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Ecologically safe (organic) agricultural production: a Ukrainian perspective

The article include: a number of statistics that shove of trends over some last years in ecological sector of world agriculture, review of the ecologically safe (organic) products markets of the USA, U.K., Germany, France and another countries; experience of the Pennsylvania centre of organic certifications (USA), brief analyse some materials of the project "Ecologically safe products" and possibility of the implementation organic farming in Ukraine

Demand for organic products around the world is at an all-time high. According to the International Trade Centre, a joint effort of the United Nations Conference on Trade and Development and the World Trade Organisation, retail sales of organic food by major consumers (the United States, Europe and Japan) totalled \$10.5 billion in 1997. Based on expected annual growth rates of 10-30 percent in these countries, retail sales this year are forecast to reach \$21.5 billion.

Organic foods have been a particularly bright spot on the agricultural horizon in recent years. According to industry estimates, retail sales in the United States grew from \$1 billion in 1990, to \$5.5 billion in 1998.

Although part of a high-value, niche market, organic products are no longer found exclusively at farmers' markets or health food stores. Instead, mainstream shoppers are finding increasing numbers of organic products on supermarket shelves around the country. At the same time, demand for organic products overseas is at an all-time high, and growing.

The United Kingdom is, at this moment, simply ravenous for organic foods—overall demand is increasing by 40 percent, while supply is increasing by only 25 percent.

Why do U.K. consumers buy organic? Health issues are key in this market, according to recent market research; in light of highly publicised food scares, consumer awareness of food safety has increased substantially. In this market as in others, there is a general perception that organic food is safe, natural and unsullied.

Other important public perceptions are that organic food is "environmentally friendly," "animal welfare friendly" and "free of genetic modification."

The upsurge in demand for organic produce has led all the major retail outlets to recognise sales potential in the organic sector. Overall retail sales topped \$650 million for marketing year 1998/99. Imported products account for about three out of every four pounds spent on organic sales. Despite stepped-up production of its own organic milk, imports of organic dairy products are on the rise in the United Kingdom. Likewise, imports of organic meat, which were negligible in 1997-98, now comprise over 4 percent of total supply. Moreover, 80 percent of organic fruit and vegetables sold in the United Kingdom are imported.

In addition to fresh products, there are opportunities galore in the U.K. retail market for high-value consumer foods.

Until recently, most organic products imported from the United States were fruits, vegetables and salads. But that's changing the shift is to shelf-stable, high-value consumer foods. Some of the most popular categories include soft drinks, alcoholic beverages, sauces, snacks, confectionery and frozen foods.

Organic restaurants and cafes are somewhat harder to find in the United Kingdom than in other European Union (EU) countries. You'll find a few in London and a smaller number yet in rural areas, where the majority of produce is locally sources. Cafes are mostly incorporated into health food shops and organic stores, which cater to high-end clientele.

Leading supermarkets account for about two-thirds of organic food sales. Most carry an ever-increasing range of products; some even feature their own-label of organic goods. Leading chains all expect to achieve very large increases in organic sales; thus they promote U.K. organic production and encourage conventional growers to convert to organic.

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In addition to supermarkets, there are an increasing number of independent retailers selling organic products, including not only fresh food but also a wide range of dairy products, bakery goods and processed foods and drinks.

Box schemes are a popular retail venue in the United Kingdom: fresh, seasonal organic food is assembled and delivered to subscribing households, either directly to the door or to a central drop-off point. Individual growers, wholesalers and organic buyers use this method to supply food to more than 45,000 families in the United Kingdom.

Germany. This country is not only one of the world's largest organic markets, but also one of the biggest producers of organic food products.

In recent years, demand for organically produced food products has been a veritable market phenomenon in Germany, growing by 5 to 10 percent annually.

Still, organics account for only about 2 percent of sales, a fact that's greatly attributed to a lack of uniform labelling. Total organic food sales in Germany were estimated at roughly \$2 billion in 1998. Surveys indicate that consumers are primarily motivated by health concerns; organics are perceived to be free of chemical residues and food additives. The current debate about the role of genetically modified food products has also boosted demand.

