

From Food Security to Food Safety: urban development in Bucharest

The expected integration of Romania in the EU has led to a significant change of perception on environmental issues by policy makers both in the rural areas as well in urban sites. With over 2 million residents, Bucharest is the largest city in Romania, has the lowest rate of unemployment in the country (4%) and faces high residential pressure. In the past decade, urban agriculture was seen as a minor issue at national and local level, but recently the quality of periurban agriculture and the impact of the industry on the quality of municipal food consumption have received increasing attention.

A multi-disciplinary team project (SWAPUA) funded by the EU was the first to look at the performances and needs of urban agriculture in Romania (De Zeeuw, 2002). The major outcome is that today the Local Action Plan for Environment Bucharest (*Regional Environment Plan Bucharest - Ilfov, 2004, Ministry of Environment*), coordinated by the Regional Agency of Environmental Protection Bucharest, has recognised the socio-economic and environmental importance of urban farming practices in the city.

Since 1998, the periurban agricultural area under cultivation in Bucharest has dropped from 4130 ha to 3760 ha. The official records indicate that there are 81 agricultural commercial entities, 161 family enterprises and almost 4000 small individual farms smaller than 1 ha in size scattered on the outskirts of the city. Some of them, having less than 0.3 ha, were not counted in the overall municipal agricultural land figure. The main crops are cereals, vegetables and fodder (*Agricultural Department of Bucharest, Annual Report, 2004*).

The uncontrolled expansion of the city made the municipal authorities temporarily cease authorisation of new building construction in the northern agricultural zone (the most exposed to residential pressure).

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In 1999, the SWAPUA assessment of the reasons for undertaking agricultural activities on the outskirts of Bucharest revealed that only 5% of the interviewed farmers gave income generation and self-employment as the main reason. Since then, the share of the producers less oriented towards surviving and subsistence farming and more focused on selling produce has continually increased. 9% of the farmers on the outskirts of Bucharest are now market oriented (*Socio-economic database, RISSA, Bucharest, 2005*). The average wages at country level continuously increased and doubled between 1999 and 2005.

There is a constant rise in the demand for food in terms of quantity in Bucharest (proved by the logarithmic increase in the number of super/hypermarkets built between 1996 and 2005). But as social research has ascertained, satisfaction of this demand has always been accompanied by some degree of anxiety (Fischler, 1988 cited by Torjusen et al., 2004). In Bucharest, one of the fears has centred on the doubtful quality (taste, scent and consistence) of the fresh vegetables and fruits (the imported products prevail over the local ones in the municipal markets).

BUILDING UP A PLATFORM

Within a project targeted on increasing the quality of available land for farming and the quality of periurban agricultural production delivered to the municipal market (*ASSP nr. 2482, Platform for ecologizing the local resources and municipal market oriented vegetables production granted by the Ministry of Agriculture, Forestry and Rural Development and the World Bank*), a platform has been set up,

comprising representatives of the commercially oriented periurban farmers, research, education and extension units, NGOs, administrative authorities (heads of the public vegetables markets and municipality departments), the Regional Agency of Environmental Protection Bucharest and the Municipal Office for Consumers Protection. During a two-day meeting (28-29 July 2004), a common action plan was developed and agreed upon and then the actors assumed responsibilities according to their experience, resources, capabilities and level of decision making. The project actions included technical research (socio-economic, environmental and market assessments), on-farm demonstration and training developments, and wide use of extension tools (leaflets, practical guides, media campaign, etc). Part of the planned activities were financially supported by the project, whilst other activities were supported by the actors' own resources, like allowing periurban organic farmers to sell eco-products on tax-free stands in the public markets. The platform succeeded in building bridges between different and complex networks and urban farming.

