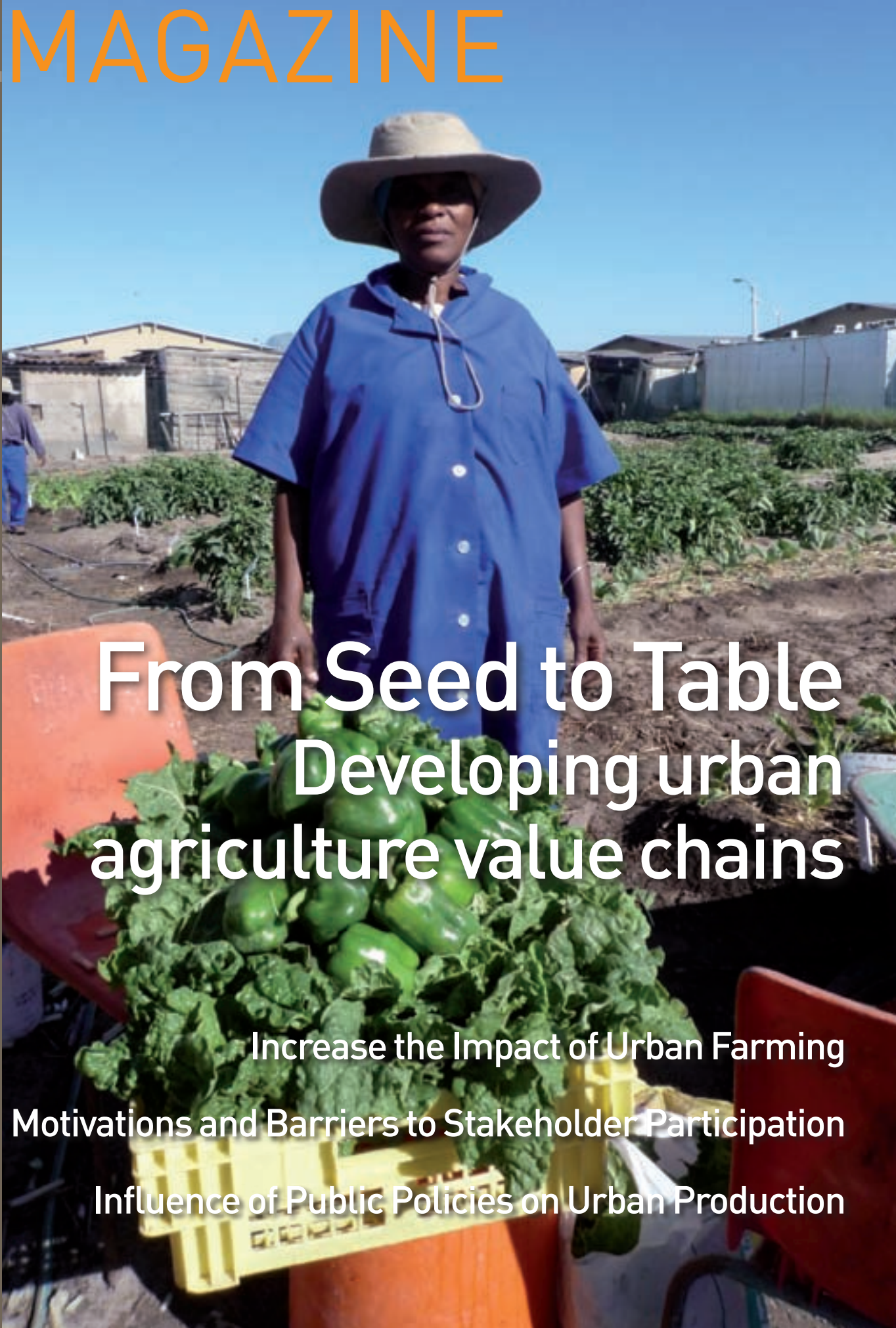


URBAN AGRICULTURE MAGAZINE

24



From Seed to Table Developing urban agriculture value chains

Increase the Impact of Urban Farming
Motivations and Barriers to Stakeholder Participation
Influence of Public Policies on Urban Production

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Cover

In this issue of the UA Magazine you will find examples of different forms of value chains and value chain development in urban agriculture.

*Photo: Producer harvested organic vegetables for box scheme business in Cape Town.
by: Femke Hoekstra*

From Seed to Table: Developing urban agriculture value chains

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Marielle Dubbeling
Femke Hoekstra
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Some urban farmers seek to enhance their income by engaging more directly or more efficiently in processing and marketing. But many of these, often poor, urban farmers are not able to sufficiently invest in starting a business, often do not undertake a proper analysis of market demand and tend to choose industries that have low entry costs, such as poultry production and food preparation. This pattern generally leads to rapid market saturation, low levels of productivity and competition that drives down returns to the business owners (Campbell, 2009). Value chain analysis and value chain development help connecting urban and periurban producers with urban markets in a more sustainable way. In this Magazine you will find examples of different forms of value chains and value chain development in urban agriculture.

Value chains

Any farmer producing a small surplus that he or she sells to a local trader becomes part of a value chain (De Koning and De Steenhuisen Piters, 2009). Except for the hobbyist allotment farmer, true subsistence farmers in this sense hardly exist. Even poor urban farmers will try to sell their surplus, or deliberately produce to sell, and thus are part of urban value chains.

Value chains can be interpreted in a *narrow* or *broad* sense. In the narrow sense, a value chain includes the range of activities performed *within a business* to produce a certain output. This can be, for instance, a producer group or cooperative that is not only involved in production but also in processing and marketing of the produce. Each activity adds value to the final product. Some call this form of value chain development “vertical integration” or “functional upgrading” and refer to the broader concept of value chain development as horizontal integration (Laven, 2009).

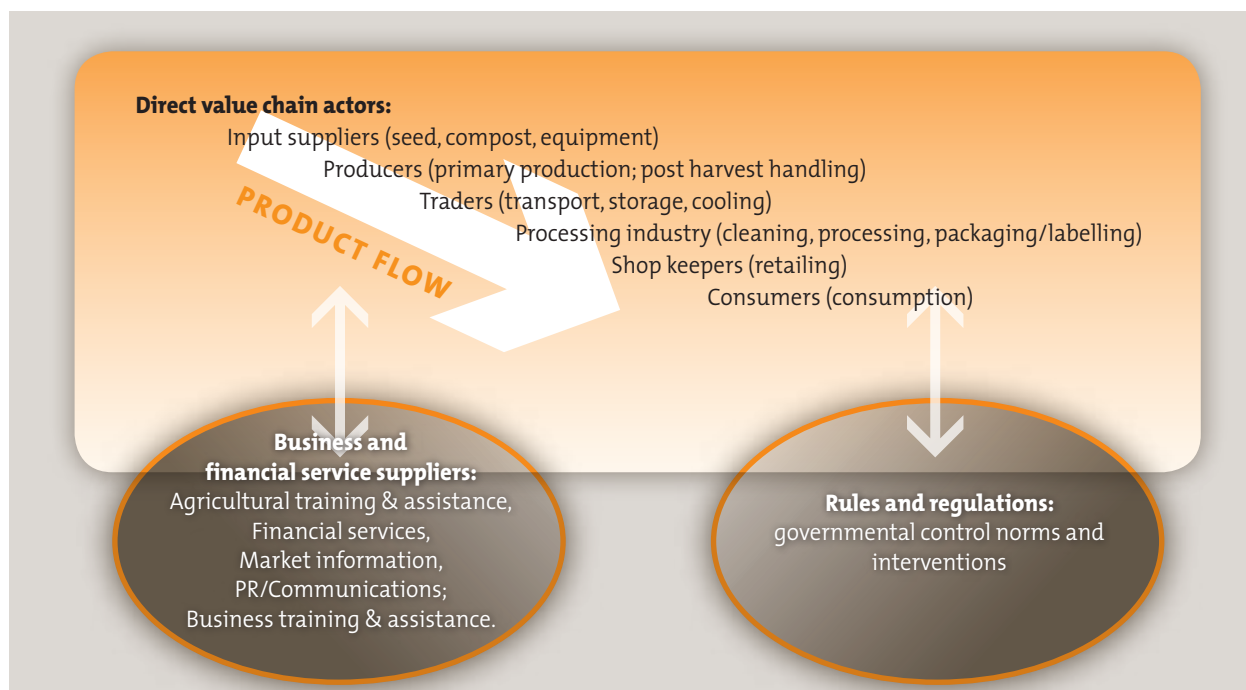
The broader definition of value chains looks at the complex range of activities implemented by *various actors* (linking input suppliers, primary producers, traders, processing enterprises, wholesalers, retailers, etc.) to bring a raw material to the final consumer. This approach looks not only at the



Farmers market in Uruguay
Photo: Hans Peter Reinders

activities implemented by a single actor, but at the linkages between the direct actors in the value chain: the organisation, coordination and power relations between them (M4P, 2006). Coordinating the supply, production, processing, trading and other related functions of various actors in the value chain ensures an efficient product flow that meets the requirements of a specific market segment. It requires that actors in the value chain invest in longer-term business relations, focus on chain optimisation and adding value (a good example is the article on p. 35).

In agricultural value chains, agricultural goods and products flow up the value chain (“from seed to table”) and money flows down the chain. Each of the direct actors performs one or more specific functions, thereby incurring some expenses and gaining some income, and thus “adding value” to the product. Chains may be short (e.g., the producer selling its produce on the farm or at a farmers’ market directly to the consumer as illustrated in several articles, for instance on Myanmar on p. 28) or longer with produce passing through the hands of middle-men, the processing industry and retailers before it reaches the consumer (adding costs and increasing prices along the way). In urban areas the linkages between producers and consumers are often shorter than in rural areas (though it is not always the shortest chains that perform best as is illustrated in the article on Madagascar on p. 24). In addition to the direct actors, value chains may also involve various business and financial service providers and regulating institutions (e.g. extension and business services, credit suppliers, quality control, training and technical assistance).



Global versus local chains

Food has become an increasingly global business, as the distances it travels have grown substantially. "In the US alone from 1997 to 2004, the average distance covered by food consumed in households increased by about 22 per cent, from 6760 to 8240 kilometres" (Rae Chi et al., 2009). Such global value chain development has both social and environmental consequences. Increased transport and cooling contribute to greenhouse gas emissions, for example. On the other hand, produce transported from Africa to the UK supports a multitude of Africa's small-scale farmers, farm workers and packers. An estimated 1 to 1.5 million livelihoods in sub-Saharan Africa depend directly and indirectly on UK-based supply chains (Rae Chi et al., 2009). That this also carries risks became clear after the financial crisis, when thousands of Kenyan farm workers had to be (temporarily) laid off after drastic reductions in (flower) inputs.

In response to these concerns, several organisations specifically promote the development of *local value chains*, also dubbed local supply chains or *circuit courts*. Although still relatively complex to manage due to the variability in products and product quality and quantity, marketing of local products is increasingly taken up by collectives of urban producers, especially where producers are converting to more ecological and organic cultivation methods and apply a joint quality control system (e.g. organic certification, green label). Such organisations of urban producers often sell their products directly to consumers through their own outlets, farmers' markets and food basket schemes or special organic corners in supermarkets (see also the article on Rosario on p. 55).

There is an increasing market for local or regional products (highlighted by the slow food movement, Buy Local Eat Local campaigns, etc.), in part because consumers are increasingly willing to pay higher prices for locally produced and good-

quality products. As oil prices increase and affect food prices that were previously dependent on cheap long-distance transportation, and as consumer consciousness of food miles and ecological footprints increases, such localised production may become even more important in the future.

Whether this development presents a true alternative for large segments of the population remains to be seen, as illustrated in the article on Paris-Tunis (on p. 31). This Magazine will present some experiences with different forms of marketing (e.g. farmers' markets, box schemes, sales to supermarkets, etc.); highlighting their opportunities and constraints. See the articles on the Netherlands, Cape Town, Rosario, Phoenix, Rome, Manchester and Accra.

Local urban and periurban agriculture chains often add value not only to products, but also to services. The box (by Fleury on p. 34) on agro-tourism in the Umbrian valley in Italy presents one example of this potential.

Value chain development

The aim of value chain development is to optimise the entire flow of a product, from production to the final consumer, by identifying bottlenecks in the chain, improving relations between various actors in the chain (input suppliers, producers, traders, processors, etc.), reaching economies of scale and enabling producers to meet certain market standards. It is seen as an effective tool to stimulate economic growth and help raise the incomes of small producers and the "economically disadvantaged".

One could say that functional upgrading (i.e. producers gaining more from the value chain by taking on additional functions like processing their output) is the most effective way to improve the livelihoods of the poor. By taking over the roles of other actors in the value chain, such as the process-

ing industry and middlemen, producers can retain a larger part of the final product price. Adding value to urban agriculture products through food processing and marketing is an innovative way to generate income and create new jobs. For every US\$100 that a consumer pays for a processed agricultural product, \$23 goes to the vendor, \$27 to the person trading the goods, and \$35 to the processor. The producer earns only \$15. By linking food production, processing and marketing, producers can earn a higher return for their products (Rae Chi et al, 2009).

Vertical integration does not, however, automatically lead to higher incomes. Adding activities also means adding costs and risks. More importantly, it requires a new set of assets and skills, such as (a) technological innovation (for example using appropriate technologies for grading and processing); (b) access to financing (for investing in processing and marketing facilities; for working capital); (c) more advanced human resources and managerial capacities; and (d) organ-

isational structures (to adhere to delivery procedures and obligations). Even if economic benefits for the producers were a certainty, the producers (or producer groups) would still have to meet these additional requirements, which is not necessarily possible. Others (Laven, 2009) argue that the net effect of value chain development initiatives is often negligible, because they simply take benefits away from one group of the poor – processors and traders – and give them to another group – the producers. Similarly, horizontal coordination (poor groups working together to achieve economies of scale in input markets, bulk up outputs and increase their market power) may work in some places and not in others.

Interventions in the value chain should in this context focus on facilitating enterprise development, including both micro-entrepreneurs and small farmers, to improve productivity and access to (new) markets, add value and enhance alliances with other actors in the value chain (MF, HPC and Triodos Facet, 2010).

The relation between urban agriculture and poverty reduction

Based on personal comments by Yves Cabannes, Gordon Prain and Pay Drechsel.

In their analysis of the economic impact of urban agriculture, the authors of the article on p. 21 reduce the complex problem of poverty reduction to improving incomes for the poor. This is a narrow view of the (potential) contribution of urban agriculture to sustainable urban development and to improving the livelihoods of the urban poor. The authors conclude that there is still insufficient data to determine the impact of urban agriculture, but that there is high potential for increasing the incomes of urban farmers through mechanisms 2 and 3. They propose that value chain analysis is needed to further understand and enhance this impact.