During the past 20 years, organic marketing has come a long way in Germany, from small neighbourhood organic stores to today's variety of venues:

1. Direct Marketing by Farmers. This chain of farmers' markets is active in sales of fruits, vegetables and poultry.
2. Specialised organic stores. Nearly 5,000 specialised organic and health food stores sell fruits, vegetables, dairy, meats and fresh food preparations.
3. Organic discount stores. These recently established stores report great success, proving that some organic customers also demand low prices.
4. Internet and mail order. A major German mail-order service recently announced that it might expand into the food mail-order business.

Studies report that the average organic buyer is between the ages of 35 and 50. Affluent, educated professionals increasingly outnumber lower income organic customers. Women make most purchases.

Organic food is still a niche market in France and represents less than 1 percent of total retail sales, it constitutes a growing selling force. While the range of organic foods in France is limited, the organic message is proving to be an important rallying cry. The French government has even implemented an action plan to stimulate domestic production of organic agricultural products.

French imports of organic food products have risen steadily by 20 percent since 1993, reaching 30,000 tons in 1998. Food processors in France are in short supply of organic ingredients such as exotic fruits, nuts, honey and milk, as well as grains for animal feed. Best prospects include grains, almonds, pistachios, dried fruits, flour, tropical fruits, milk and organic proteins for animal feed.

A few areas are almost unexploited: vegetarian meals, veggie burgers, salad dressings, sauces, ethnic dishes, baby foods and soups.

Argentina: About 85 percent of the output from Argentina's active organic production sector is exported, mainly to Europe, with smaller amounts going to the United States and Japan. Organic production has been expanding by 25 percent annually for the last few years and is currently at \$20 million. Rich in natural resources, Argentina grows a wide range of organic commodities such as grains, oilseeds, vegetables, pulses, fruits, livestock and more on land that traditionally has been farmed with minimal use of agro-chemicals.

Israel: The majority of Israel's organic horticultural production is exported to Europe. The focus is on fresh produce including cherry and other tomatoes, potatoes, peppers, carrots, cucumbers, avocados, and white and red grapefruit. To avoid competing with European production directly, Israel has created a niche in Europe's speciality and off-season markets.

Mexico: Organic production in Mexico is on the upswing. From 1996 to 1998, area devoted to organic increased 140 percent from 23,000 hectares (56,800 acres) to 55,000 hectares (135,900 acres). Mexico produces a diversity of crops: coffee, tomatoes, hot peppers, cucumbers, onions, garlic, peas, melons, squash, eggplant, apples, sesame, beans, chickpeas, blue corn, peanuts, vanilla, pineapples, herbs, avocados and more. Most of Mexico's organic output is destined for the export market, primarily the United States.

With demand outpacing supply in many categories, the world organic market is in a unique stage of development. Ukraine suppliers may find it advantageous to begin now

making connections overseas and establishing an organic farming as part of their long-term marketing strategy.

Organic farming can be defined as an approach to agriculture where the aim is:

To create integrated /humane/ environmentally and economically sustainable agricultural production systems/ which maximise reliance on farm-derived renewable resources and the management of ecological and biological processes and interactions/ so as to provide acceptable levels of crop, livestock and human nutrition, protection from pests and diseases, and an appropriate return to the human and other resources employed.

As such, the objective of sustainability lies at the heart of organic farming and is one of the major factors determining the acceptability or otherwise of specific production practices. The term 'sustainable' is used in a wider sense, to encompass not just conservation of non-renewable resources (soil, energy, and minerals) but also issues of environmental and social sustainability. The term 'organic' is best thought of as referring not to the type of inputs used, but to the concept of the farm as an organism, in which all the component parts - the soil minerals, organic matter, micro-organisms, insects, plants, animals and humans - interact to create a coherent whole. In many European countries, organic agriculture is known as ecological agriculture, reflecting this reliance on ecosystem management rather than external inputs, chemical or otherwise.

The key characteristics of organic farming include:

- Protecting the long-term fertility of soils by maintaining organic matter levels, fostering soil biological activity and careful mechanical intervention;
 - providing crop nutrients indirectly by using relatively insoluble nutrient sources which are made available to the plant by the action of soil micro-organisms;
 - Nitrogen self-sufficiency through the use of legumes and biological nitrogen fixation, as well as effective recycling of organic materials including crop residues and livestock wastes;
 - weed, disease and pest control relying primarily on crop rotations, natural predators, diversity, organic manuring, resistant varieties and limited (preferably minimal) thermal, biological and chemical intervention;
 - the extensive management of livestock, paying full regard to their evolutionary adaptations, behavioural needs and animal welfare rearing;
- careful attention to the impact of the farming system on the wider environment and the conservation of wildlife and natural habitats.