CONVERSION TO ORGANIC FARMING

The project continued with a survey among the small-scale periurban vegetable growers comprising over 400 questionnaires as well as on-field extensive interviews. The assessment revealed that converting to organic production would be not make a big difference, since 80% of the investigated farmers use less than 100 kg N -



Tomato crop in a periurban organic demonstration plot

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Periurban farmers visiting an organic demonstration plot

fertiliser/ha and half of them apply less than 3 chemical pest-control treatments/year/crop. Only 29% of the respondents identified an organic product as one that is inspected, certified and labelled as such, while 51% confused organic with “natural”. The large majority still knows nothing about organic regulations. Nevertheless, over half of the respondents would like to undertake a conversion to organic. This interest is directly related to the education level of the farmer. An interesting result is the identified difference in the quality of the inputs used by a significant number of farmers on the parcels cultivated for self consumption vs. parcels cultivated for the market. One third of the commercially oriented farmers using synthetic agrochemicals recognised that they strongly limit the use of these on the self-consumption parcels.

Part of the survey was oriented at consumers at the municipal fresh vegetables market. A similar percentage of respondents in this group (29%) were aware of the identification of organic products. 20% of the respondents were willing to buy organic products at a slightly higher price than conventional ones. 77% of the respondents prefer to purchase vegetables produced in Romania rather than imported ones. The market interviews revealed that some “food scares” emerging from the West (like salmonella, mad cow disease, genetically modified foods and crops) have been noticed by the most educated and high-income consumers. Moreover, many low and middle-income aged consumers expressed the view that urbanisation increases the distance between producers and consumers, thereby reducing the possibility that

relationships between both parties are based on “personal” trust.

Learning from experiences in Western Europe, where organic farming seems to be more relevant next to urban settlements (Van Hirtum et al., 2002), the project developed 6 demonstration plots in the periurban area of Bucharest. At the same time, an intensive organic training programme was implemented and well received by the periurban farmers. But next to overall positive economic results (in 2004, average yields of tomatoes ranged between 36.7 and 44.3 t/ha and reached profits up to 2.8%), at one farm located the closest to Bucharest, it was perceived that high exposure to pests and climatic extremes was related to its close proximity to a residential area). The farm located on the municipal border faced yield losses of up to 40% due to a strong aphid attack followed by a summer storm with heavy rainfall and hail (the climatic event occurred only in the city on 26 July 2004). The coordinators of the project suggested that the organic network should be redesigned to be located at least 10 km further away from the municipal border.

ASSESSING AND IMPROVING THE LAND QUALITY

The industrialisation process that has taken place during the last decades in Bucharest has caused diverse environmental problems due to polluting emissions generated by the chemical industry, factories, power stations and traffic. In addition, agricultural practices undertaken on the city outskirts contributed to environmental pollution due to the unsuitable rates of mineral/organic fertilisers and pesticides used. On several periurban agricultural sites, study cases revealed nitrate, heavy metal and pesticide levels in the soil exceeding the maximum allowable limits (Stefanescu and Dumitru, 2002).

A nationally funded project was initiated in 2005 to map urban land resources, vulnerability and pollution levels (AGRAL nr. 342, “Evaluation of the agro-ecologic potential and quality management of the agricultural land exposed to the environmental impact of urban settlements” granted by the Ministry of Education and Research). The maps will be used by the Municipal Office for Agricultural Consultancy as tools for improving the

advisory services delivered to farmers (limiting cultivation, reshaping crop structure on contaminated land, introducing rehabilitation measures, etc) and by the General Municipality to find viable ways to extend the city’s area (a proposal that is currently being debated in the media) while preserving the land fertility and meeting infrastructural needs. A next step in this process will be the design of an urban soil monitoring system for Bucharest (that will be connected to water and air monitoring systems).

Each month Bucharest releases 70,000 tonnes of wastes. The General Council of the Municipality has decided to implement starting in 2006 a separate waste collection system and to simultaneously organise an intensive educational programme for the residents. One of the project’s tasks is to closely connect this decision with the periurban organic farming needs.

As a result of the specific semi-arid climatic features of Bucharest, the most important farm management elements for organic matter are based on plant residues and green manure. This is a consequence of low stocking densities and the resulting necessity of importing animal manure, which is the case for most of the organic farms in the Mediterranean countries (Vizioli, 1998, cited by Stolze et al., 2000). To address this issue, an urban farming waste selection, disposal and composting brochure, based on the experience of the Vienna Municipality in the field, will soon be printed and distributed among periurban farmers.

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