AGRICULTURA ECOLOGICĂ, AGROTURISM ȘI ORGANISMELE MODIFICATE GENETIC: EXPERIENȚA POLONIEI PENTRU MOLDOVA

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ORGANIC AGRICULTURE, AGROTOURISM & GENETICALLY MODIFIED ORGANISMS: POLISH EXPERIENCE FOR MOLDOVA

Proceedings of International Conference.
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ЭКОЛОГИЧЕСКОЕ СЕЛЬСКОЕ ХОЗЯЙСТВО, АГРОТУРИЗМ И ГЕНЕТИЧЕСКИ ИЗМЕНЕННЫЕ ОРГАНИЗМЫ: ПОЛЬСКИЙ ОПЫТ ДЛЯ МОЛДОВЫ

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International Conference "Perspectives of Organic Agriculture, the GMOs Problem and Agro- and Ecotourism Development for Moldova and Polish Experience in these Spheres"" is held in Chisinau, Moldova, October 29, 2005, in frames of international fairs "Farmer-2005" and "Mold-Eco-2005", in premises of "MoldExpo" Complex. It was organized in frames of the Projects "Agritourism and organic agriculture the chance of developement of the Moldavian village" and the "The development of rural areas as an element of democratization of the Moldavian village - exchange of experiences Poland - Moldova". The projects implementing NGOs: the Lower Silesian Foundation for Sustainable Development (Wroclaw, Poland), and Moldovan NGOs: Eco-TIRAS International Environmental Association of River Keepers (Chisinau), Habitat Agency for Local Development (Rezina) and Pelican NGO (Bender). The projects were supported by the Ministry of Foreign Affairs of Poland and RITA Program of the Polish-American Freedom Foundation.

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CUPRINS - CONTENT - СОДЕРЖАНИЕ

Capitol I. AGRICULTURA ECOLOGICĂ - ORGANIC AGRICULTURE - ЭКОЛОГИЧЕСКОЕ СЕЛЬСКОЕ ХОЗЯЙСТВО

PRODUSE ECOLOGICE – CALEA SPRE O ALIMENTARE SĂNĂTOASĂ

Anatolie Agachi, OO"AGRO-CONS", Drochia, MOLDOVA

Produsele ecologice sunt o noutate atît pentru consumatorii locali, cît și pentru producători. În prezent pe piață putem întîlni produse ce conțin sau puține produse nocive - provin de la producătorii mici, care nu au posibiltate să aplice tehnologii performante, ce includ o fertilizare a solului puternică și folosirea pesticidelor de ultimă oră, și producătorii mari, care aplică în practică toate acestea, dar nu dispun de o cultură de aplicare a lor, producția lor avînd un conținut înalt de nitrați și substanțe, controlul cărora nu se face.

Treptat producătorii mici vor fi excluși de pe piață și populația va consuma produse cu conținut ridicat de produse dăunătoare sănătății.

Totodată producerea produselor ecologice ar permite unor producători să-și realizeze producția, care dacă va fi propagată la un nivel cuvenit va avea un segment bun pe piață.

Recent fermierul Maria Darii din satul Chetrosu raionul Drochia a participat la o vizita in Polonia ce tine de Agricultura Organica: "In Polonia produsele ecologice sunt întrebate din ce in ce mai mult deoarece cumparatorii doresc produse fara chimicale si de aceia multi fermieri si-au inceput afacerea ce tine de domeniul produselor ecologice. Consumatorul nostru insă consuma produsul mai intai cu ochiul, si nu gustativ" - afirma fermiera Maria Darii.

OO "AGRO-CONS" își propune să organizeze în raionul Drochia companii de informare despre productele ecologice atît pentru consumatori, cît si pentru producatori. Consumatorii trebuie informati despre importanța consumului de produse ecologice, produse certificate cu excluderea toxinelor, pentru sănătatea sa. Ideia este că nu tot ce se produce este si consumabil. Moldova este o țara cu pămînturi fertile și ne-ar permite pe lîngă o tehnologie adecvată, să cultivăm produse ecologice. Prin o alimentarea sănătoasă a populației dorim să promovăm conceptul: Sănătatea populației vine din consumul de produse ecologice.

THE PARTICULARS OF ORGANIC AGRICULTURE IN THE REPUBLIC OF MOLDOVA

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Introduction

Organic agriculture (OA) in the Republic of Moldova is very old and very young. It is very old because there were times in our history when the country had endless woods that harmoniously alternated with fertile fields boasting lentil and wheat and corn, excellent vineyards and orchards and green hayfields and pastures. It was not an occasion of wonder to see a fox, or a pheasant or a deer then, while cranes were to be seen living right in people's yards.

