



Eric Goewie

Transition to **Ecological** Urban Agriculture; a Challenge

Ecological agriculture is seen as especially relevant to the urban setting. The introduction in rural settings of ecological practices is still debated, although it seems that coexistence of both conventional and ecological farming in an adequate mix seems to be the best option. This begs the question whether similar arguments apply to the urban setting and which lessons can be learned for urban agriculture (1).

Editorial

Ideas on ecological agriculture differ and various concepts exist (e.g., ecological or organic agriculture, permaculture, biodynamic agriculture). Its simplest definition is "agriculture without the use of chemical inputs (e.g., synthetic fertilisers, pesticides and herbicides, or hormones)". Yet others see it as more than applying ecological practices to maintain soil fertility, to manage crop and animal health and, for instance, understand it as a vision on healthy products and as a way of life. (For more on concepts, see Goewie on p.5).

However, the discussion in this issue is not about definitions, but rather focuses on the process of "ecologising" urban agriculture and its relevance for sustainable urban development.

WHY ECOLOGICAL URBAN AGRICULTURE?

"Ecologising" urban agriculture is an important issue for a number of reasons. The proximity of urban agriculture to large numbers of people and sources of drinking water demands means that the health and environmental risks associated with urban agriculture be minimised. The transition to ecological urban agriculture will remove the risk of contamination of soil, water and produce, by residues of agrochemicals, hormones, and through other detrimental effects of conventional agriculture.

Some urban farmers may adopt ecological practices because of environmental concerns, or see it as a way of living. Others may change to ecological farming practices for economic reasons. Where technologies are still predominantly traditional, the introduction of modern ecological practices may actually enhance the production. In cases where already substantial amounts of chemical inputs are applied, the introduction of ecological practices may reduce the production costs through savings on chemical inputs and probably reduce productivity at least initially, a situation sometimes imposed upon a region, as was the case in Cuba. In the urban setting, niche markets also exist for organically grown food.

A more ecological agriculture may also be sought since it stimulates the recycling of urban organic wastes and matches well with modern approaches to urban sanitation (eco-sanitation). Ecological agriculture is also better adapted than conventional agriculture to being combined with other functions like recreation, landscape management, maintaining biodiversity, education of youth, regeneration of deteriorated areas, etc.

Although ecological urban agriculture is not the ultimate solution to environmental degradation, economic decline or poverty alleviation, it is a positive and appropriate way of looking at sustainable (urban) development, working with nature and worth actively promoting.

TRANSITION TO ECOLOGICAL URBAN AGRICULTURE

But how can such a transition to ecological agriculture be realised? What steps should be taken? Which strategies can be applied with success? And what are the main constraints that have to be dealt with?

The introduction of ecological agriculture into the rural setting has been confronted by several constraints, including opposition to the alleged ideological character of ecological agriculture, a lack of awareness among policy-makers, lack of information and technical assistance to urban farmers, technical reasons (e.g. lack of organic materials), economic reasons (e.g., high labour requirements), etc.
+ (initial) lower output!

Urban practitioners may learn lessons from what is happening in the rural areas. However, the constraints and opportunities for “ecologising” urban agriculture may be different from those for rural agricul-

ture, since the local conditions are different. Some of these differences include are:

- ❖ urban farmers are able to establish more direct relations with the producers and vice versa
- ❖ have greater and easier access to urban organic wastes and wastewater
- ❖ have land shortages
- ❖ have greater difficulties integrating crop and livestock farming, and internal recycling; and
- ❖ part of the urban farmers are farmers by choice or necessity, while it is usually by birth in rural areas.

Appropriate policies and support strategies should be developed, which may include the provision of information to urban farmers on ecological farming practices, support for the establishment of decentralised composting facilities, creation of farmers’ markets, shifting subsidies from chemical inputs to composting activities and natural fertilisers and pesticides, participatory action

PERCEPTIONS OF ORGANIC AGRICULTURE by URBAN VEGETABLE FARMERS AND CONSUMERS IN GHANA

A typical phenomenon of urban agriculture is its specialisation in perishable products. In Kumasi, Ghana, as in other cities in sub-Saharan Africa, vegetable market production takes place on inner-city lowland areas, close to stream and drains or in the periurban environment,

where high amounts of seeds, manure/fertiliser and pesticides are used. Research is undertaken into biological production methods and to risks reducing options beyond the farm level, i.e. at markets and households, but it shows that the adoption rate of biological farming methods remained very low among vegetable growers. How to convince urban farmers and consumers?



SELBSTERNTE: A NEW CONCEPT OF URBAN ORGANIC FARMING IN AUSTRIA

Cities like Vienna (Austria) are known for great monuments and wonderful art. At first glance, urban agriculture seems to be limited to public baroque gardens, some vineyards, *Schrebergärten* and intensive vegetable growing. But recently, clever consultants, organic farmers and “green-minded” consumers have developed a new concept of urban organic farming that allows new ways of interaction between organic farmers and urban citizens in residential areas.

research on technical problems encountered by urban farmers and gardeners, etc. Such policies would gradually lead to a more ecological way of farming within the reach of all urban farmers, which would be a step forward towards healthy food grown by healthy people, in healthy cities.