Although we agree that there is a need for value chain analysis, which is illustrated in this issue of the UA Magazine (e.g. by the RUAF FStT programme described in the article on p. 11, we would like to make a few critical remarks here about the ODI article. Firstly, the limited impact ascribed to urban agriculture under mechanism 1 (expenditure substitution) underestimates, in our understanding, the importance of self-provisioning. One example is the contribution urban agriculture can make in improving the health of the urban poor by providing access to higher quality agricultural products (the nutritional benefits were illustrated in a recent study by RUAF with IDRC and UN Habitat in Rosario, Bogota, Accra, Kitwe and Colombo. This is an essential point because better health is a key component in breaking the poverty spiral.

Regarding mechanism 2 (income from marketing), more attention could have been given to the diversity of chains and the additional income generated in these chains.

Also, one should look at higher aggregate benefits at the city level. (This is quite difficult, and hardly quantitative, but one could look at the different subsidies now provided for maintenance and policy, among other expenses, for open space management, employment creation, etc.; see for example Van Veenhuizen and Danso, 2007). This also includes labour creation (mechanism 3) for a wide variety of other actors at input and output levels (compost producers, seed suppliers, porters, transporters and retailers in kiosks, which are often small scale and often belong to the poor).

There is indeed a lack of solid, empirical data on the economic impact of urban agriculture, as also demonstrated by this paper, but there is a wealth of information on the wider impact of urban agriculture, which does affect the poor and their living environment.

Furthermore, the article does address the contribution of “verticalisation” of production (as presented in earlier contributions to the UA Magazine, for instance on PROVE in Brazil in UA Magazine 16). Therefore, essential stages in the chain are not considered, such as production of inputs and agro-processing (or transformation of primary products), which add value to the crops or animals produced. More importantly it does not consider at all the issue of fair and social development and the mechanisms that are necessary for a fair distribution of the added value to the urban (poor) farmers, as discussed in a number of articles in this issue (Rosario, Brazil, Italy).

We will pursue this discussion in following issues of the UA Magazine. Your reaction is very welcome at ruaf@etcnl.nl.

Chain governance

As illustrated above (and in the article on the Netherlands on p. 40), value chain development may offer producers a way to access new markets as well as to add value to their products. But value chains – and especially global value chains – often exclude the most vulnerable farmers, who may not be able to meet product standards or other requirements (licenses). Moreover, smallholders who are able to participate may benefit only marginally due to the unequal distribution of power, where prices for example are set by dominating processors, input suppliers or supermarkets (Laven, 2009).

Actors in the chain may thus be excluded from decision-making in the chain, or alternatively they may actively contribute to designing and steering the processes and forms of cooperation. *Chain governance* determines the conditions under which chain activities are carried out. It determines, for example, farmers' participation in managing various aspects of their product's value, such as the definition of grades and standards (possibly creating the chain's own brands), the targeting of consumers, the management of innovation and so on. As stated earlier, this participation, however, also entails greater risks, investments and responsibilities, which farmers should be willing and able to bear. Becoming organised into cooperatives is one way small producers can achieve a stronger voice and position, as is also outlined below.

Governance is also important with respect to the rules and regulations governing (part of) the chain or the services that are feeding into the chain. Value chains are also tied to environmental factors, as the establishment (or development) of value chains may create added pressure on natural resources (land and water) and influence soil degradation, biodiversity and pollution.

Finally, the social and economic impacts of participation in the value chain should be taken into account, particularly



Adding value through processing

Photo: Hans Peter Reinders

the potential impact of value chain development on poverty reduction. Improvement of value chains may increase the total volume and value of products that the poor can sell, resulting in higher absolute incomes. Another objective may be to sustain poor farmers' share in the sector or increase their margins per product, so that they gain not only more absolute income, but also relative income compared to other actors in the chain. The latter can be defined as pro-poor growth (M4P, 2006).

This is an important issue, but only scattered information on this impact of urban value chain development exists. The economic impact of urban agriculture is therefore a current topic of research. The article on p. 21 by ODI provides a framework for and analysis of the impact of urban agriculture on poverty reduction. The framework illustrates four mechanisms through which urban agriculture impacts the poor: expenditure substitution (by growing their own food, families may save on food expenditures and use the money for other purposes); income from marketing; income from labour (e.g. farm workers on larger-scale commercial farms) and reduced food prices due to the influx of local produce.

The process of value chain development

There are basically three approaches to value chain development, and these are illustrated with some examples below.

Add value through processing

One example of functional upgrading or vertical integration is the former Brazilian programme PROVE (Small Agricultural Production Verticalisation Programme). PROVE was a programme designed to promote small-scale agricultural production, processing and trade. Through this programme, about 500 small agro-industrial facilities were built in Brazil in the period 1995-1998, creating more than 700 jobs. During this same period, the monthly per capita family income of those involved in the programme rose from 25 to 100 dollars (Homem de Carvalho, 2006). PROVE involved many urban and periurban agricultural systems, including vegetable gardening, fruit growing and livestock keeping. Intervention focused on the *individual producer and his/her extended family*. The basic idea was to improve prices by creating added value through processing (see also article on Sudan on p. 50). The approach was thus product-driven, improving the value of what the farmers already produced.

The programme specifically looked at (government) interventions that can help alleviate the constraints limiting vertical integration, such as:



Inside Thiri Mingala Market, Yangon

Photo: George O'Shea

- low degree of (or inappropriate) support services
- limited access to productive resources and insecure land tenure
- limited access to financing
- low degree of organisation of urban producers
- low productivity and profitability
- low degree of business planning, marketing skills and information.

Focus production on market niches

An example of this second approach is the RUAF-From Seed to Table programme, which focuses on strengthening *a group or groups of producers* (a) to add value to their products by improving production and engaging in (simple forms of) processing, packaging, branding and direct marketing, but also (b) to focus production on strict demands of *market niches*, such as the ecological/organic market, supermarkets or the tourist industry (see article on p. 11). The producers are supported to form an associative or cooperative business, in order to lower transaction costs, create economies of scale and develop greater lobbying and negotiating power. A key aspect of RUAF's approach is that not only technical and organisational optimisation and innovations are stressed, but also practical exchange and learning and improved relations with other chain actors and service providers. The starting point in the RUAF-FStT programme is to enhance urban producers' capacity to innovate urban farming systems from a market chain perspective and realise concrete improvements in **"one most promising product"**. Innovation and marketing are thus seen as key to economic success (see for example the case of strawberries on p. 40). To be success-

ful producers have to learn how to better meet market and consumer demand (in terms of quality, variety, safety and delivery requirements).

A similar approach is taken by the Learning Alliance value chain development initiated by Agri-ProFocus (see p. 38).

Intervene in other parts of the value chain

Alternatively, the value chain can be viewed as part of the entire urban (or metropolitan) food system. All possible – but not necessarily connected – stakeholders in the chain are considered, both those who specialise in one part of the chain and those involved in several parts. This approach to value chain development entails first selecting one specific value chain and then looking at all aspects of that chain in order to decide where it needs to be strengthened. The benefits of this approach are that it allows the choice of intervention to emerge from the analysis and may lead to the conclusion that the greatest pro-poor impact would not be in the production segment at all but could be achieved by working with processors or traders or others (see avocado article on p. 35).

Value chain analysis in this approach is undertaken to map the actors participating in the production, distribution, marketing and sales of a particular product (or products) and can provide insight into the distribution of benefits and earnings among various value chain actors. It can shed light on how to improve organisation and coordination among value chain actors and indicate where to intervene to achieve a desired development outcome, be it benefiting a particular actor, maximising income and employment, improving governance or alleviating poverty.



Pick-your-own in Beijing Photo: Lu Mingwei / IGSNRR

Such value chain analysis aims to:

- map the chains of interlinked production and exchange activities in a (sub)sector (N.B. the first step in value chain analysis is to decide which sector or product to focus on. A thorough market analysis can show which production systems are most efficient – see the article on Madagascar);
- map geographic spread of linkages;
- identify key stakeholders at different levels and locations of the chain and in relation to opportunities/constraints;
- measure the value accruing to different levels, locations and stakeholders in the chain;
- identify governance structures affecting the distribution of value;
- identify interventions directly targeting different levels of the chain, their impacts and alternatives.

In this way the options for a whole range of other interventions are assessed – such as *vertical contracting* (i.e. producers entering into long-term contracts with buyers); *product upgrading* (improving the quality of their output); *process upgrading* (producing their output more efficiently) and/or *inter-chain upgrading* (applying the skills gained from one value chain to another to improve returns).

These three approaches thus differ with respect to the target groups they work with, which could be all actors in the chain, groups of producers (or individual farmers and households, as in the case of PROVE. However, in all cases, strengthening organisation of producers, facilitating policies and access to financing are key to the success of the approaches.

Strengthening producer organisations

Producer organisations can play an important role in (urban) agricultural supply chains as intermediates between individual farming households and other chain actors (buyers, processors and service suppliers, such as financial institutes and governments). They may have several functions, including collecting, processing and marketing

agricultural products, collective buying or production of farm inputs, implementing quality control and providing members with technical and market information, advice and training (see the article on Vietnam on p. 51). The degree of organisation of urban farmers is often low and the functioning of existing farmer groups and organisations is often poor. This hampers their development efforts and limits their capacity to negotiate with local authorities and service providers. It also hampers the development of concerted efforts by urban farmers to engage in processing activities – adding value to their primary products – or to engage in direct marketing to consumers or acquiring an improved position in the marketing chain. Well-organised urban producer groups and associations may also play an important role in educating their members, product quality control and enhancing access to credit and other productive resources (including urban organic wastes and treated wastewater).

Strengthening existing urban farmer groups (their cohesion, management and financial planning capacity, and their inter-linkages) will thus improve the chances of success for farmer-led development projects. For example, as a producer organisation has to benefit its members and at the same time generate a surplus to ensure its continued operation, it must be able to prepare a comprehensive business plan. Financial support may be needed at the start-up phase for market analysis and for hiring qualified commercial/financial personnel, in addition to support for organisational strengthening and increasing the organisation's and members' capacity to perform all these new functions (Ton et al., 2007).

Facilitating policies

Development of urban agriculture value chains can play an important role in local economic development and income generation by urban poor and middle-class households (see the article by ODI). Although generally little information exists on the income and employment generated by urban agriculture related enterprises, the data that does exist indicates that the employment generated can be substantial (see PROVE above). These enterprises are also important in the respect that input supply, production, service delivery, processing and marketing systems may be set up and managed by specific vulnerable groups (e.g. youth or women). Urban agriculture value chains can involve anything from small-scale and low-capital enterprises to capital-intensive, large-scale businesses. General support needs include improving quality control (processing and marketing), farmer organisation and cooperation, access to capital, credit and markets (information), and new distribution channels. Municipal programmes that promote the processing and marketing of local urban agriculture products should try to increase the participation of relevant urban institutions and farmers. At the same time, municipalities must modify legislation and improve the poor's access to capital and marketing venues (see article on Piracicaba on p. 53).

Municipalities or international organisations may be able to encourage existing credit institutions to establish special



Belo Horizonte
Photo: IPES



Family cleaning and grading carrots, Magadi Photo: IWMI South East Asia

credit schemes for urban agriculture related enterprises, by creating for example a guarantee fund. A co-responsibility principle involving the government (contributing with subsidies or a guarantee fund), the entrepreneurs (mobilising their savings and paying back their credit) and the private sector (which contributes generally with credit lines) may constitute the basis for models of enhancing access to credit and capital for specifically poorer people. Municipalities and local support organisations may also facilitate enterprise development and marketing by small urban producers by:

- providing urban producers access to existing city markets, assisting them in the creation of farmers' markets or authorising food box schemes;
- supporting the establishment of quality or "green labels" for ecologically grown and safe urban food;
- providing start-up licenses and subsidies (or tax reductions), technical and management assistance to cooperative and individual small-scale agro-processing and packaging enterprises and enterprises supplying ecological farm inputs (compost, earthworms, open pollinated seeds and plant materials, bio-pesticides) to urban producers;
- providing timely market information to stakeholders;
- ensuring preferential local procurement, e.g. through regulations requiring that a specific percentage or volume of food offered at local schools (Belo Horizonte, Ile de France), institutional cafeterias, restaurants or supermarkets (Belo Horizonte) be sourced from local produce.

Finally, efforts to organise producers also need to be undertaken independently from government, so as to ensure the continuity of programmes (RUAF et al., 2008).

Financing

Access to adequate and timely financial services for all actors in the value chain has proven to be a key element for success. Farmers need working capital to buy good seeds or other inputs or to invest in equipment. Traders need funds to pay farmers in cash at the moment of crop delivery to ensure

that farmers do not sell their produce elsewhere. However, traders often lack the collateral to get loans. Processors also need money to buy inputs or expand their operations (KIT and IIRR, 2010). Such financing is not always available. For small-scale commercial urban agriculture producers, access to credit and other sources of financing (e.g. subsidies/grants) is crucial to further develop their agricultural production and/or processing and marketing activities. However, financial service providers are often not familiar with the sector, regard it as too risky (doubting the willingness and ability of the small entrepreneurs to repay their debts) or have requirements and procedures that are not accessible for poor urban farmer groups. If not supported through specific schemes (see above), many groups thus turn to self-managed schemes, such as AGRUPAR, (see p. 61) which implemented a self-managed microcredit scheme in the form of the Grassroots Investment Societies. This scheme is adapted to the needs and characteristics of the urban farmers and gives an additional push to their business activities.

In order to provide more information, knowledge and clear recommendations that will serve to broaden collective and individual financing opportunities for poor urban and periurban producers located in these cities, RUAF recently initiated local studies on credit and financing opportunities for urban and periurban agriculture in each of its 18 partner cities. Results of these studies are being discussed with local credit and financing institutions to lobby for and put into place (new) financial products servicing small-scale urban producers.

Examples of value chain financing include the offering of financial services to support the entire product flow (from the producer to the final consumer), building on existing relations in the chain. This form of financing can spread risk among the financial institutions and chain actors and provides alternatives to traditional collateral requirements.

For example, microfinance institutions can link with producer organisations to provide small input loans to producers, while banks simultaneously provide an investment loan to a processing company in the chain. Or a bank may lend money to a trader because the trader has a regular supply of products from a producer group and loyal customers that guarantee sales (KIT and IIRR, 2010). When customers are willing to sign sales contracts with their suppliers, even small farmers become credit worthy. One such example of value chain financing is being tested in Bulawayo (Zimbabwe), where a system of contract farming for production of mushrooms has been set up. A consortium of restaurants and supermarkets will fund production initially for two urban producer groups. The money will not go directly to the farmers but to a bank that will administer the loan on behalf of the consortium. The farmers will then sell 50 per cent of their mushrooms to the consortium and the surplus to other markets. The funding being provided is for the infrastructure and inputs. The bank will provide subsidised training for the farmers and will not charge the farmers for training in business management and bookkeeping (personal communication T. Mubvami, MDP/RUAF, June 2010).

Limits of value chain development

Value chain development in urban agriculture is an important new approach to urban agriculture development. It is certainly in the interests of farmers and city governments to enhance the economic benefits and impact of urban agriculture. It should be noted, however, that only part of the urban agriculture producers want or are in a position to invest more in their agricultural activities and to participate more intensively in the market, in addition to their self-provisioning of food. These producers need assistance in designing and implementing value chain development projects focusing on innovating the production, processing and marketing of certain selected products. For such projects to be successful, the farming households or producers should meet the following criteria.