OA is very young in the Republic of Moldova because very few of the current farmers are aware that farmers need to be concerned about the state of the environment in their area, that farming without chemicals is possible, that such farming exists elsewhere. The very notion of OA is misunderstood even by many agricultural researchers, while most farmers have never heard of it.

Having acknowledged this situation, NGO BIOS has initiated in 1998 a long term multilateral research of opportunities for OA in the Republic of Moldova. While the research is still on-going, there are a number of aspects that can already be reported as positive achievements and products ready for trial and implementation.

Methodology

The research methodology included first of all traditional soil, water and biologic diversity research methods, for one cannot apply OA before finding out the current state of the natural resources. Such research was conducted in NGO BIOS pilot villages Cretoaia, Anenii-Noi district, Tartaul de Salcie, Cahul district and Butesti, Glodeni district. Study of existing literature was another frequently employed method. Observation method was used during a study tour in OA undertaken by 2 NGO BIOS staff. Along with the above traditional methods, a less frequently employed method was used, the contest method, whereby children and students of agricultural and ecological higher school and university institutions had collected through communication with their grandfathers and

grandmothers old time skills in chemical free plant protection, soil fertility improvement, maintenance of soil moisture, etc. Such knowledge is being accumulated in NGO BIOS for trial and recommendation for use to OA farmers. Yet another, relatively novel research method used was Participatory Farmer Research (PRA) with its multitude of tools that has yielded a number of interesting options for OA initiation both in pilot villages and elsewhere. The participatory generation of OA knowledge by modern farmers was also employed through facilitation using PRA tools during training events in OA for farmers of Stefan-Voda, Cahul and Soroca districts.

Findings

The findings of NGO BIOS research up-to-date are well in line with the general OA principles shown below in italic and underlined format. The argument below the text of the OA principle shows conclusions of NGO BIOS research or project products that confirm the viability of the principle for the conditions of the Republic of Moldova and the need for its further pursuance within the current and future farming systems within the country.

Principle 1. To produce sufficient quantities of high quality food, fiber and other products.

As shown by work in pilot farms, those farming systems are viable that use high diversity in their crop mixtures which allows both for crop rotation and thus fertility improvement, and for safer income generation.

Principle 2. To work compatibly with natural cycles and living systems of the soil, plants and animals in the entire production system.

The research has shown almost total lack of knowledge in farmers about life cycles of cultivated crops, their compatibility, of pests and their natural predators, of weeds, the specific features of the birds and small animals living in the area of farming activity. The filling in of this knowledge gap was revealed as an important prerequisite of large scale transition to OA in the country.

Principle 3. To recognize the wider social and ecological impact of and within the organic production and processing system.
A research of the social condition of farmers and rural population in general carried out within two World Bank projects by NGO BIOS staff (in 1998 and 2005) showed that much of the current degradation of natural resources and biologic diversity is conditioned by po-

verty and low standard of living of the rural population. This conclusion led to the concept of rural development as a system of actions aimed at improving the social, economic, ecological and cultural condition of rural people. Observation of environmental protection activity in Biesti village by a local ecological NGO showed that in isolation from other concerns of the people nature protection has low efficiency. As an action research endeavor, NGO BIOS in cooperation with NGO "Mester popular", the Section for Traditional Art of the Academy of Sciences of Moldova, the Ministry of Health and Social Protection and the Association of Women's Organizations of Moldova tired to foster business and cultural development within the village, which, in its turn, has conducted to a certain improvement of the condition of natural resources in the area.

Principle 4. To maintain and encourage agricultural and natural biodiversity on the farm and surrounds through the use of sustainable production systems and the protection of plant and wildlife habitats.

While monoculture and collective management of land in the past has conducted to crucial loss of skills among farmers in managing the very rich crop mix possible in Moldova, its restoration is needed both for income generation by farmers and for promotion of better nutrition patterns in the country which while having the best tradition of growing a wide variety of legumes, vegetables, melons, berried, fruits, grapes, nuts and cereals, relies on a rather limited diet of meat, dairy, eggs and a few most widely spread vegetables and potatoes. The development of a wider variety of crops is also beneficial for the processing and for the catering industries, which currently rely to a great extent on imported raw materials and on fast food technologies. In line with this NGO BIOS has carried out a small research of old time diet of Moldovans still maintained at some monasteries. The research revealed a healthy almost totally vegetarian diet made of a wide variety of cereals, legumes in combination with local spices and herbs which is still applied by nuns and sick people that stay at monasteries for health recovery. The research was carried out at the recommendation of World Health Organization for publication of a brochure or urban agriculture in Moldova.