As the result of implementation organic farming will be ecolabelling. Ecolabels are a suitable instrument for indicating the environmental quality of a product to consumers. In particular, they reduce consumers' need to obtain information on the products environmentally relevant qualities. The ecolabel's symbol signals a certain environmental quality and may be taken account of in making a purchasing decision in addition to the price. It is assumed that this increases sales of the labelled products or creates the potential for higher prices.

Ecologically certification of clean products can provide by the Government Statutory of standardization, metrology and certification.

In this time this organization do not provide ecologically certification. Also certification ecologically clean products can conduct private centers.

Figure 1 The ecolabel's symbol of the project "Ecologically clean product"

First step in this activity made project "Ecologically clean product". Project "Ecologically clean product" foresaw the next measures:

1. Conducting careful examination in the laboratory of Ministry of health service and in the independent experimental institutes of food on maintenance of harmful admixtures stuffs, pesticides, herbicides, hormone preparations, toxic admixtures and on the criteria of microbiological examination and criteria of quality;
2. Bringing inferences of laboratory researches of food products in the general register and fixing positive results of verifications in the ecologically quality certificate.
3. Marking packing ecologically clean product by the special sign, which has legal defense of state.

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4. Conducting the ecological educational program among the population of Ukraine 5. Advertising producers, that conformable all requirements of the project "Ecologically clean product".

But in this time the project still "paper project". All proclaimed principles du not realized. We think what this project can be restart with the farmers end another participators. Farmers, agricultural enterprises, forestry enterprise and another participants can organize that center. Wholesale buyers and processors of organic products require that products they buy be certified by a recognized organization. Consumers at the retail level are also becoming aware of the significant of food label "certified organic". The USA has a good experience in this field. The Organic Food Act requires that products labeled "organic" or "organically produced" meet certain requirements, including certification by organic certification organization such as Pennsylvania certified organic (total organic certification organization 40, including 28 private). For quality for certification all farmland must be free of prohibited materials for at least three years prior to harvest.

Figure 2 The copy of organic certificate of the Pennsylvania certified organic



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All farmland must be free of prohibited materials for at least three years prior to harvest. Prohibited materials include, but are not limited to:

chemical herbicides, pesticides, fungicides and fertilizers. Growers must recognize the importance of nurturing the soil and follow a specific organic plan. Adequate buffer areas must separate organic land from land being farmed conventionally. Livestock is raised on organic feed under humane, sanitary conditions without the routine use of antibiotics or other harmful drugs. Each certified farm is inspected annually by a licensed independent Organic Inspector who personally visits the farm or processing facility and reviews the producer's records such as field histories, inputs into the system, livestock care and sales records. Farmers can place a portion of your farm under organic management with an approved plan to certify other areas as they become eligible. In addition to the Certification Manual, PCO holds workshops and provides information on organic production and resources to members.

The cost of annual certification ranges from approximately \$275 to \$1,500, based on gross income from organic sales. Additional inspection fees apply in certain circumstances.

That center can create the contacts to the IFOAM (INTERNATIONAL FEDERATION OF ORGANIC AGRICULTURE MOVEMENT) for assistance and international admittance of the certificate.

Voluntary certification by means of an ecolabel in order to emphasize the relative environmental soundness of products could be a way of incorporating environment-related aspects into marketing. However, many firms are still quite reserved about the application of this instrument for consumer information.

Some suppliers in "green" market niches are attempting to optimize their full range of products - throughout the entire life cycle - in environmental terms. In co-operation with other actors along the product chain the greatest possible environmental soundness is being sought. In this case, ecolabels are interesting only if they refer to the best available technology and allow for a clear-cut differentiation in relation to the "conventional" market.

Conclusion

The lessons learned from the world experience provide the elements of a possible roadmap for Ukrainian agricultural industry. Demand for organic products around the world is at an all-time high, organic food is still a niche market in USA, Germany, U.K., France and other countries. Ukraine farmers may find it advantageous to begin now establishing an organic farming as part of their long-term marketing strategy. For establishing an organic farming will help ecological certification of clean products. In this time government organization does not provide ecological certification. Farmers, agricultural enterprises, forestry enterprises and other participants can organize private center for ecological certification of clean products. Private center can be organized upon restarting project "Ecologically clean product".

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