MAIN ISSUES DISCUSSED

This issue starts with a discussion of concepts, a review of experiences of the transition to ecological agriculture gained in a rural setting, and the identification of different forms of ecological agriculture (Goewie on page 5). Getachew (on page 18) uses the Ethiopian context to highlight different concepts and aspects of ecological agriculture and appropriate techniques; while on page 23, Danso et al. illustrate perceptions of ecological agriculture of farmers, planners and consumers in Ghana.

In the article by Santandreu and Dubbeling (page 9), a wider perspective is taken in exploring the links with biodiversity and poverty alleviation in Latin America. Permaculture, or Permanent Agriculture, goes even further: basically, food is grown according to ecological principles, but with a few important additions. Permaculture actively promotes local community trading structures, and self-sufficiency. This is taking the discussion a step further than ecologising agriculture. It is strongly rooted in sustainability, which includes an emphasis on the social and economic side of things as well (see experiences from the UK and Cuba on pages 21-22).



The environmental gains of ecological agriculture are quite obvious, due to the absence of chemicals, and good care for the soil and animals. Some authors argue that it could be a solution for social and economic problems as well. Some organisations actively promote ecological agriculture as a way of community building (see the article of Abalimi on the positive effects on communities living in the Cape Flats, South Africa). People engage in growing healthy food together, learn to collaborate, to grow and how to market their vegetables. Ecological agriculture can help support people to gain control over their lives, as well as their own food production. It can revitalise old knowledge, alongside the introduction of new techniques, thereby revitalising local culture. In Costa Rica, students are involved in organic urban agriculture projects as part of their studies, thereby getting in touch with their local communities (see page 36).

Several authors indicate that a major constraint to ecologising urban agriculture lies in their government's active promotion of conventional agriculture, by way of subsidies on chemical inputs, among others, and not giving attention to - sometimes even discouraging - ecological practices. Nuppenau reflects on page 29 on the changes in the perceptions needed at the planning level, in order to give ecological urban agriculture, with its potential positive benefits, a chance. On page 12 Vogl and Axmann introduce a successful concept from Austria on how to bridge the gap between planners, farmers and consumers. Angeles on page 32 describes differences in perception between men and women. The articles on Cuba (page 25 and 26) and Argentina (page 34) deal

with the role of local governments in the transition process towards ecological agriculture. In this process, several stages can be identified. On pages 15-16, an attempt is made by Galanti to sum up the steps needed.

One of the key factors in organic agriculture is the availability of organic material, compost and manure. In cities, large amounts of organic waste materials are available, and the composting of these materials is a good way to close the nutrient loop, to reduce costs of waste disposal, and to provide farmers with cheap composting materials. A problem, however, with commercial composting plants is that the compost may become too expensive for farmers (Furedy on page 38), one reason for many urban farmers to collect organic material from dumpsites, even though this material may be contaminated with (bio)chemical waste. The article from Getachew (page 18) shows that there are simple small-scale techniques to make the best use of what little waste you can get your hands on.

Besides knowing how to grow organic food, it is of crucial importance to know how to market it. Several articles (see for instance Vogl and Axmann, and Travez on page 17, Santandreu et al. and Small on page 30) speak of marketing problems due to location, irregularity and seasonality of production, size and appearance of ecological products, consumers' lack of trust in the green label or problems with certification standards. Certification can become a problematic issue if standards are set by the importing countries, thereby placing great pressure on urban ecological farmers. It is therefore important that countries develop their own certifica-

- 5 Organic Production *What is it?*
- 9 Biodiversity, Poverty and Urban Agriculture, in Latin America
- 12 *Selbsternte: a New Concept of Urban Organic Farming in Austria*
- 15 Integrating Ecological Practices into Urban Management
- 17 Certification
- 18 *The Living Garden: a Bio-intensive Approach to Urban Agriculture in Ethiopia*
- 21 Tackling Permaculture in the UK
- 22 Community Backyard Farming in Cuba
- 23 Perceptions of Organic Agriculture by Urban Farmers and Consumers in Ghana
- 25 Cuba's Organic Perspectives
- 26 Organic Urban Agriculture, A Real Effort in the City of Havana, Cuba
- 28 Training in Backyard Organic Vegetable Production in Michoacán, Mexico
- 29 The Creation of Viable Rural Urban Interfaces
- 30 Lessons from the Cape Flats Townships, ecological micro-farming among the poor in Cape Town
- 32 The Struggle for Sustainable Livelihood; Gender and Organic Urban Agriculture in Valencia City, Bukidnon, Philippines
- 34 A Strategy for Local Development of Lower-Income Urban Sectors
- 36 Urban Organic Farming; at the University of Costa Rica
- 38 Organic Waste at Low Cost: Dilemmas of a Transition Period
- 40 Risk Reduction in Sewage Irrigated Farming Systems in Hubli-Dharwad, India

tion processes (see Cuba experience, p. 22), and that such certification is accepted by importing countries.