Principle 5. To maintain and increase long-term fertility and biological activity of soils using locally adapted cultural, biological and mechanical methods as opposed to reliance on inputs.
The research of fertility maintenance practices of the old Moldo-

vans identified very strict rules for incorporation into the soils of any biological waste generated on the farms and in the households, including cattle manure, bird droppings, wood cinders, sawdust, etc. Hardly any farmer in modern Moldova does it any longer. The reverting to the forgotten but useful practices is being recommended by NGO BIOS to its rural partners as a viable alternative to the current excessive use of mineral nutrients.

Principle 6. To maintain and conserve genetic diversity through attention to on-farm management of genetic resources.

In the 18th century Moldova was famous for its varieties of grapes, plums, and was exporting them to Europe in dried form. Very tasty local varieties of apples, quinsy, pears, tomatoes, pepper are still in existence in villages; however they are not promoted for use at the national level because their low transportability and unsuitability for export. However, while unsuitable for export these varieties are valuable for local consumption, local agro- and ecotourism, canning. Therefore they should be protected and cherished. While some Moldovan researchers suggested the need creation of a national genetic plant seed fund, the idea has not yet been implemented, the national varieties being lost every year in greater numbers being replaced by imported varieties which are good for transportation in fresh conditions but have almost no natural taste.

Principle 7. To promote the responsible use and conservation of water and all life therein.

During Soviet times much damage to the environment of Moldova was done through drainage of marshes and natural ponds for extension of agricultural surfaces. While agricultural area has increased the overall productivity has dramatically decreased through violation of the natural balance. Within BIOS pilot villages attempts are made to restore water resources to their older state or to make use of existing water sources for improvement of the local natural climate and natural resources. Thus, in Tartaul de Salcie, Butesti, Cobani, Cretoaia, and several other villages support was provided to actions for cleaning of wells and springs, ponds and lakes, rivers and for actions preventing their pollution.

Principle 8. To use, as far as possible, renewable resources in production and processing systems and avoid pollution and waste.

In the south of Moldova where vineyards and orchards are predominant a lot of waste material is produced in the spring during pruning of trees and vineyards. The waste material was usually burned in the field which produces air pollution. A brainstorming with village population of BIOS southern pilot farm, Tartaul de Salcie revealed that the thin limbs of trees and the vines produce steady heat in wood ovens and are suitable for baking bread and pies in summer. Thus, local population has started to use all the waste in their households thus eliminating a vast pollution factor. The adoption of the practice in other villages is bound to have quite a high effect in energy conservation and prevention of air pollution.

Principle 9. To foster local and regional production and distribution.

While local market is duly exploited by farmers and other producers in the country, there are still opportunities for further extension of the local market, especially now in conditions of more expensive energy resources. Especially important is the local consumption of vegetables, grain and legumes, which are undervalued by Moldovan people in comparison with meat produce and the dairy. Since the current older generation of Moldovan underwent a terrible famine artificially organized by the Soviet regime in the area, in later times the households took to developing small family herds of domestic animals and flocks of different birds. Thus, the research shows a typical rural Moldovan household to comprise a milking cow and a calf, one or two pigs, 5 to 12 and sometimes to a few dozens of sheep and goats, and 50-100 hens, ducks, geese, turkey. This conducts to overproduction of animal products and in case when no market is found for the produce it is all consumed in the household with a disproportionately lower consumption of fruits and vegetables which some rural people have come to consider as food fit mainly for animals.

This situation conducted to lower health indices in the rural population with a high mortality rate due to heart and blood circulation diseases produced mainly by inclusion of a high share of animal protein and fat in the diet. NGO BIOS has undertaken to improve dietary culture in the pilot and other villages through incorporation of healthy diets in its agricultural publications and in training events. Thus, the "Book of the farmer" has a special chapter on healthy diets, adequate combinations of foodstuffs and significance of vegetal fiber for digestion and health. The education of the rural population in healthy diet while necessary for the sake of improving the health of the people has also the potential to increase the local market for vegetal production, including organic food.