- **Market orientation:** The farmers or groups must already be selling surplus products and have a strong interest in further developing their market production and/or engaging in processing and direct marketing activities.
- **More homogeneous target group:** It is more difficult to work with a very heterogeneous target group, so the producers to be supported should preferably have a similar farming system (e.g. all vegetable producers or all dairy farmers) and work under similar conditions (for example have a more or less similar degree of market orientation).
- **Closeness/clusters:** Support will be more difficult if the participants are spread out thinly over a vast area. Preferably they should be located in one area or in a limited number of clusters not too far apart from each other.
- **Organised:** The producers should have already participated in some form of cooperation/organisation, although this might be very informal.

Value chain development is not suitable for the development of all types of urban farming systems. Subsistence-oriented home or community gardens, for example, will call for other approaches and support measures.

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A microfinance and development NGO in Madina, Accra
Photo: Irene S. Egyir

References

- Campbell, R. (2009) Linking the poorest to economic growth: Value chain approach enhances food security, ACIDI / VOCA, Washington.
- De Koning, M. and De Steenhuijsen Piters, B. (2009) Farmers as shareholders: A close look at recent experience. Bulletin 390. KIT Publishers, Amsterdam.
- KIT and IIRR (2010) Value Chain Finance: Beyond Microfinance for Rural Entrepreneurs, KIT Publishers, Amsterdam.
- Laven, A. (2009) 'Empowering rural entrepreneurs', The Broker – Issue 16 Including the rural poor in global markets; The power of value chains, Stichting International Development Publications, Leiden.
- M4P (2006), Making value chains work better for the poor; a tool book for practitioners of value chain analysis. <http://www.markets4poor.org/Making%20Value%20Chains%20Work%20Better%20for%20the%20Poor>
- Parsons, H. (2006) The importance of upgrading for Micro and Small Enterprises in the Competitive Value Chain, ACIDI / VOCA, Washington.
- Ton, G., Bijlman, J. and Oorthuizen, J. (2007) Producer organisations and market chains: facilitating trajectories of change in developing countries, Wageningen Academic Publishers, Wageningen.
- Rae Chi, K., MacGregor, J. and King, R. (2009) Fair miles; recharting the food miles map, Big ideas in development series, Kiser, B. (ed), IIED, Oxfam, Oxford
- RUAF, ETC-Urban Agriculture and the Ryerson University's G. Raymond Chang School of Continuing Education and Centre for Studies in Food Security (2008) Marketing support and quality control, Module 11 - Input supply, service delivery and post-production systems, Distance Learning Course 3 Urban Agriculture Types.
- Homem de Carvalho, J. (2006). PROVE - Small Agricultural Production Verticalisation Programme. In R. Van Veenhuizen, Cities Farming for the Future, Urban Agriculture for Green and Productive Cities (pp. 201-204). Philippines: IIRR, IDRC and RUAF Foundation.

Strengthening Urban Farmer Organisations and their Marketing Capacities: The RUAF “From Seed to Table” programme

11

Henk de Zeeuw¹

Introduction

Many poor urban households are active in local production of food and related activities (e.g. food processing and street vending of food, compost making, supply of animal feed). Some of these poor urban and periurban producers are mainly interested in producing food for their own household consumption, to save some cash that would otherwise be used to buy food (poor urban households often spend more than 50 per cent of their cash income on food) and to earn some additional income from occasional sales of surplus production. Others produce vegetables, herbs, fruits, mushrooms, eggs, milk, ornamental plants, etc., for sale on the urban market as a main source of income for the household. A comparative advantage for the urban producers is their close proximity to the urban consumers. Research has shown that market-oriented, small-scale urban agriculture is often more profitable than small-scale agricultural production in rural areas and generates incomes above formal minimum wage level (Van Veenhuizen and Danso, 2007).

However, the urban producers who seek to produce for the market also encounter a number of constraints, including a low degree of organisation and low productivity. Most urban farmers are organised informally, if at all. This limits their capacity to improve their production system and hampers the development of concerted efforts to acquire a stronger position in the market, engage in direct marketing to urban consumers and/or undertake processing activities, adding value to their primary products. It also limits the representation of their interests in decision making at various levels.

Productivity in small-scale (intra- and peri-) urban production is generally low. This is partly because urban agriculture has for a long time been seen in most cities as an unacceptable form of urban land use and its importance for poverty reduction, food security, waste recycling and sustainable urban development has gone unnoticed. Consequently security of land use for urban agriculture is often low (making producers unwilling to invest in the land) and agriculture research and extension organisations and other service providers have paid little attention to urban agriculture. Due to the historical lack of recognition for urban agriculture by national and city authorities, appropriate technologies for



Just-harvested good-quality fresh carrots, Magadi
Photo: IWMI South East Asia

the specific conditions of urban agriculture have been slow to develop and urban producers still have very limited access to agricultural information, credit and infrastructure.

The RUAF “From Seed to Table” programme

Against this background, the RUAF Foundation² initiated the “From Seed to Table” programme (RUAF-FStT), which helps groups of poor urban producers organise themselves, analyse market opportunities, improve their production systems and develop short marketing chains for selected products through retailers or directly to urban consumers.

RUAF-FStT builds on the results of the RUAF “Cities Farming for the Future” Programme (RUAF-CFF), which was implemented from 2005 to 2008. During those years RUAF Foundation partners supported local governments, urban farmer groups, NGOs, universities and other stakeholders in 20 cities of 17 developing countries in multi-stakeholder situation analysis and strategic planning on urban agriculture. These processes have led in many of these cities to the legalisation of urban agriculture and its incorporation in local development policies and the programmes of local organisations³.

In these same cities, and as part of the new policies and action plans, the RUAF “From Seed to Table” programme cooperates with local development NGOs to:

- strengthen the organisation of urban farmer groups and

- enhance their capacities;
- formulate and implement innovative “From Seed to Table” projects in a participatory way (e.g. projects that will innovate the farming systems of the urban producers and develop joint processing and marketing activities based on a market analysis and participatory business planning);
- enhance urban producers’ access to credit and financing.

Starting points: farmer-led learning and action

Reducing poverty through micro-enterprise development, while maintaining nutrition

The FStT projects target low-income urban households involved in some kind of agricultural production that want to engage more intensively in market-oriented production as a means of self-employment and income raising, and that meet the minimal conditions for commercial farming (e.g. secure access to land and water). Although the FStT projects enhance the marketing and income-generating capacity of the urban producers, this should not lead to deterioration of household food security and nutrition. These aspects are thus given due attention in FStT projects.



Pig-raising project Agrosilves in Belo Horizonte, Brazil
Photo: IPES

Enhancing farmer innovation capacity, experiential learning

Given the dynamic and challenging urban conditions, FStT support to the urban producers focuses strongly on building their problem-solving capacities (problem analysis, identification and testing of alternative solutions) as well as their capacity to identify and utilise new market opportunities (analysis of specific requirements of various market segments, adaptation of crop choice and production practices, certification and trademarks, establishing strategic alliances, etc.). In the FStT programme, farmers participate directly in market analysis and business planning in order to develop the required analytical and innovative capacities. Market analysis, design of marketing strategies and business planning are usually seen as very complicated and highly technical tasks that can only be done by specialised organisations and consultants. In FStT we seek to demystify

them, offering a method for market analysis and project design that is understandable to the producers and that involves them in all stages of the process.

The FStT programme also stimulates a hands-on capacity development process in which learning, planning and doing are closely interwoven. The main instruments used are: a. participation of farmer representatives in the local team that is coordinating the project activities, b. implementation of “urban producer field schools” (based on the same principles as the “farmer field schools” methodology⁴ but simplified and adapted to the specific conditions of the urban producers) and c. organisation of farmers in functional committees at group and association level and their direct involvement in and responsibility for the development and management of their own businesses from the very start.

Interactive

This does not mean that the farmers have to do everything by themselves. The interaction with “knowledgeable outsiders” is crucial in FStT in order to stimulate the analysis and planning process and to inform the producers about aspects they have little knowledge about. But the knowledgeable outsiders take part as *advisors* who help the producers make well-informed decisions, not tell them what they should do. Moreover, the knowledgeable outsiders are not only production and marketing specialists, but also farmers who already have experience with producing, processing and marketing of a certain product, managers of small-scale agro-enterprises, traders, managers of supermarkets and other people with knowledge and experience of relevance for the intended business.

Gender

FStT projects encourage women producers to actively take part in all activities. This will help them make full use of their experience and knowledge, ensure that their interests are taken into account, strengthen them in their roles as food producers and marketers and enable them to participate in leading roles in the farmer organisation and its activities. To that effect, special emphasis is given to enhancing the leadership skills of women producers.

The process

Capacity development of local partner organisations and work planning

To initiate the programme in January 2009, NGOs were selected in each of the RUAF partner cities. Most had already participated in the local Multi-stakeholder Forum on Urban Agriculture and Food Security previously established in that city with support of RUAF-CFF. Various staff of these NGOs were brought together in two planning/training workshops for each of the seven regions in which RUAF operates. The first workshop focused on the FStT approach, the selection and strengthening of urban producer groups and the situation analysis. The second workshop was held three months later, once the results of the situation analysis were available, and focused on business planning, project design and the organisation and implementation of urban producer field schools.



Participatory diagnosis and market analysis, Magadi
Photo: IWMI South East Asia

Selection of urban producer groups and initial training of local team members

On the basis of the established criteria the local partner NGOs selected urban producer groups and organised meetings to inform the producers on the formulation and implementation of the intended project. The interested producers selected the male and female producers (often two of each) who would participate in the local team to coordinate preparation of the project together with the NGO staff. The NGO staff organised a short introductory training for these producers on the situation analysis.

Situation analysis

The situation analysis included:

- A rapid and participatory review of the actual production systems of the selected urban producer groups (main products, production and marketing practices, gender aspects, access to land and other resources and security of use, main constraints).
- An analysis of the main strengths and weaknesses of the selected urban producer groups with a view to the challenges ahead.
- A rapid and participatory market analysis. The RUAF staff developed a three-step methodology for the participatory market analysis⁵. First, available secondary information was analysed and key informants were interviewed in order to identify a limited number of “promising options”: products that are or can be produced by the urban producers and that have interesting market prospects (e.g. production and packaging of organically grown green onions for sale under the group’s own brand to high-end restaurants and hotels). Second, more information on each of these options was collected to enable the producers to make the final selection of the “most promising option” (often shortened to MoPO⁶). The selection was done by making a group assessment of a number of pre-established criteria (production costs, market price, level and stability of market demand, competitiveness, availability

of required licenses and support services, value adding potential, level of investment needed, etc.). For the selected MoPO, additional information was collected that would be needed for the development of a business plan.

Business planning

The local team developed a business plan for the MoPO selected by the producers. The business plan included:

- The business idea: what is the business the producers want to develop? This includes the selected product and related marketing concept: e.g. selling cut, mixed, washed and packaged green vegetables for stir-fries, soups and curries.
- The marketing strategy: to whom and how do the producers plan to sell this product?
- The operational plan: the activities through which the producers will realise the production, processing and commercialisation of the MoPO, including planning and administrative activities.
- The financial plan: the calculation of costs and benefits of the production at the individual and group level; investment needs and financing strategy.
- The partner strategy: with which other actors will the producers (need to) cooperate in order to get the business

Production and Processing in Belo Horizonte
Photo: IPES





Flyer to promote upcoming urban producer field school meeting
Photo: IPES

running (licenses, technical and management support services, transport, bank services, etc.)

Urban producer field schools

The main instrument used to get the businesses started was the urban producer field school (UPFS). Starting from the business plan, the most important technical and organisational changes that would have to be realised in order to get the business up and running were identified. Subsequently the required knowledge and skills related to these technical and organisational changes were spelt out and structured in learning modules. The technical changes could have to do with the production of the MoPO as well as the processing/packaging and marketing of the product (e.g. how to assess and grade the quality of the product as delivered by the individual producers or subgroups to the association). The organisational changes would relate to operation, management and administration of all steps in the process of producing and marketing the MoPO.

Each of these modules/sessions were implemented in the weeks before the related activities had to be implemented in practice (e.g. a session on how to organise and operate the buying and distribution of newly required inputs a few weeks before this had to start functioning, a session on production practices in the weeks before the new crop variety had to be planted, or a session on the technical and organisational aspects of the collection, washing and packaging a few weeks before the harvest was initiated). In most UPFS sessions both technical and organisational aspects were discussed and practiced. All sessions started with a review of the activities implemented so far, and possible solutions to problems that had arisen were discussed. All sessions ended with planning the activities to be performed by the producer groups in the coming weeks. In this way the UPFS was not only a learning platform but also a vehicle for periodic work planning and evaluation with the producers.

Each session was prepared and guided by a facilitator from the local project team together with one or more invited “experts” (experienced farmers, technical specialists of the extensions service, university staff, managers of small-scale enterprises, etc.). Sessions were implemented as much as possible in locations where the producers could observe and/or practice themselves what was discussed in that session (in the field, in a packaging shed, etc.).

In most cases the UPFS was repeated during more than one production cycle, focusing the new sessions on gaps in knowledge and skills and technical or organisational problems identified during the first cycle.

Some examples of FStT projects being implemented

The FStT programme started in January 2009 and by September/October in most of the RUAF partner cities, local producer groups (each involving between 50 and 150 urban producers) had formulated a business plan and the FStT projects were ready to be implemented. Since then a variety of farmer-led agro-businesses have started focussing on cherry tomatoes, mushrooms, baby potatoes, strawberries, dressed chickens, cabbage, carrots, green chillies, packages of mixed vegetables, boxes with a variety of vegetables, dried herbs, spring onions, eggs, piglets and other products.

In the limited space available we can present below only three of the 18 projects that are currently being implemented. A fourth case (community gardeners in Cape Town marketing their organic vegetables through a box scheme) is presented in the following article.

Diversifying into organic mushrooms, Beijing

In Huairou (a periurban village of Beijing, China) RUAF Foundation cooperates with the Beijing Agricultural Bureau and the Huairou Vegetables Cooperative, which had been growing grapes for many years but wanted to diversify. Based on the market study, the cooperative decided to also start growing mushrooms. With help from the Agricultural University of Beijing, UPFS training was organised to familiarise a core group of producers with the ins and outs of mushroom growing; and the university also supplied the quality seed. The mushrooms are now grown in the same semi-permanent plastic tunnels in which the grapes used to grow. One mushroom cluster was established at the original Huairou cooperative (50 members) and two other clusters were established in two neighbouring villages (20 members each). The Huairou cooperative trained the producers, sells the inputs (bags/mushroom seed) and buys the produce (through a type of contract farming/outgrowing system). Huairou Cooperative also linked up with a marketing coop-



Organic mushrooms in Beijing
Photo: IGSNRR



Integrated Pest Management training on chili cultivation

Photo: IWMI South East Asia

erative to sell the top-quality mushrooms to supermarkets. The second-grade produce is sold locally.