Some authors (for instance Getachew, p. 18) argue that ecological agriculture stimulates the local economy and reduces energy use through recycling urban organic wastes, cutting down on transport costs, and by reducing food packaging by providing fresh and less expensive products, among other issues.

The articles from Cuba, South Africa, the Philippines, Mexico and Austria further provide successful local ecological urban agriculture initiatives and discuss the role of partnerships, gender, and extension in the transition process. The articles about the Philippines and Mexico show that women are enthusiastic about urban agriculture and that they are developing -amongst others- new management skills.



PAGE 34

A STRATEGY FOR LOCAL DEVELOPMENT OF LOWER-INCOME URBAN SECTORS IN ROSARIO

Argentina, like the rest of Latin America, is confronted with the challenge of combating structural poverty. Urban

agriculture – particularly when using organic methods – is seen as a viable and appropriate strategy for easing poor urban sectors. This article presents two cases in which this strategy was developed in two cities contrasting greatly in size: Rosario and Camilo Aldao.

THE NEED FOR A CONTINUED DISCUSSION

Taking into account the articles in this issue, the transition to ecological agriculture looks promising, although various constraints are identified. Readers are invited to continue to contribute to this theme, since many unknowns still exist and further examples are needed. We also invite critical evaluations of existing projects (approach, technical and economic results), discussion on the strategies to generate greater attention on ecological urban agriculture among local and national government authorities and also to generate more institutional support.

A special point of attention and discussion is the issue of gender. It is often stated that ecological agriculture requires higher labour inputs and that the major part of this labour falls under the responsibility of women, thereby burdening them even more. Is this also the case in urban agriculture? Can you confirm or falsify this statement? How can we avoid the negative effects on women and increase the positive effects?

Note:

(1) The original topic of this magazine was "Transition to Ecological Urban Agriculture and Appropriate Technologies". We received several articles on technologies, many of which related to ecological agriculture. Therefore it was decided that this issue should focus more on ecological urban agriculture, and to dedicate another UA Magazine issue, probably in 2003, to technologies and training in urban agricultural practices.



PAGE 36

URBAN ORGANIC FARMING AT THE UNIVERSITY OF COSTA RICA

According to a study, organic production has increased constantly in the last years in Costa Rica, involving a high diversity of crops. The Organic Farming Program of the University of Costa Rica works in research, extension, and teaching of soils, animals and plants, post harvest management, and rural development. This Programme coordinates all the activities on organic farming at the University and has cooperative links with other institutions both at national and international levels. This article narrates some of the experiences.

Myths about (Ecological) Agriculture

Ecological Agriculture and Permaculture are seen as more than producing crops without chemical inputs alone, but as part of a larger vision of a healthy life. Others do not want to go that far, but have their doubts about conventional agricultural production. Still others reject the claim that ecologically produced food is healthier. And although there seems to be increasing support for a strategy in which both (or rather several) types of agricultural production prevail, the arguments and prejudices have not changed over the years.

The following is based on material produced by the German Foundations "Scheweisfurth" and "Ecology and Agriculture" and the Dutch "Platform Organic Food and Agriculture", published in German and Dutch in 2000.

- 1) Hunger in the world prevails because there is not enough food. That is why we need (more) chemical inputs and biotechnological advances.

*According to the FAO, more than 800 million people in the world do not have enough food, **BUT** hunger is a result of poverty and lack of assets, (it is an access/distribution issue as well) not because there is just not enough food. Political systems, controversies and choices in types of food to grow, create local scarcities.*

- 2) Ecological Agriculture is not able to produce sufficient food to provide all people with food.

*On average, ecological farmers produce less than when using conventional practices, **BUT** in the European Union and the USA, a complete change to ecological farming would not lead to food shortages. It is intensive, conventional farming that has shown to be unsustainable in many areas – and therefore would lead to food shortages in the long term. Urban agriculture generally supplements food needs in the cities*

- 3) If conventionally-raised animals are able to achieve such high production levels, then these practices cannot be detrimental to them.

*Animals produced within the intensive bio-industry yield more than under ecological farming methods, **BUT** we have recently seen how unhealthy this can be for the animals and their bosses. (e.g. the BSE and Foot and Mouth epidemics)*

- 4) Organic products are too expensive and mainly for the elites

*Organic products are generally more expensive than conventional products in the supermarkets, **BUT** we actually end up paying three times for all the costs involved in non-organic products: i.e., over-the-counter costs, through taxes to sustain subsidies, and even higher taxes to cater for the negative effects on the environment.*

- 5) Ecological farmers are idealists and against technological innovations.

*Ecological farmers do not favour all of the technologies developed in the past decades, **BUT** definitely use modern techniques, while innovative technologies are developed in ecological farming.*

- 6) Organic products don't look attractive to consumers

*Organic products are less uniform, **But** many persons like the way they are produced, appreciate the lack of chemicals, and the taste (although the latter is indeed a matter of taste).*

- 7) Ecological production is deceitful

There are gradations in ecological agriculture, and without certification and mechanisms of control, cheating can take place.