptake. A number of states report that surveys show that the general public believes farming to be a less polluting activity than previously.

The EC believes that agri-environmental programs are necessary because of the failure of the market to account for the environmental consequences of farming. In their view, spending 4% of the CAP Guarantee spending on these programmes is good value for the money. The programme has permitted a diverse mix of state-level programming options to accommodate regional needs, which the EC believes is important[11]. It also believes that successful programs:

- set measurable objectives and have good monitoring systems,
- pursue a holistic landscape approach to programme design,
- offer a mix of measures,
- encourage a whole farm approach to participation,
- have available extension personnel,
- consult with NGOs and private service providers,
- target priority areas but also mix in measures that have a general impact,
- have minimum 5 year agreements with farmers that can be extended under certain circumstances,
- have solid training, information and advice components

The agri-environment programme is likely to play an even larger and more flexible role in agricultural programming in the future. Proposals by the Commission are that agri-environmental programs become a compulsory part of all rural development programmes in all territories of the Member States, and that minimum environmental standards should be assured in all rural development programming[12].

2. Crop insurance programs for farmers in transition

The idea is to insure transitional growers for the yield losses that are sometimes associated with the transition period. Although some governments have crop insurance programs for organic farmers, that pay out based on the premium prices organic farmers often receive, fewer have designed insurance schemes specifically for the transition period. The US Department of Agriculture is currently designing an insurance program for the transition period, the details of which should be available shortly. To be effective, such programs would have to set suitable yield loss floors that would trigger insurance payments and would also have to determine a compensation price - something between conventional prices and organic prices to reflect the transition process. In part because setting such levels is difficult, agencies have stayed away from creating such programs.

The Agricultural Conservation Innovation Center (ACIC), a U.S.-based program seeking to develop and deliver economically practical solutions to agricultural-environmental problems, has created insurance policies for farmers practicing IPM for corn rootworm control and late blight. Farmers pay a per acre insurance premium that is less than chemical treatment costs and provides some insurance if the IPM program fails[13].

Notes:

[1] Much of this appendix is condensed from a World Wildlife Fund Canada report entitled "Making Pesticide Reduction a Reality in Canada" (2000).

[2] Lampkin, N.H. and Padel, S. (eds.). 1994. **The Economics of Organic Farming: an international perspective**. CAB International, Wallingford, Oxon, UK.

[3] De Putter, J. 1995. **The Greening of Europe's Agricultural Policy: the "agri-environmental regulation" of the MacSharry reform**.. Ministry of Agriculture, Nature Management and Fisheries, The Hague, The Netherlands.

[4] Lampkin, N. 1996. Impact of EC Regulation 2078/92 on the development of organic farming in the European Union. **Working Paper #7, Welsh Institute of Rural Studies,** University of Aberystwyth, Aberystwyth, Wales..

[5] European Commission. 1999. **State of application of regulation (EEC) no. 2078 EC Evaluation of agri-environmental programmes**. Commission Working Document - DGVI, Brussels.

[6] Lampkin, N. 1996. Impact of EC Regulation 2078/92 on the development of organic farming in the European Union. **Working Paper #7, Welsh Institute of Rural Studies,** University of Aberystwyth, Aberystwyth, Wales.

[7] However, much of the land in programmes is in 5 countries, and uptake has been limited in the most agriculturally intense areas, a problem which is discussed later in the section.

[8] Note that this regulation still does not yet cover animal production.

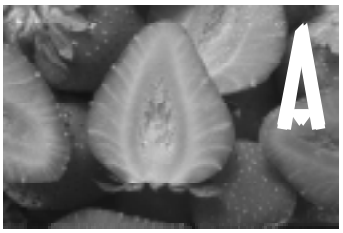
[9] Lampkin, N. 1996. Impact of EC Regulation 2078/92 on the development of organic farming in the European Union. **Working Paper #7, Welsh Institute of Rural Studies,** University of Aberystwyth, Aberystwyth, Wales.

[10] Lampkin, N. 1996. Impact of EC Regulation 2078/92 on the development of organic farming in the European Union. **Working Paper #7, Welsh Institute of Rural Studies,** University of Aberystwyth, Aberystwyth, Wales.

[11] Note that the Agenda 2000 proposals, currently under discussion, should result in additional flexibility.

[12] Commission of the European Communities. 1999. **Directions Towards Sustainable Agriculture**. COM (1999) 22 final. Communication from the Commission to the Council; the European Parliament, the Economic and Social Committee and the Committee of the Regions.

[13] See their web site: www.agconserv.com.



Appendix 2: Guides to conversion to organic farming

On-line guides:

http://eap.mcgill.ca/Indices/Organic_agriculture/OATCS.htm
http://eap.mcgill.ca/MagRack/COG/COGHandbook/COGHandbook_1_2.htm
http://www.gks.com/library/transition.html
http://www.attra.org/attra-pub/trans.html

Available from the University of Wales, Aberystwyth:

Padel, S: Adoption of organic farming, an example of the diffusion of an innovation - a literature review on the conversion to organic farming. Discussion Paper Series 94/1. Centre For Organic Husbandry and Agroecology; Aberystwyth. 15 pp. (1994).

Lampkin, N H and Measures, M 1999 Organic Farm Management Handbook Welsh Institute of Rural Studies, University of Wales, Aberystwyth. (1999)

Lampkin, N H: Converting to organic farming, Elm Farm Research Centre Practical Handbook, No.3, 100 pp. (1990)

For ordering information, see their web site: http://www.wirs.aber.ac.uk/index.html

Available from the Elm Farm Research Centre

The EFRC runs an advisory service for converting farmers and producers various documents on conversion, including:

Vogtmann, H., Boehncke, E., Woodward, L. and Lampkin, N. 1986. Converting to Organic Farming. Elm Farm Research Centre, Newbury, UK.

Postal address: Hamstead Marshall
Near Newbury
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Available from Ecological Agriculture Projects (EAP):

EAP has nearly 100,000 documents organized in vertical files, as well as thousands of books and journals. The thousands of documents on this Web site are organized using some of the topic headings used to organize their print collection. Find the topic you are looking for in these indexes, and follow the links to the documents.

If you don't find what you are looking for (the site still provides only a small sampling of what is in their collection), you can request hard copies of the top articles from the collection on a specific topic in this index. This service costs $0.20/page for photocopying ($5.00 minimum), plus shipping charges. If your budget is constrained, give us a price limit and we'll only select material up to that amount.

If you're looking for more detailed information in an area about which you already have some knowledge, or which is not included in these on-line indices, use our information retrieval or technical summary services.

They may have in their files the following two conversion guides (in French):

Schmid, O. 1978. La conversion à l'agriculture biologique. Technical Bulletin 1. Research Institute for Biological Husbandry, Oberwil, Switzerland.

Pousset, J. 1981. Conversion à l'Agriculture Biologique. Association Européene d'Agriculture et d'Hygiène Biologique, Paris, France.

Available from AgAccess, many books on organic farming:

http://www.agaccess.com/index.html

Available from the University of Kassel, Germany:

The University of Kassel has undergraduate theses that are conversion plans for different farms (in German). If you have expertise in German, contact: http://www.wiz.uni-kassel.de/foel/index.html

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