The main challenges include: a. quality management (the production practices still need further upgrading), b. quality control (the produce delivered to the Huairou Cooperative does not always meet the required standards but effective monitoring systems are not yet in place).

Spring onions under the olive trees in Amman

RUAF Foundation is cooperating with the Urban Agriculture Bureau of the Municipality of Greater Amman and the Iraq El Amir Women Cooperative Association located in a periurban area of Amman. After performing the market analysis the Cooperative decided to start organic production of green spring onions under their olive trees, to package them in small bunches and sell the packages under their own brand name. Over eighty families are part of the business, 75 per cent of which is represented by women. An Urban Producer Field School was organised with assistance from various university staff and a farmer-entrepreneur with wide experience in production and marketing of spring onions. The UPFS sessions included various cultivation aspects (seeding under plastic, fertility management, pest and disease management, etc.) as well as organisational aspects of the new business (administration, buying/distribution of inputs, collection, grading, packaging and marketing of the produce).

The group designed its own label based on a “Responsible Production Protocol” that guarantees that a. the produce comes from a radius of 10 km or less from the centre of Amman, b. ecologically sound production practices were applied, c. its production did not involve any abusive women or child labour, and d. 75 per cent or more of the price paid by the consumers flows back to the producers. The first spring onion harvest was a big success. Produce was sold to high-end restaurants and hotels at JD1.2 to 1.5 (JD1 = €1) per bunch of onions (around 1 kg), while predictions made in the business plan were for JD0.7 to 1.0.

The main challenges here relate to the maintenance of soil fertility and preventing incidence of diseases and pests in the onions. At present the best crop rotation options are being evaluated (with regard to technical and marketing aspects) including lettuce, basil and coriander. In a new round of UPFS sessions the group will be trained in the cultivation and marketing of these additional crops. The cultivation of spring onions will in future be concentrated in those months of the year during which demand and prices are highest.



Spring onions are weighed and packed in plastic bags or sold in bulk in large bunches

Photo: Salwa Tohme Tawk

Bottling of fruit juice in Freetown

In Freetown, RUAF-FStT is being implemented in cooperation with the NGO COOPI and the National Association of Farmers (NAFSL). One of the participating producer groups is Lelima Women's Group in the popular Kissyeastern area of Freetown, a 30-strong self-help women's group. The group considered several products and innovations during the inventory of options and tested them during the market scan. While initially very keen on yoghurt, during the process of comparing market demand, prices and possible returns and profits they chose bottled fruit juice as their MoPO. The UPFS took the group through technical training in hygiene, safe food handling, pasteurisation and bottling as well as training in

organisational strengthening, business management and marketing.

The group set up a basic processing and bottling facility. They use recycled sterilised glass to bottle fruit juice (currently mainly mango). An adapted non-commercial blender is used to prepare the juice while pasteurisation is done in a large local pot on a screened fire; and the juice is bottled and capped while hot. A number of testing sessions with customers in bars and restaurants were organised to compare three different mixes before the final recipe was chosen.

In May 2010 SALONE Mango Juice “proudly produced in Sierra Leone” became the first locally bottled fruit juice in Sierra Leone. The group is able to offer the juice commercially at a trade and retail price lower than imported juice.

The main challenge is that the market demand is considerably larger than the production capacity. The group is now moving into organising year-round production of juice from several seasonal fruits. The group currently targets the Freetown capital market, but investors have shown an interest in sub-contracting the group to produce and bottle juice, which would then be transported cold to and sold in the provinces. However, the group still lacks the required business experience to negotiate with seasoned investors and the sudden expansion of their business has already put considerable strain on group dynamics and cohesion. These aspects will need to be carefully monitored and addressed to prevent the group from falling victim to its own success.

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FSTT training in Accra

Photo: René van Veenhuizen



Group saving and internal lending, Magadi - organisational strengthening

Photo: IWMI South East Asia

Note

- 1) I thank my colleagues René van Veenhuizen, Marielle Dubbeling, Marco Serena and Femke Hoekstra for their contributions to this article
- 2) RUAF Foundation is an international network of one Northern and seven Southern-based development organisations collaborating since 2000 to support the development of pro-poor urban agriculture in developing countries. DGIS, the Netherlands, and IDRC, Canada, are the main funding agencies of the RUAF Foundation programmes.
- 3) A book on the experiences gained in the RUAF-CFF programme with the multi-stakeholder approach to policy development and action planning in urban agriculture has recently been published (Dubbeling et al., 2010).
- 4) Ample information available at: www.farmerfieldschool.info
- 5) In this process we used a number of manuals on participatory market analysis that had been published recently or were available in draft version, e.g. Joss et al. 2002; Lundy et al. 2004; Ostertag 2004; Dixie 2005; Tracey-White 2005; Bernet et al. 2006 (in earlier Spanish draft version)
- 6) In several cases the selected MoPO was not one product but a combination of products e.g. “small packages of washed and cut mixed green vegetables for wokking, soups and curries” or “boxes with sorted fresh seasonal vegetables for home delivery”

References

- De Zeeuw, H. and Dubbeling, M. (2009) **Cities, food and agriculture: challenges and the way forward**, RUAF Foundation, Leusden
- Bernet, T. Thiele, G. and Zschocke T. (eds) (2006) **Market chain approach (PMCA) User Guide**. CIP, Bogota (read in earlier Spanish draft version)
- Dixie, G. (2005) **Horticulture Marketing** Marketing Extension Guides # 5 FAO-AGS, Rome
- Dubbeling M., De Zeeuw, H. and Van Veenhuizen, R. (2010) **Cities, Poverty and Food; Multi-stakeholder Policy and Action Planning in Urban Agriculture**, Practical Action Publishing, Rugby, UK.
- Joss S., Schaltenbrand, H. and Schmidt, P. (2002) **Clients First. A rapid market appraisal toolkit**, Helvetas, Zurich.
- Lundy, M. et al. (2004) **Increasing the competitiveness of market chains for small holder producers; a field guide**, Rural Agro-enterprise development project, CIAT, Costa Rica.
- Ostertag, C.F. (2004) **The Territorial approach to rural business development. Module 2: Identifying and assessing markets for small scale rural producers** Rural Agro-enterprise development project, CIAT, Costa Rica.
- Tracey-White J. (2005) **Rural-urban marketing linkages; an infrastructure identification and survey guide** Agricultural Services Bulletin 161, FAO, Rome.
- Van Veenhuizen, M. and Danso, G. (2007) **Profitability and Sustainability of Urban and Peri-urban Agriculture**. Agricultural Management, Marketing and Finance Occasional Paper no. 19. FAO, Rome.

Vegetable Box Scheme in Cape Town, South Africa

17

Femke Hoekstra
Rob Small

Although quite a number of experiences with community supported agriculture (CSA) and box schemes in Europe and the United States have been documented, there are not so many examples from the South. Abalimi/Harvest of Hope is a special case even in the South, as it is a social enterprise that works with poor people in urban areas who are the producers of the vegetables.

How it started

*Abalimi Bezekhaya*¹ (meaning “Farmers of Home” in Xhosa) is a civil society organisation working to empower the disadvantaged through ecological urban agriculture. Abalimi operates in the townships of Khayelitsha, Nyanga and surrounding areas on the Cape Flats near Cape Town. This area has a population of nearly one million people, the majority of whom are from the Eastern Cape - the former apartheid homelands of Transkei and Ciskei. Many are unemployed. Abalimi has been working with small-scale producers living in these informal settlements for 28 years. The producers (or micro farmers as Abalimi calls them) are poor people – mainly women – who are engaged in vegetable gardening in home gardens and community gardens in order to supplement their diet, improve household food and nutritional security, and provide sustainable additional income. Other benefits are community building, personal growth and self-esteem.

The central tool for the success of Abalimi (and Harvest of Hope) is the development of the “Development Chain”. The rationale behind the Development Chain is that conventional approaches pull the urban poor into commercial production too soon, while they first need to go through a number of preparatory steps to enable social learning. Furthermore, without sufficient support (subsidies and training) the development that ensues is unlikely to be sustainable. A step-wise approach is necessary to deal with the socio-political, environmental and economic dynamics and challenges which the poor encounter on a daily basis, such as poor education, poverty mentality, gender/racial and class tensions, very poor soil and mass unemployment. The development chain has four phases: the survival phase, the subsistence phase, the livelihood phase and the commercial phase (read more on the development chain in Van Veenhuizen, 2009, p.160).

Over time Abalimi noticed that some of the producers in the subsistence phase had the ambition to sell (part of their)



Harvest of Hope staff packing vegetable boxes
Photo: Femke Hoekstra

produce, but it was a struggle to sell their produce to a wider audience than their local community (selling “over the fence”). At the same time, Abalimi noticed a growing public interest in quality organic produce in Cape Town. This eventually led to the setting up of a marketing system selling boxes of organically grown, in-season vegetables on a weekly basis. A marketing unit within Abalimi was created, named Harvest of Hope.

The main goals of the Harvest of Hope initiative are to:

- create a sustainable and expandable market for producers in and around Cape Town;
- use this market as an engine for growth and an instrument for poverty alleviation in poor communities;
- give customers access to fresh competitive organic produce and contribute to fewer food miles.

Why a box scheme?

After a thorough market analysis, an organic vegetable box was chosen as the most promising marketing option for the producers for a number of reasons. The box system is sufficiently flexible to deal with crop failures, late harvests and poor quality, giving producers time to learn about consistent production, in terms of both quality and quantity. Varying the box content each week allows for yield inconsistency as producers build towards stable output targets, because quantities do not have to be exact.

The concept of the food box deals with various challenges that producers face: broadening the distribution chain (access to markets outside their local community), cash flow and liquidity issues (getting cash monthly instead of having



Labelled plots in a community garden

Photo: Femke Hoekstra

to wait an entire growing season), price fluctuations (a regular price is guaranteed), as well as seasonal fluctuations (contents of the box may differ).

Although the price that producers get for selling to Harvest of Hope is (often) lower than if they sold crops directly to the local community, Harvest of Hope offers them a regular market and a more secure and upfront source of income. The price set for the vegetables is based on a comparative analysis of prices at different supermarkets and wholesalers.

How the scheme works

The participating producers are trained in agribusiness systems. They sign simple contracts to grow specified crops in a designated size plot for pre-planned yields at pre-determined prices, to be harvested on targeted dates. The producers do the quality control, harvesting, cleaning and bunching of vegetables themselves. Harvest of Hope picks up the vegetables from the gardens once a week and delivers them to the packing shed, which is located on the perimeters of the Abalimi office and has all the equipment needed to process vegetables. There the vegetables are weighed (to record the amount of vegetables delivered by each garden), washed, cut and packaged or bundled, depending on the type of vegetable. An equal number of vegetables are packed in each box. The core packing staff consists of about five people, including Abalimi field staff. In addition, several producers work in the packing shed on a rotational basis to learn about the entire process of processing and marketing.

There are two types of boxes. The big box (sold at R95–10 Euros), a stackable crate, contains between 9 and 12 different vegetables depending on the costs of production. Standard vegetables in the box are potatoes, onions, carrots, a salad pack and bean sprouts. Other vegetables, depending on the

season, include tomatoes, green peppers, butternut, baby marrows, sweet potatoes, beans, peas, pumpkins, spinach, Swiss chard and beetroot. Boxes also usually contain a special and expensive vegetable, such as mushrooms, cherry tomatoes, red or yellow peppers, which are supplied by other farmers. The small box, which was introduced on demand in February 2009 (sold at R65–7 Euros), is actually a plastic bag (they are looking for a better alternative) containing 6 to 7 varieties of vegetables.

After the packing, the Harvest of Hope staff delivers the boxes to the collection points, most of which are primary schools (about 15–20 in total) in the suburbs of Cape Town, but also some institutions and a retail outlet. Schools seem to be the best distribution places, as parents can combine collecting their children with picking up a food box.

Harvest of Hope in numbers, April 2010:

- *Harvest of Hope is the marketing unit of Abalimi. Since it was started in February 2008 it has grown from working with 8 producer groups to 18 groups (with 118 producers) and has increased the number of commercial subscribers to their weekly food boxes from 79 to about 180 in April 2010 (and the number of subscribers continues to increase).*
- *For each 100 boxes produced, 8,415m² of land is required. The total amount of land used for Harvest of Hope is 26,047m².*
- *Income per producer is up to R3,000 a month on an average plot of 500m².*

Supporting the CSA movement

Running the business encompasses production planning, training and preparing producers for (semi-) commercial production, monitoring the producers' performance, and arranging inputs and finance. An intermediary organisation operating between the producers and consumers (in this case Abalimi/Harvest of Hope) is required, especially during the initial period. At operational level, the business is now almost entirely run by the target group, while being represented at management and board level by the main leader of the producers and other local black leaders from the target community.

Abalimi monitors the sustainability of all gardens on the basis of several pre-defined indicators to make sure that the producers are ready to become part of Harvest of Hope. Furthermore, Abalimi organises the production planning. Harvest of Hope developed a planning tool, which shows for each week of the year how much needs to be planted in each garden to obtain a certain amount of kilos per week per box (for a total number of boxes). Harvest of Hope plans for a production surplus of 10%. Through this surplus, they are able to cope with production loss and they can deliver their best produce to their customers. The surplus goes to charity projects, staff and volunteers.

In addition, Urban Producer Field Schools (UPFS, which are part of the RUAF From Seed to Table project) aim to look at weak areas in the production cycle and train producers in order to increase production. UPFS provide training sessions on subjects including quality control, soil management and pest management.

Abalimi provides inputs such as seeds, seedlings, compost, fertiliser and equipment. These are either free or subsidised, depending on the price of the input. Groups are starting to contribute (100% of seed and seedling costs, 10% of bulk cow manure costs) and this is deducted from their monthly

payment. At present the groups are only capable of contributing as they cannot afford to make new investments by themselves, but Abalimi believes that subsidies and services are necessary for any farming activity nowadays.

Consumer relations

It remains a challenge to keep all consumers satisfied. Consumers are informed by weekly emails and can participate as a volunteer or join a weekly tour to the gardens and the pack shed to become part of the CSA. A customer feedback survey (March 2010) among 56 non-active consumers showed why people decide to quit. This had to do with (a combination of):

- Size (concern for 23% of customers): either too much quantity leading to food waste or too little of everything;
- Variety (a concern for 25%): kind of vegetables offered (too much or too little variety, not enough of the basics (like potatoes), or not "child-friendly" enough);
- Pick up (25%): concerns with time, date or location. Some would prefer home delivery;
- Financial (7%): financial concerns, being able to find the same quality of food cheaper in supermarket;
- 5% had started their own garden and produced enough vegetables;
- 7% had issues with choice; some wanted to be able to select for themselves or know in advance what would be in the box so they could adapt their other shopping based on this information;
- Others have either moved; are buying more readymade food (cut, peeled and prepared); found another supplier; or don't know how to prepare the vegetables (although a recipe is always included).

Furthermore, when the schools close during the holiday there is no alternative market outlet, so sale volumes can be very low. This year box numbers dropped from 195 to 131 during the most recent holiday.

Masikhanye garden in Khayelitsha

Photo: Femke Hoekstra



The future

Since 2008, Harvest of Hope has developed from a small-scale initiative to a well-organised, complex logistical marketing business. It has created access for small-scale producers to a new market and is working towards the

Note

1) Abalimi is one of the local RUAF partners and Harvest of Hope is part of the From Seed to Table programme.

References

Abalimi Bezekhaya. (2009). HoH Business Plan. Cape Town: Abalimi Bezekhaya.
Femiano, M. (2010). Harvest of Hope customer feedback survey. Cape Town: Abalimi Bezekhaya.
Van Veenhuizen, R. (2006) Cities Farming for the Future, Urban Agriculture for Green and Productive Cities. Philippines: IIRR, IDRC and RUAF Foundation.

creation of an alternative food system. In 2010, Harvest of Hope won the Impumelelo Innovations Award, which “rewards exceptional projects, which involve partnerships with the public sector that enhance the quality of life of poor communities in innovative ways”.

In some community gardens, the average age of producers is as high as 60 years and the levels of production remain relatively low. The low level of participation of younger people may have sustainability implications in the long run.

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Developing an Organic Box Scheme in Accra, Ghana

The demand for sustainably produced and healthy vegetables and fruit is growing in Ghana. This provides an opportunity to set up sustainable local value chains. A consortium of farmer cooperatives and traders in Accra, supported by the Netherlands-based NGO Agro Eco-Louis Bolk Institute (LBI), is developing an organic fruit and vegetable box scheme.

Organic produce grown in Ghana is currently mainly exported. Growing crops for the local as well as the international market will enable the (often small-scale) farmers to diversify their farms, thereby reducing their financial risks and also benefiting the soil, water conservation and biodiversity.

The partners

This initiative is the work of the Forward Ever Youth Cooperative (supported by the Ghana Organic Agriculture Network), Ideal Providence Farms, and Quin Organics.

Forward Ever sites are located around Woe, a suburb of Keta in the South East of Ghana. Established in 1997, the cooperative has 45 registered members, all of whom are full-time vegetable farmers. These farmers will provide vegetables for the box scheme including cucumber, lettuce, cabbage, green pepper, chilli, eggplant and okra. The farmers grow these crops according to organic agriculture principles and are in the process of acquiring organic certifications. Ideal Providence Farms, established in 1998, manages the production of tropical fruits and herbs on two farms covering a total of 85 acres. This company is also active in organic wild collection: about 150 women in Northern Ghana collect shea nuts, which are processed into shea butter for export to European and other markets. Quin Organics is a certified organic farming and processing business in Ghana that deals in vegetables, herbs and spices. In addition to running a nucleus farm, it also coop-

erates with farmer-based organisations in the Keta District through an out-grower scheme and a training scheme. Quin Organics focuses on both the local and the export market. It will provide fruits and herbs for the box scheme and is in the process of building a pack house for processing and storage.

The box scheme

Interested consumers will register and receive a weekly box of organic vegetables and fruits for a fixed price. The box can be delivered to an office or residence, or picked up at one of several locations in town (including fruit stalls, supermarkets and gas stations). The box scheme targets high- and middle-income Ghanaians in Accra as well as expats, since these people are willing and able to pay a bit more for the quality products.

The initiators aim to make the box scheme financially independent once it is up and running. The farmers will receive a fair price, which includes a premium for the organic products and sufficient extra to cover the costs of assembling, packaging, marketing and distribution. It is estimated that some investment will be needed at the start of this initiative, for which funds are currently being raised.

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Sample of a large organic vegetable box in Accra

Using Value Chain Analysis to Increase the Impact of Urban Farming

21

Jonathan Mitchell
Henri Leturque

This paper summarises work attempting to answer two apparently simple questions: Can urban agriculture reduce urban poverty? And, if it can, in what ways can poverty be reduced? It also explores the role of value chain analysis in understanding better the role of urban agriculture.

A team at the Overseas Development Institute¹ recently had a chance to investigate these questions in a scoping study undertaken for the International Development Research Centre². The aim of the study was to re-appraise the role of urban agriculture in poverty reduction in developing countries. The research was based on an extensive review of the literature, key informant discussions³ and field visits to Africa, Asia and Latin America.

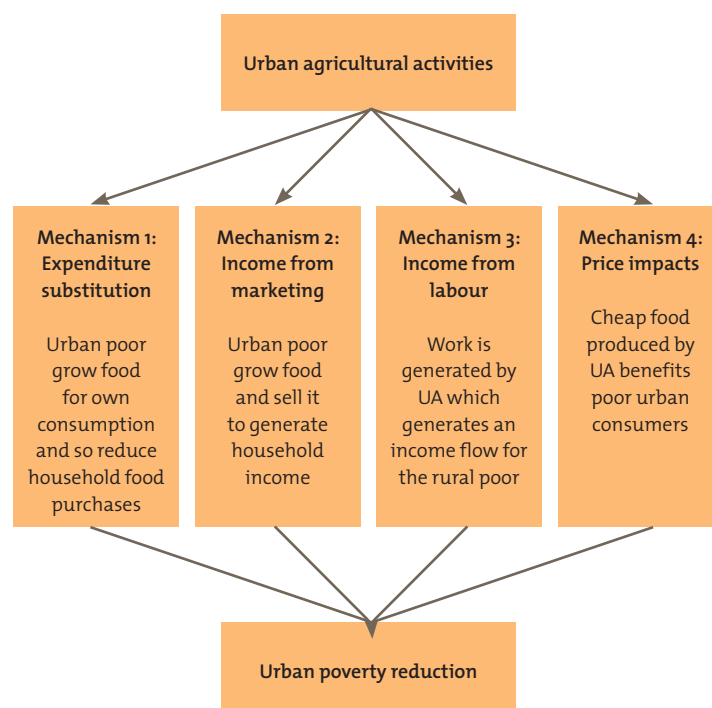
Conceptual framework

Poverty is about much more than a lack of money. The multi-dimensional nature of poverty should prompt us to examine environmental and social issues related to urban agriculture, as well as economic aspects. However, given that the environmental and social impacts of urban agriculture have been investigated much more vigorously than the economic, our analysis was restricted to a strict focus on income poverty.

There are several different channels through which urban agriculture can impact the poor. The urban poor can benefit directly from their own on- and off-plot agricultural activities in cities—by using their produce for household consumption, or selling it to provide household income. Beyond this direct economic benefit are less direct ways through which urban agriculture can contribute to reducing urban poverty.

First, periurban agriculture by large producers requires the allocation of labour along different parts of the value chain – on-farm labour, marketing and transportation. Secondly, urban agriculture is a helpful channel for the production and supply of cheap food in cities and towns that is affordable to the urban poor—who are primarily net buyers of food. These different contributions are shown in Figure 1.

Figure 1: Linking urban agriculture and urban poverty reduction



Our approach to understanding the agriculture sector in the productive city focuses on examining the following four mechanisms:

- **Mechanism 1. Expenditure substitution:** where home production for own consumption contributes to household food security. Growing their own food makes people less dependent on purchases and this could have an impact on poverty levels by freeing up household resources that could be used for other expenditures.
- **Mechanism 2. Income from marketing:** where produce is sold and this generates household income. This mechanism involves producing food and other agricultural products for the market. Farmers who grow for their family's own consumption may in fact sell part of their produce either because they cannot use it all or because they want to earn from it.
- **Mechanism 3. Income from labour:** where work related to urban agriculture generates income. The main opportunities are on larger commercial farms producing vegetables, poultry, fish and fruit that employ mainly unskilled labourers, but they are also related to inputs, processing and marketing or other agricultural services.

- **Mechanism 4. Price impacts:** where cheap food produced through urban agriculture benefits poor urban consumers. The urban poor benefit from the supply of cheap food in cities, irrespective of whether they are urban food producers or not.

These mechanisms are not mutually exclusive – household poverty reduction often results from more than one mechanism. For example, households growing vegetables may consume part of the crop and sell part of it and are therefore simultaneously engaged in mechanisms 1 and 2. If the household also buys food and other agricultural produce that is produced locally by others, then it is also engaged in mechanism 4. Similarly, production systems and value chains can incorporate combinations of different mechanisms. Real life is often complicated, which is why we use frameworks to simplify a messy reality.

However, this framework is useful because it reminds us to consider all the diverse ways in which urban agriculture can potentially reduce poverty.

Examine the empirical evidence about what we do (and don't) know

Producing a comprehensive picture of the overall economic impact of urban agriculture is tricky. Data is limited (especially on mechanisms 3 and 4) and, what is available, often focuses on specific commodities and is generated from different, and incompatible, methodologies. However a meta-analysis of household surveys by the RIGA⁴ program (FAO) offers a snapshot of the importance of urban food production across 15 countries. This analysis suggests the following:

- Many urban people participate in agriculture: some 20 to 80 per cent of the poorest fifth of the population.
- Urban agriculture generally represents a very limited proportion of urban people's income, except in sub-Saharan Africa, where agriculture contributes 15 to 50 per cent of total income in the African case studies below.
- Resource-poor households are the most active participants in urban agriculture and, for them it represents a larger share of their total income.

This suggests that urban agriculture is generally relevant to urban poverty - since it involves the urban poor. However, whether it should be part of urban poverty reduction strategies is another question. This depends on whether urban agriculture related incomes can grow or at least be sustained. Our conceptual framework is a useful tool with which to study each mechanism's potential to contribute to urban poverty reduction.

Mechanism 1 is most prevalent in situations where deteriorating food supplies and poverty have made own production an important coping strategy. This situation is more prevalent in Sub-Saharan Africa in areas where urban poverty levels and food insecurity are higher than anywhere else, and access to land is often easier (relative to more densely populated cities in Asia). This mechanism was also prevalent in other crisis or transition contexts, such as in East European

cities and Havana, Cuba, after the fall of the Soviet Union. Harare, Zimbabwe, is the most contemporary example of a city in which urban food production surged in response to economic stress (e.g. Redwood, 2009). The importance of mechanism 1 often appears more limited out of crisis contexts. For example, in Ghana, although very high proportions of urban people are involved in agriculture, it only covers a tiny share of urban food costs⁵.

Mechanism 2 or production for the market was identified as a critical mechanism across all the recent case studies reviewed - and also the most important in terms of income generated. Urban agriculture can complement rural food influx by providing products that rural agriculture cannot supply easily. For specific perishable products, it is reported to supply as much as 80 per cent of urban consumption (e.g. leafy vegetables in Accra).

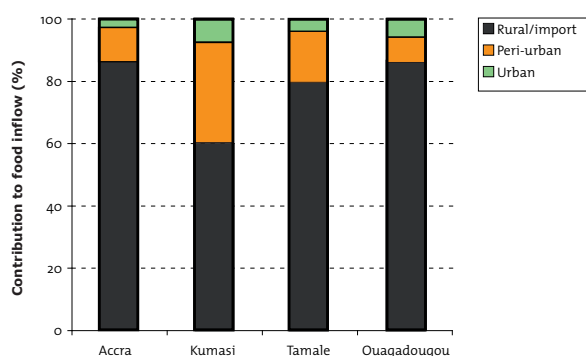
But beyond its overall contribution to urban food supply, what is striking is the extreme diversity of production by urban farmers sold to local markets. While the production of traditional perishables such as vegetables, meat, fish and milk continues to be widespread, other crops including flowers, fodder and different uses of land such as agro-tourism are also becoming more important. Value chain structures are also diversified; they can be very simple in situations where produce is sold directly by farmers to walk-in clients or extremely complex where a variety of different users, transport, collection and marketing channels operate. Also, it appears to offer relatively high incomes to urban vegetable producers in East and West-African cities. However, beyond information gathered through studies of fresh vegetable production, our understanding of market-orientated urban agriculture is often still limited.

Mechanism 3 is an under-researched area. Urban agricultural labour has only been studied in a few cities where there is anecdotal evidence of its scale. Beyond being a research 'gap', there is no reason that it should not be as important as other mechanisms, with workers either hired on large urban and periurban commercial farms, or working as casual labour for smaller-scale farmers. It is plausible that most urban agriculture wage labourers are income poor, whereas this is not necessarily the case for people involved as producers, either for the market or for their own consumption.

Mechanism 4 links urban agriculture to urban food security. It is clear that the vast majority of urban dwellers are net food buyers. Even urban farmers can rarely produce enough food, in quality and diversity to feed their families. Guaranteed access to cheap food is a major concern to urban poor, and therefore to urban policy makers. But does urban agriculture contribute to the regulation of urban food prices?

Urban agriculture can contribute a significant share of some specific products to urban markets. However, available information on a few cities (**figure 2**) suggests that, on the whole, it only plays a limited role in supplying urban food markets. It is unlikely that it has a significant poverty-reducing effect by depressing the prices of the staple foods consumed by the resource poor.

Figure 2: Contribution of different areas to urban food inflows in selected West-African cities



Source: Drechsel et al., 2006.

Information gaps

What is clear from the analysis above is that mechanisms 2 and 3 appear to hold the best potential for increasing urban farmer incomes at scale. Both mechanisms are also inherently appropriate for a value chain analysis. Value chain analysis separates the different functions, or nodes, of production, processing and marketing in order to understand how they work, who participates and gains, and how the efficiency of the chain can be improved. Value chain analysis is also well-suited as a framework to understand the labour market effects of urban agriculture. Despite this potential, very few studies⁶ have focused on urban agriculture value chains to date.

At present we know in some cases a bit about the numbers of producers and their return, but we rarely know:

- who participates and the value of that which is captured in nodes other than production of the value chains;
- the numbers of wage labourers who depend on urban agriculture and related services, their backgrounds, labour conditions and wage levels;
- the other income sources of those engaged, and the significance of urban agriculture to their livelihoods;
- the difference in income levels between those (fully or partly) engaged in urban agriculture at various nodes and the average income of urban dwellers (which would provide a better idea of its relative impact);
- how to improve the efficiency and pro-poor impact of the production, processing and marketing systems of urban agriculture value chains.

This is critical information to be able to design interventions which will both improve the functioning of current production, processing and marketing systems and also enhance the incomes of participants in urban agriculture value chains.

Implications

Based on available information, mechanism 1 and 4 seem to have a weak poverty-reducing effect. As they are the only two involving a very large number of poor people in urban areas, urban agriculture may only have a limited potential to transform urban poverty. Mechanism 1 (production for own use) makes a positive but generally very small contribution to the

livelihoods of many urban poor (as well as the non-poor). Mechanism 4 (food prices) would have a very widespread impact on the urban poor if urban agriculture had a significant influence on the price of staples in urban areas – but there is no evidence of this influence. In addition, these two mechanisms are associated with coping strategies rather than developmental strategies that can reduce poverty at scale on a sustainable basis.

This leaves us with Mechanisms 2 (marketed output) and Mechanism 3 (agricultural wages), which have clear potential to reduce poverty by increasing farmer incomes. Both these mechanisms are also clearly associated with livelihoods and development strategies. We believe that value chain analysis is well-suited to analysing how to improve the production, processing and marketing systems of urban agriculture – and also how to enhance the pro-poor impact of these chains. Viewing agriculture through a value chain lens is standard practice in rural areas, but is more rarely applied to urban agriculture. Adopting a value chain approach should help in building links with the rest of agricultural development thinking. So far, most urban agriculture work has focused on producers, while far less attention has been paid to market intermediaries, which are critical to the operation of the whole chain.

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Notes

- 1) The ODI is the United Kingdom's leading development policy 'think tank' (see www.odi.org.uk): an independent organisation with a mission to inspire and inform development policy and practice to reduce poverty and suffering.
- 2) The IDRC is a Canadian Crown corporation that works in close collaboration with researchers from the developing world in their search for the means to build healthier, more equitable, and more prosperous societies.
- 3) We acknowledge the valuable insights provided by RUAF, the World Bank, FAO, Rockefeller Foundation and policy-makers, researchers, practitioners and farmers in six cities in four countries.
- 4) Rural Income Generating Activities
- 5) A recent IWM survey of people engaged in backyard gardening in Kumasi and Accra showed that this activity contributed in general to an annual savings between 1 and 5 per cent of overall food expenditures with the higher values (up to 10 per cent) reported by the poorer households.
- 6) African indigenous vegetables in urban agriculture / edited by C.M. Shackleton, M. Pasquini and A.W. Drescher. Earthscan, 2009.

References

- Drechsel, P. Graefe, S. Sonou, M. and Cofie, O.O. 2006. Informal Irrigation in Urban West Africa: An Overview. IWM Research Report 102.
- Redwood, M., ed. 2009. Agriculture in Urban Planning: Generating Livelihoods and Food Security. London and Ottawa: Earthscan and IDRC.
- Zeza, A. and Tasciotti, L. 2007. Does Urban Agriculture Enhance Dietary Diversity? Empirical Evidence from a Sample of Developing Countries. ADED, FAO.
- Shackleton, C.M, Pasquini M, and Drescher, A.W. (2009) African indigenous vegetables in urban agriculture. Earthscan, London.

Distance to the City and Performance of Food Chains in Antananarivo, Madagascar

Little is yet known about the quantitative importance of urban agriculture in Antananarivo. Yet several recent studies on chains, such as those for rice, tomato, cauliflower and leafy vegetables, provide insights into the contribution of agriculture to the capital city's food supply, and the comparative advantage that urban locations provide.

This study¹ examines the difference in performance between food-processing chains in urban, periurban and rural areas. It analyses the relationships between location; availability and access to production factors; the structure of marketing channels; and the cost, distribution and performance of production. The study shows that these chains constitute contrasting economic environments at very short distances from one another.

Rice is the main staple food in Madagascar and the main market is Antananarivo. Providing 15 to 25 per cent of the total rice supply to the capital, urban rice production is the third largest contributor after imported rice and rice coming from Lake Alaotra, the country's largest rice granary. Harvested earlier than most rice in Madagascar, urban rice helps supply the market and stabilise prices during the lean season (December-February/March) thus reducing the need to import rice from April to June, before the large harvests come in from Lake Alaotra.

Tomatoes, due to their perishable nature, are grown predominantly around Antananarivo. They are the most common market crop consumed in the capital (ahead of potato, carrot, onions and leafy vegetables) and more than 90% comes from urban agriculture. Farmers who previously grew only rice have started to diversify by growing tomatoes, which are regarded as a "year-round" product by consumers in Antananarivo. Farmers in different locations use their differences in agro-climatic potential (including altitude) to create a complementary marketing calendar.

Sites at varying distances from the city centre

A comparative analysis was made on rice and tomato, the two dominant products in the intra-urban, periurban and rural agriculture areas close to the capital of Madagascar, based on data collected in 2005. The sites for the study were chosen on the basis of the following criteria: 1) strong market integration of the farmers; 2) strong orientation of the chains

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A farmer selling his tomatoes in downtown Antananarivo
Photo: Marie-Helene Dabat

towards markets in Antananarivo and; 3) similarity of farming systems, equipment and soil.

The sites compared for rice were Analamahitsy Tanana, an urban area; Ambatomainty, a periurban area 12.5 km from the city; and Ankazoandrano a rural area located 85 km away. The tomato sites were Ambohimarina, a periurban area 15 km from the city (referred to as close); Ambohidrazana, a periurban area 20 km away (referred to as far); and Ambatomoina a rural area at 102 km distance from the capital.

Ten farmers per site (60 in total) were interviewed, as were several experts and agents in the main marketing channels towards Antananarivo. The farmers practise mechanised farming in the periurban area and more traditional techniques in the intra-urban and rural areas. Tomato yields range from 2.7 tons (rural area) to 3 ton per hectare (periurban). In the rural area, tomatoes are grown in the rice off-season, and in the periurban areas they are grown in the rainy season in the rice producing foothills. The yields for rice vary from 16 tons (close periurban area) to 22 tons per hectare (rural area).



Urban farmers at work
Photo: Marie-Helene Dabat

Number of participants in chains is not distance dependent

Farmers sell on average about 25 per cent of the rice they produce. After processing it manually, the intra-urban rice farmer sells 80 per cent of the produce that he markets directly to consumers in the capital and 20 per cent to a district retailer. The production marketed by the peri-urban rice farmer passes from small-sized paddy collectors/processors or processing factories to collectors of processed rice, wholesalers and retailers before reaching the consumers at the big daily markets in Antananarivo. The produce marketed by rural rice farmers passes along several channels, some of which are fairly short: local sales at rural weekly markets no further than 50-60 km away account for 50 per cent of marketed produce. Other channels take longer for the rice to reach urban consumers, as it passes through paddy collectors, processors, collectors of processed rice, wholesalers, and retailers at several markets.

Tomatoes must be sold immediately after harvesting. Most of the harvest is sold, only a small part is being retained for domestic consumption. Paradoxically, of the three sites, the marketing channel for the two periurban sites is much longer (i.e. is composed of a larger number of intermediaries) than that for the rural area. The collectors/wholesalers



Farmers transporting watercress
Photo: Marie-Helene Dabat

buy about 88% of their tomatoes from the close periurban area and use a rented car to transport them to the wholesale market. The semi-wholesalers then transport them by taxi (minibus), rickshaw, or sometimes on their backs, to retail markets. The channels are similar for tomatoes from the far periurban area. The differences are that there are two types of collectors (collectors for the wholesale market and collec-

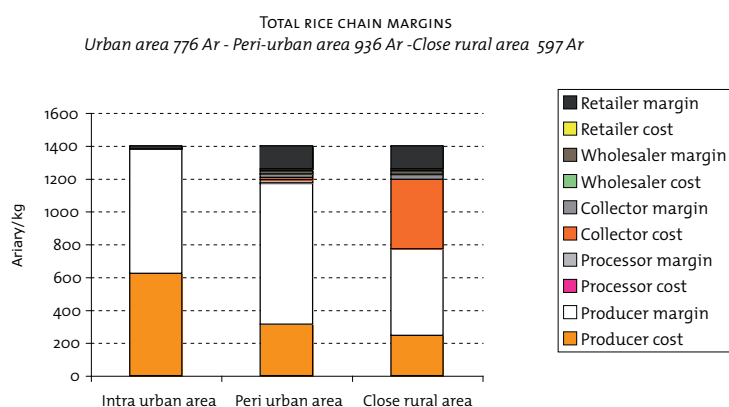
tors for the local market) and produce flows not only towards the capital but also outwards, towards the provinces. Collectors do not approach nearby rural producers because the area is enclosed. These farmers therefore have to transport their tomatoes at their own expense by taxi and rickshaw to the major markets (wholesale and retail) of Antananarivo.

There is demand for different types of tomatoes on the Antananarivo markets. For example, large, good quality tomatoes are sold by the kilo at the Petite Vitesse market, while small tomatoes are sold more cheaply by the pile at the Andravoahangy market.

Other products also pass along a variety of channels before reaching their final destination. Watercress is an example, where almost two-thirds of intra-urban produce also goes through long channels (see Box). In the city, this apparent paradox may be because the process of agricultural production is so time consuming, leaving little time for marketing, or because of having to combine several household activities. In the countryside, this may be because farmers can secure a safer return on their work by selling more expensive produce directly to urban consumers, but it may be more difficult to find collectors in the most remote areas.

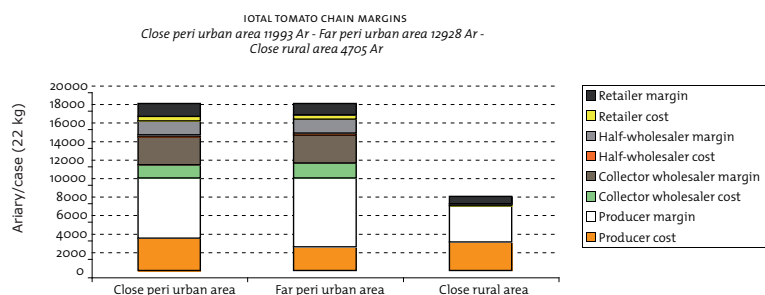
Reduced costs and comfortable margins for middle-distance production

Processing costs are charged to the rice farmers in the intra-urban site, while they are charged to the collectors in the peri-urban and nearby rural areas. Therefore production costs are relatively higher in the intra-urban area. However, production costs of the urban rice farmer are also higher than those of the periurban rice farmer because of the high labour cost in the city. This means that urban farmers' profit margins are lower than those of periurban farmers for rice sold at the same price. Collection costs are high for the rural site in comparison to the peri-urban site because they include processing: in fact the rural rice farmer sells paddy and not white rice to the collector, but also pays four times higher transport costs. In conclusion, the periurban rice chain is the most efficient within the comparison (see Figure).



Tomatoes grown during the rainy season in the periurban area offer a higher margin than those grown in the rural area

because the produce is sold during a period of scarcity on the market. This increases the price, but the maintenance cost of the crop is also higher. Nevertheless, in the far periurban area, production costs are lower than in the rural area because transport costs are charged to the collector/wholesaler. Rural producers pay the transport costs and sell directly in Antananarivo. Production costs are also lower in the close periurban area because the yield is higher (20 t / ha against 16 t / ha) and thus economies of scale play a role. So, the tomato chain of far periurban production is the most efficient, but the differences with the other tomato chains are smaller than those between the different rice chains (see Figure).



Factors of production that follow different rules

The initial assumptions, of a gradual decrease in the availability of inputs and a progressive increase of the prices asso-

ciated with the remoteness of the town, were confirmed for transportation, unskilled labour, and mode of tenure. They do not always hold, however, for price of land, skilled labour, or situations where there are many stakeholders.

In the city, agriculture is combined with other activities, so the producer of rice or tomato must resort to the use of paid labour from rural areas, or unpaid labour of acquaintances or members of the extended family. For rice, paid labour is expensive in the periurban areas because there is not always enough labour available to cover farming activities, especially during the harvest period. Labour is cheapest at the rural site. For tomato, labour is more expensive in the rural area than in the periurban areas because labourers need to be better qualified to handle farm equipment (plough and harrow).

Land is a complex factor of production, subject to other factors than just the rule of competition and decreasing prices as you move away from very populated areas. Land may be more expensive in the rural area than in the far periurban area; and land on hillsides may be more or less expensive than land in the valley, depending on the site.

Similarly, it is not always the shortest chains, in terms of the number of participants, which perform best. Moreover,

Watercress, an example of growing urban agriculture

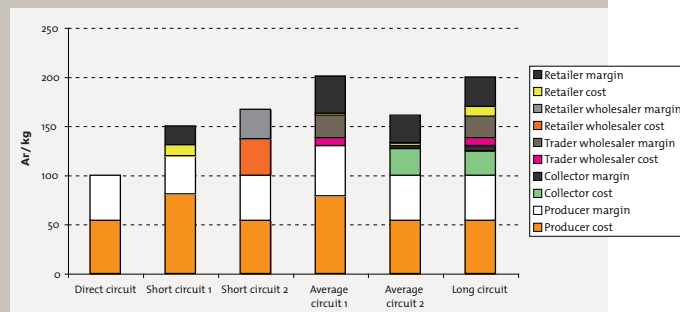
Watercress (*Nasturtium officinale*) is one of many leafy vegetables grown by urban farmers in Madagascar. Produced on small family plots, it grows in spaces left derelict by urban construction and where rice is no longer grown. In 2005, the Department of Agriculture estimated national production to be 1003 tons, 80 per cent of which is grown in the province of Antananarivo. This figure would appear to be a considerable underestimate. A cross-check of production site maps, systems analysis and crop yield estimation, shows that production in the capital city alone is likely to be between 20,000 and 40,000 tons. The majority of the 296 operators are Betsileo, an ethnic group from the central southern Highlands, who maintain seasonal activities in their region of origin and complement this by renting land to cultivate rice and watercress in the capital.

The area occupied by watercress in Antananarivo is growing, in response to increased food demand as the city grows. It expanded from 40 ha in 1973 to 68 ha in 2008. In total there are 41 sites, of which 37 are located in the intra-urban area. Ten have started to decrease in size due to an embankment.

Watercress cultivation is a very profitable activity. For example, annual production in Ambanidia, one of the most important areas, varies between 154,000 and 257,000 ares² where it is a monocrop. Differences in economic performance are related to several factors: tenure status (owner or tenant), access to water, the selling price of the product (higher in periurban areas) and the marketing channel.

The cress grown in Ambanidia passes along several marketing channels to get to consumers in Antananarivo. These vary from direct channels (no intermediaries in the sector, consumers purchase from farm gate) or short channels (producers, retailers) to chains with multiple intermediaries (collectors, wholesalers, retailers). In total, eight channels have been differentiated.

The margins in these chains are shared evenly between the different agents, except for the chain which supplies supermarkets. Indeed, much of the total margin of the chain accrues to supermarkets because they sell the product to consumers at a price 5.5 times higher than in other forms of urban outlet.



The competition between development of urban agriculture and other urban activities seems to favour the cultivation of watercress. However, the sustainability of this chain, which lacks organisation and support but is strongly resilient, depends on its capacity to deal with the questions of quality and food safety of the product.



Watercress production in the city

Photo: Marie-Helene Dabat

several unexpected parameters have a strong effect on economic performance: the origin of labour used (farmers or employees/paid labour), the type of fertiliser used (no fertiliser, green manure or artificial fertiliser).

Indeed, the most successful systems are the ones which take advantage of the proximity of urban markets for trade opportunities, and, at the same time, minimise the costs arising from the competition between agriculture and other urban activities. In the case of Antananarivo, the optimal systems are situated in the intermediate periurban area between the intra-urban area and the rural area.

Finally, it is important to make a sectoral and spatial analysis of the interactions between food-processing chains, household strategies and territorial dynamics. This dual approach enables space to be taken into account in economic analyses of chains; processes of structural change in the agricultural world that are related to urban areas to be studied; and local development decisions to be supported by actors in the chains concerned.

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Notes

- 1) This text is an excerpt from the Corus1-ADURAA research project (Analysis of the sustainability of agriculture in the town of Antananarivo) 2003-07 funded by MAEE.
- 2) 1 acre = 40 ares

References

- Aubry C., Ramamonjisoa, J., Dabat, M.H., Rakotoarisoa, J., Rakoton-draibe, J. & Rabeharisoa, L. (2008) L'agriculture à Antananarivo (Madagascar): une approche interdisciplinaire, *Natures Sciences Sociétés* 16, 23-35.
- Dabat M.H., Andrianarisoa B., Aubry C., Ravoniarisoa E.F., Randrianasolo H., Rakoto N., Sarter S. & Treche S. (2010) Production de cresson à haut risque dans les bas fonds d'Antananarivo?, *Vertigo*, forthcoming.
- Dabat M.H., Aubry, C., & Ramamonjisoa, J. (2006) Agriculture urbaine et gestion durable de l'espace à Antananarivo, Madagascar, *Economie rurale*, Juillet-Octobre, 57-73.
- Dabat M.H., Razafimandimby S. & Bouteau B. (2004) Atouts et perspectives de la riziculture péri-urbaine à Antananarivo, Madagascar, *Cahiers d'études et de recherches francophones Agriculture*, 2004, vol.13, n°1, p 99-109
- N'Dienor M., Dabat M.H., Ramanarivo R., Randriamiharisoa F., Rajoelison J. & Aubry C. (2005) A trend towards urban integration and organization of the tomato subsector in Antananarivo, Madagascar, *ISHS, Acta Horticulturae*, vol. 699, 317-326.
- Ramahaimandimbisoa, A.T. (2007) Analyse technique et économique de la filière cresson dans un contexte de problème sanitaire à Antananarivo, Madagascar, mémoire d'ingénieur agronome, Université d'Antananarivo, Ecole Supérieures des Sciences Agronomiques, Département Agriculture, 149p.
- Ravoniarisoa, F.E. (2005) Analyse des différentiels de coûts de production liés à la proximité avec la ville d'Antananarivo pour les filières riz et tomate, mémoire d'ingénieur en Agromanagement, ESSA, Université d'Antananarivo, Décembre, 105p.



Informal market close to the train station at Tanyingone market
Photo: George O'Shea

Market Access for Urban and Periurban Farmers in Yangon

George O'Shea
Paing Soe

Preliminary research reveals that there are many urban and periurban producers in Myanmar and many of them sell part of their produce at a variety of markets in Yangon. Distance from the city and available transport to a large extent explain the differences.

Urban agriculture in Yangon

Urban agriculture is a survival mechanism and a means for income-diversification. Urban farmers generally have limited physical space for living and cultivation, and mostly work in low-paying, seasonal jobs with an unpredictable flow of income. They grow crops for household use as well as for the market, when the household economic situation is more stable. There is no private land ownership; all land is owned by the government. There are many "landless" cultivators in Myanmar who pawned their usage rights after a failed crop or family emergency and are unable to repay the money-lender (the main source of credit for farmers – with monthly interest rates of 10% on average).

In the survey undertaken by the authors, urban farmers are defined here as those who live less than 15 miles away from downtown, cultivate plots from 0.25 to 0.5 acres due to high land prices and are mostly subsistence farmers. Periurban cultivators reside beyond 15 miles from downtown, cultivate larger plots (above one acre) and rely more upon yields as a part of their household's subsistence strategy. Types of crops commonly grown around Yangon include rice, cabbage, cauliflower, banana, bok choy, broccoli, lettuce, cilantro, coriander, eggplant, green onion, tomato, and snake gourd.

Market channels

A range of markets exists throughout urban and suburban Yangon. They vary greatly in size, opening hours, permanence/formality, electricity access, number of stalls/vendors, product types sold and accessibility.

There are several large *wholesale markets* around Yangon that draw upon local urban and periurban growers as well as growers from throughout Myanmar to supply them. Shipments arrive at these markets throughout the day. The several hundred stalls that make up these markets are owned by or rented to vendors and have access to electricity. There are two types of wholesale markets in Yangon: "dry

goods" (*goun chauq*) markets, specialising in the sale of less perishable crops such as tubers, beans/pulses, and rice; and "green goods" (*goun sein*) markets, which sell perishable crops like fruit and vegetables. The main input suppliers for these markets are wholesale brokers who have large cargo trucks capable of transporting a significant volume of produce. The buyers from these markets are mostly wholesale purchasers (e.g. hotels and restaurants), as well as vendors who buy large amounts of crops, which they resell to a (smaller) township market. Because of their limited number and lack of organisation, urban and periurban cultivators seldom have the yields needed to sell at these markets themselves, let alone the time and resources necessary to reach them.



Vegetables being unloaded at Thiri Mingala market
Photo: George O'Shea

Township markets are more numerous, and located in densely populated areas throughout Yangon. They are housed in permanent structures and are usually on the electrical grid and open from pre-dawn to late afternoon. Smaller than a wholesale market, they often sell a larger range of "dry" and "green" products. Since they serve as the primary point of sale for many households' weekly consumables, vendors also sell a wide variety of household items, medicines, books, toys, etc. These markets serve consumers who visit the market several times a week to purchase perishables due to unreliable electricity and limited refrigeration (mostly households and small-scale restaurants). While the produce usually gets to these markets through an intermediary, some farm (often periurban) households collectively own a market stall and sell their harvests on alternating days, sharing the monthly costs.

Weekend/morning markets, which are often temporary structures, appear throughout the city early in the morning especially in smaller neighbourhoods that do not have a township market. Mobile vendors sometimes use these markets as a starting point before going on their neighbourhood rounds. Prices are often lower compared to other markets because of their informality and non-existent operating costs; they are not housed within any formal structure (besides makeshift tents erected by sellers in the rainy season), they are off the electrical grid, and are not subject to any (formal) taxation. Often the vendors are (urban) produc-

ers from nearby plots as these markets are most easily accessible due to their proximity and tax-free nature.

Transportation

Yangon's urban and periurban farmers have several options to reach these markets.

Urban growers mostly market their produce themselves. They rely either on formal public buses or informal "line-cars" (a truck that ferries passengers back and forth along a route) to transport crops to the market for 250 kyats (approximately USD 0.25), while bringing cargo costs an additional 50 kyats. Periurban growers regularly use line-cars to reach markets, as bus lines are less accessible (especially further away from the main road). However, not all periurban farmers have a line-car route nearby, and there is considerable cost and risk involved for a farmer to personally bring his or her crops to the market. These farmers often lack reliable market information or have to compete with merchants and middlemen who have better relationships with consumers.

Another option for urban cultivators is the local train, called the "circle line", which travels from a downtown train terminal (once per hour) out to the suburbs and back on a circular route. A ticket costs 10 kyats (USD 0.01) and passengers can bring an unlimited amount of cargo onboard. This is the cheapest means of transport for the urban cultivators, indicated by the high volume of "circle line" passengers, as well as the particularly high volume of traffic at Tanyingone Market, which is located at the junction of the "circle line" and the railway route serving wider Myanmar. This affordable choice is not an option for periurban cultivators, as they cannot access the train stops.



Bauk Htaw plot with the "Circle Line" train in the background
Photo: George O'Shea

Some periurban households choose to collaborate to get their crops to the market and jointly rent a truck (at 1000 kyats (USD1) per mile) for a one-way trip to Yangon. Urban farmers do not use this method, as they are not as well connected to other cultivators and have easier market access. This collaborative method means higher margins for periurban producers (sometimes up to 40% depending on the crop). However, the lack of knowledge about optimal selling

locations and prices, the time spent in the city (and not tending one's plot), and the hassle of having to transport home (or abandon) any unsold crops are major considerations for a periurban cultivator.

Others use a "local" broker who travels to different urban and periurban areas, purchases crops and transports and sells them to the local market. By selling to a broker, the farmer does not have to travel to market, which saves time, although the price they get from the broker (the "farm gate value") is lower than at the market. Each morning local brokers in Yangon divide bulk amounts of vegetables arriving from places that are 12 to 160 miles from Yangon into smaller "household-sized" bundles in stalls located outside of the official market area. These local brokers "work the margins" by buying the cheapest vegetables and by avoiding the tax they would have to pay if they sold in the official market space. These brokers play an important role for periurban cultivators, with their larger plot sizes and greater dependence on agriculture combined with their more limited means of transporting their crops to the market. For urban cultivators, with their greater proximity to markets (and better infrastructural access), these brokers are not as important.



Weekend market near Bauk Hta urban farm
Photo: George O'Shea

Besides local brokers, there are also "regional" brokers who have increased market access through their ability to purchase crops from wholesalers or large farmers. While local brokers often walk from farm to farm (some own bicycles), regional brokers usually own or have reliable access to a vehicle. They work in areas where travelling requires a significant investment in terms of time and money due to poor infrastructure. When a periurban producer reaches a certain threshold of quality or harvest size, they attract the attention of a regional broker who is able to pick up the crops from the farm and explore the local sales options. If the surrounding village markets are not favourable, the regional broker travels to a larger wholesale market to pursue higher profits. Though important for periurban cultivators living in



Transport of bananas to nearby Thiri Mingala market
Photo: George O'Shea

areas with limited infrastructure, regional brokers are basically non-existent in downtown Yangon, making them irrelevant for urban cultivators.

Conclusions

Urban farmers mostly market their produce by themselves, as they do not have large quantities of vegetables to sell and are closely located to different marketing channels. Periurban farmers, with more produce to sell, can either sell to a local or regional broker, organise marketing themselves, or in groups with various advantages and disadvantages as discussed above.

Though there is a vegetable seller's cooperative that works with farmers to more widely and effectively market their produce at both supermarkets and smaller chain stores, there is a general distrust of "producer cooperatives", on account of Myanmar's unsuccessful past experimentation with Socialism.

Transportation is a decisive factor for periurban farmers. The lack of appropriate infrastructure for farmers frustrates efforts to personally transport crops to the market. If the "circle line" or similarly priced transport options were available to more cultivators around Yangon (or the circle line's track were expanded and running frequency increased to serve a wider area), the resulting income returns for Yangon's farmers would be significant. Improving market access in this way would simultaneously create additional income-earning opportunities for cultivators, as they would gain access to new markets for their crops. An added benefit would be increased access to fresh produce for consumers in Yangon.

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A Comparison of Urban Agriculture and Short Food Chains in Paris and Tunis

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Saloua Toumi
Roland Vidal

In general, the distance between producers and consumers is relatively short in urban agriculture. A comparative analysis between Paris and Tunis revealed significant differences in the economic, social and environmental impacts of these short value chains. The agro-climatic context, the social and spatial organisation of the city, and the nature of the distribution chains all influence the sustainability of urban agricultural projects and should be taken into account in their development.

Short distances

The concept of “food-miles” was introduced by British researchers in the early 1990s, as an indicator to measure the environmental impact of different distribution chains. The idea is simple: the more miles food travels between its place of production and consumption, the more it contributes to exhausting fossil fuels and polluting the planet. However, this simple idea has started to be questioned in a number of studies (e.g. Perez-Zapico, 2008), which have found that “the logistical organization of distributing produce in bulk/larger volumes appears to be an important element in reducing energy cost”. This means that marketing products through large-scale distribution channels, even when imported, may be more energy efficient than promoting short food chains.

Moreover, several studies conducted in the United States and Europe show that the energy cost of food depends much more on the way it is produced than on its transport, especially when transport is organised in an efficient way. (These studies do however question the subsidised (energy) costs of transport). Another example is given by DEFRA (2008), which showed that tomatoes produced in the London area have much higher environmental costs than those produced in Spain and transported to London – because of the energy requirements of producing this crop in the London climate. Minimising the environmental impact of agricultural production thus also means choosing the crops best suited to the agro-climatic conditions in the place of production. In the words of the German researcher Elmar Schlich (2006), “the ecology of scale joins the economy of scale”.

So, local food is not always a (more) sustainable solution. This is especially so for Northern cities, where climatic and soil condi-



Hot peppers produced and sold in periurban area in Soukra
Photo: Saloua Toumi

tions are less suitable for growing fruit and vegetables – the products that are in principle best suited for short food chains. For these cities, the notion of local production must be extended to several hundreds of kilometres if it is to better respond to achieving the optimal environmental impact desired.

But what is true for Northern Europe is not true for all regions of the world. The notion of “*locavores*” (people who prefer to eat local food) is becoming more and more fashionable in Paris, where local vegetable production and fruit cultivation is almost entirely maintained with support of the community (Community-Supported Agriculture). On the other hand, in Tunis, urban agriculture is increasingly threatened by urban expansion, while its real utility is not fully understood by its citizens and local governments. This form of agriculture, dominated by vegetable and fruit production (and unlike production around Paris), does not need any community support to be economically viable. Furthermore, its environmental balance, on first analysis, seems to be significantly more positive in respect of its ecological footprint than that of urban agriculture in periurban Paris.

To use the typology of André Torre (2009), we could thus say that in the case of Paris, the expressed desire of its city-dwellers for short food chains can be met by what we could call “organised proximity”, where direct producer-consumer relations are relatively more important than actual distances between places of food production and consumption. In the case of Tunis however, “geographical proximity” (where food is indeed produced close to the consumers) is more likely to be functional.

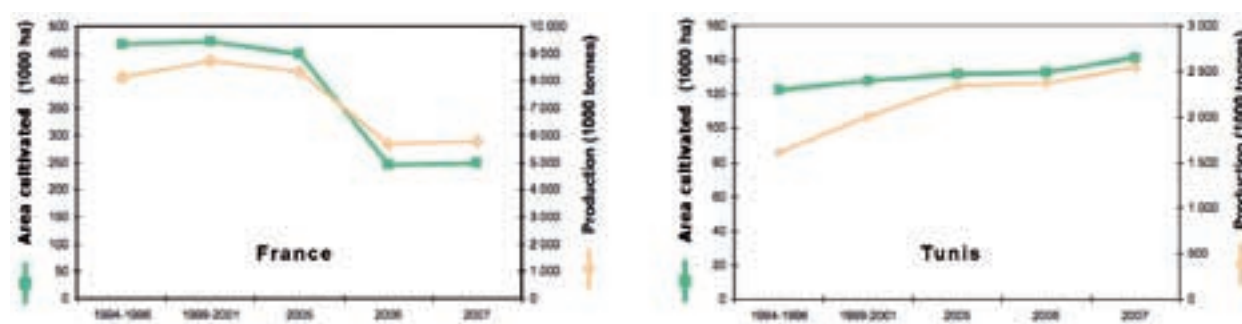
Agro-climatic context

Short food chains, as we saw, mostly involve fruit and vegetables. However, these are not the most optimal products for growing in Ile-de-France, where the land is actually best suited for growing grain. That is why the development of the railroad in the 19th century, which enabled food to be transported over greater distances, resulted in the disappearance of the food growing area surrounding Paris. Vegetable production was relocated to the Loire valley and Brittany, and fruit cultivation towards the sunnier regions of the South. The agricultural lands in the valleys surrounding Paris were gradually urbanised and hardly any are left today. Therefore, re-introducing local horticultural and fruit production in the Paris area cannot be done without significant economic and ecological costs.

Tunis, on the contrary, is located in the heart of a plain that is still dominated by fruit and vegetable production and is one of the most productive vegetable producing regions in the country. Despite rapid urban expansion, which has accelerated since independence, agriculture in Tunis still contributes to supplying the city with fresh products. Urban agriculture in the centre and immediate outskirts of Tunis produces much of the supply for local markets and small stores (e.g. fruit and vegetable vendors, street merchants). But this agriculture is constantly threatened by urban growth, which is causing fragmentation of farm/land holdings. This fragmentation mostly affects fruit cultivation, which is barely profitable on farms of less than three hectares. Vegetable production, in contrast to the Paris situation, is still being widely developed.

In a more general way, we can thus state that, for these reasons, short food chains based on local vegetable production are hardly viable in Ile-de-France, and in France as a whole, where vegetable production is steadily declining (see diagram). On the other hand, they do have a place in Tunisia, and their development would be strengthened if they were taken into account more in urban planning. This is not to say, however, that local/urban vegetable production should not be supported in Paris. It has a role to play, for example in the context of the need to maintain green, productive spaces in and around the city, and the need to promote more multi-functional land use (e.g. combining agriculture with water storage and recreation), but this should take more strongly into account the need to promote the use of land in accordance with its agronomic suitability.

Graph 1 Comparison of the development of vegetable production in France and Tunisia
(Source FAO)



Proximity between consumers and producers: short food chains, at what price?

Comparative studies conducted for several years by the Centre Technique Interprofessionnel des Fruits et Légumes (CTIFL) show that, in France, prices for fresh produce are higher in local markets than in supermarkets. This is not reflected, however, in the many surveys and reports on food habits, which fail to show that consumer preferences may be inconsistent with purchasing practices. Instead, respondents often declare that they prefer local agricultural produce, bought in the market or on the farm, but ultimately price remains their main concern. This is why they end up buying produce in super/hypermarkets, and specially discount shops, even if this means they lose out on quality.



Collection and sale at the Viltain farm in Yvelines
Photo: Saloua Touni

This leaves local producers to sell their crops to a wealthier clientele that is more likely to be interested in other criteria than price alone. This clientele is found in the centre of Paris, and participates in various forms of short food chains, such as vegetable baskets or community supported agriculture (*Association pour le maintien d'une agriculture paysanne*, or *AMAP* in French). They may do so because they are interested in the preservation of old or rare varieties of fruits and vegetables, or because they want to support and preserve local agriculture. Rare examples of cross-subsiding produce for the less well-off population can be found in Chicago for example, where local produce is sold for higher prices to the better-off, and for lower prices to poorer consumers, but this kind of cross-subsiding is very rare in Paris.



Food production is primarily an educational activity

Photo: Roland Vidal

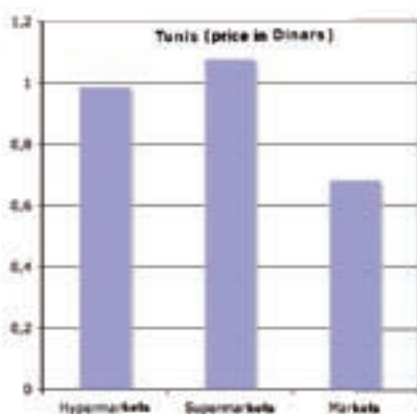
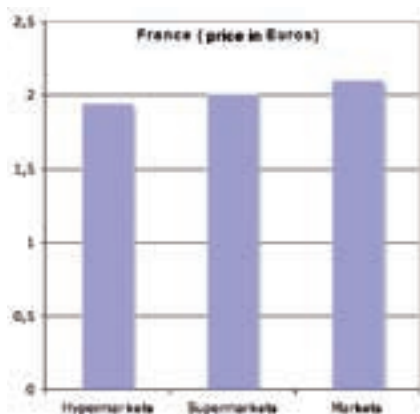
The consequence of this state of affairs is, however, that the desire for proximity is in fact translated into a disconnection between the places of production, with production inevitably taking place in distant suburbs, and consumption in the city centre. The distances travelled by small trucks – which return empty – result in higher energy costs than those incurred by a producer in the Loire valley supplying Les Halles de Rungis or by supermarkets buying large volumes of various food products that are transported in big trucks. The difference in energy costs becomes even greater when it is the customers themselves who travel in their own vehicle to the farm to buy their food.

The reverse is true in Tunisia, where the distribution via short food chains is an ancient practice, and still in place and widely practised today. According to the data we collected in Greater Tunis, the prices of fruit and vegetables are much lower in local markets and in neighbourhood stalls, largely supplied by periurban producers, than in the supermarkets. The most disadvantaged reside mainly in the suburban

neighbourhoods, so the people interested in buying food for the lowest prices live close to the places of production. This results in a natural and geographical proximity between producers and consumers, and in a more positive environmental balance than in France.

Conclusions

The demand for local agriculture in European urban regions comes mainly from urban citizens who are (often) unfamiliar with the economic realities of farming (Vidal and Fleury, 2009). Short food and distribution chains are defended from the point of view of management of periurban areas, although – in the authors' view – they meet neither the requirements of a sustainable food policy, nor those of optimising the environmental impact of agriculture. At the same time, the short food chains in Tunis represent a form of distribution that is anchored in the local economy and in the habits of the city-dwellers. Tunis nevertheless is gradually losing its local agriculture as uncontrolled urbanisation continues.



Graph 2 Prices of the main vegetables consumed in France and in Tunisia according to distribution methods (on the left, data from the CTIFL, on the right, personal statement)

In the cases presented here, we have two completely different types of short food chains. In the case of France, we are talking about local food production that the community claims to support, but in reality is only supported by an affluent and very small minority. This form of production and marketing of fruit and vegetables covers only a small portion of the agricultural land and only supplies a small fraction of the population (overall, this market represents just 3% of fruit and vegetables consumed in France).

On the other hand, in Tunisia, we are talking about an existing form of distribution, which is managing to retain its



Market garden landscape in Soukra (Grand Tunis)

Photo: Roland Vidal

place in the market and reach a large part of the population. The viability of short food chains, in both cases, depends on the agro-economic and climatic conditions in which they operate.

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References

- Perez-Zapico, B. (2008) – FRCIVAM Bretagne – Programmes SALT/ CREPE
 DEFRA (Department for Environment, Food and Rural Affairs) (2008) Comparative life-cycle assessment of food commodities procured for UK consumption through a diversity of supply chains, London, UK <http://defra.gov.uk/>
 Schlich, E., Biegler, L., Hardtert, B., Luz, M., Schröder, S., Schoeber, J., Winnebeck, S. (2006) "La consommation d'énergie finale des différents produits alimentaires, un essai de comparaison". *Courrier de l'Environnement de l'INRA* 53, 111-120.
 Torre, A. (2009) "Retour sur la notion de proximité géographique". *Géographie, Économie, Société*, vol. 11, n°1, 63-74
 Vidal, R. and Fleury, A. (2009) "La place de l'agriculture dans la métropole verte. Nostalgies, utopies et réalités dans l'aménagement des territoires aux franges urbaines". *Revue Projets de paysage*, ENSP <http://projetsdepaysage.fr>

Innovative Forms of Value Chain Development for (Peri)Urban Agriculture in Central Italy

Historically, agriculture in the Umbrian Valley in central Italy was based on sharecropping. Large estates were divided into small farms corresponding to the working capacity of a peasant family, while the proceeds of the farm were divided between the family and the owner of the domain. The agricultural system mostly consisted of woody crops (vines and olive trees), grains and livestock (oxen). This type of agriculture has changed dramatically since the 1950s, affecting both family life (young people leaving for the city) and the organisation of farming operations (in terms of production and marketing systems). In addition, most farmers in the Umbrian Valley are aging, while few of them have the expertise required to make the changes needed to diversify their farms. Those that have been able to diversify have mostly looked for activities outside the sphere of (urban) agriculture.

However, recently farmers have started to add value to agricultural products by focusing on specific market niches – in this case local products (*produits du terroir*) – and establishing direct relations with consumers. Some farmers have inherited vineyards and/or olive trees, and have developed their business by exporting, particularly to North America. Faced with fierce competition from other producers, especially those in Latin America, they seek to upgrade their products by emphasising the origins of their agrarian landscape. They have understood that the countryside can be conceived of as a relationship between a social group (visitors and buyers) and a crop (olives and grapes). For example, the Lungarotti family, who own a vast estate in Torgiano, created a Wine Museum and a Museum of Olive Oil with the explicit intention of establishing an attractive image for the region of Umbria. Similar examples are found all over the world.

Another form of value chain development concerns internal financing between producers and consumers. Networks between city and countryside still exist, and these include traditional exchange practices (in oil and wine). For example a farmer, who owns an olive grove located on the hill under the Basilica of Saint Francis in Assisi, offers consumers the possibility to adopt an olive tree, pay in advance, and get paid in return in the form of the product (the olives or the oil). Furthermore they are offered the exclusive right to have a picnic under 'their' tree, which is not only about adding value to the product, but offering new services such as agro-tourism. Today, the rapid development of tourism and the recognition of the city and its agrarian landscape as a UNESCO world heritage site offer new possibilities to Assisi. The strategic objectives of UNESCO include agriculture as a vital link in the design of cultural and tourism development.

These new approaches, developed by farmers, can shape a type of local agriculture that is based on new and real economic prospects. Local public policies to enhance these are moving in this direction too, but are flawed because they are based on an outdated understanding of the specific identity of Assisi. The institutions involved focus more on the role of agriculture in preserving the landscape rather than the production aspect. However, it no longer makes sense to merely protect the countryside without considering the relationships that it creates. To preserve the landscape we must begin to think about its socio-economic aspects.

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Value Chain Development of Avocado in Vietnam

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Rapid economic development, urbanisation and rising income levels, in Vietnam offer potential for pro-poor development, by creating new market opportunities for producers, traders and retailers. This article describes the process of value chain development, which involves all actors in the broad chain of avocado.¹

The project

Dak Lak, a province in the Central Highlands of Vietnam, is an important coffee producing area. Many poor ethnic minorities are engaged in coffee farming. Their dependence on coffee cultivation only at a time of decreasing coffee prices made income diversification an urgent necessity. Dak Lak area is also known for producing the best quality avocados in Vietnam. Because avocado trees are grown within coffee plantations to provide shade, and because demand for avocado was growing, avocado was defined as a potential crop to diversify the coffee dominated agricultural sector in Dak Lak. Avocado was also considered because of its high nutritional value and its potential to improve the poor-quality diet of the local rural communities, and of children in particular. This product choice was made in cooperation with local research institutions and local farmers.

The aim of the intervention plan was to create a professional value chain for avocado, in which the different chain actors cooperate to supply consistent quality avocados to urban sales channels across Vietnam. The objectives were to: (1) create a professional avocado chain; (2) increase awareness of and demand for avocado (avocado is relatively unknown in Vietnam and consumers are not familiar with its nutritional values and its uses); (3) develop a high quality avocado brand.

Participatory value chain analysis

The project started with a thorough chain analysis, incorporating the ideas and opinions about the avocado sector of all actors in the chain. Besides gaining an understanding of the Dak Lak avocado sector, this analysis aimed to identify the main stakeholders in the avocado supply chain, create a joint vision among these stakeholders on development, build relations with urban sales channels, and develop an intervention plan. To learn about and understand the entire chain, a sample of avocados was literally followed from the moment of harvesting until delivery to the final consumer. 'Show casing on the job' brought a clear understanding to all actors about their interdependency. All collected information was documented, shared and cross-checked with the different subgroups.



Avocado farmer participating in the Dakado scheme
Photo: Fresh Studio Innovations Asia

An important part of the analysis was the stakeholder meeting, where findings were discussed with over 60 stakeholders in the avocado chain. The participation of many private sector representatives was essential, and the involvement of retail and wholesale actors was especially important: it meant that their role and needs were acknowledged, and it made it clear that the project had a strong market perspective. Important outputs of this stakeholder meeting were: (1) agreement that a general avocado awareness campaign for end-consumers was required; (2) the largest supermarket chain in Vietnam, Saigon CO.OP Mart, immediately placed an order for avocados from one of the participating traders.

Avocado chain actors

Traditionally, rural development projects focus on farmers, as they are seen as key in improving product quality. However, in the Vietnam avocado sector, farmers have limited initial interest in avocado cultivation. The average 'avocado farmer' is in fact a coffee farmer, and only has a few avocado trees (ranging from 5-100), mainly used as a windbreak around the coffee fields. Although the large majority of the interviewed farmers expected that the demand for avocado would increase in the coming years, only a few had made serious investments and efforts to create avocado orchards. This is partly because farmers lack adequate market information and are dependent on collectors, as their volumes are too small to develop a direct relation with a trader.

Collectors buy avocados from different farmers, but also trade other products. They collect the avocado either by

payment (per kilogram or they pay a fee for the whole tree), or through a deposit system (a payment before harvesting, several months or even one year before). The latter system is used for trees which produce good quality avocados, or which produce during the off-season. In this way professional collectors develop a kind of “portfolio” of good avocado trees.

Collectors indicated that a lack of sufficient working capital to place deposits was a problem. They also mentioned their lack of market information, especially of the consumer market. In addition, researchers observed the negative impact of handling during harvesting and transportation as a problem for the quality of the avocado.

Traders in avocado mainly deal with collectors. During the main season, large traders can deal with 50 different collectors in a day, buying on the spot without fixed contracts. Most traders mentioned that they depend on good relations with the collectors. This is important, for instance, to ensure that they will also be supplied in periods of shortage. Good and regular collectors are hardly ever refused, even when the trader has already sourced enough that day. Conversely, the collectors depend on the traders for good and stable market prices.

The local traders regard lack of consistency in volume and quality supplied by collectors, the weather sensitive market demand, and the lack of direct links with urban sales channels as the main hurdles to future sector development. The traders who work on both the agricultural and the market side of the avocado sector were found to be the most avocado business minded. Therefore it was agreed that the development of the avocado value chain would start with these traders. The trader creates market access, which also benefits collectors and farmers, and would be an incentive to improve product quality. In addition, farmers and collectors need to develop a proper market perspective if they are to improve their role in the chain.

Sales of premium Dakado avocados in a big supermarket chain
Photo: Fresh Studio Innovations Asia



Since avocado is relatively new in Vietnam, and **consumers** were not yet familiar with the product, **retailers** were initially hesitant about selling a premium priced quality product. To convince them, a product diversification strategy was developed, which consisted of selling cheap bulk avocados and high quality premium priced avocados. This strategy minimised the risks and provided an opportunity for traders to also sell their stock of avocados that did not meet the DAKADO quality standards. Fresh Studio made a price proposal, which allowed all actors to make a very good margin if they met quality specifications. This meant that sales success would be an incentive for all actors in the chain.

Developing the chain

One trader emerged as the lead-actor: the firm that would organise and develop activities in the value chain. The gradual project intensification strategy ensured that all interested parties could get acquainted with the project, but it also ensured that only serious stakeholders actually joined the business – vital for sustainable business success. Only two out of the fifty traders were interested enough to actively join the project, and in the end only one trader was willing to take the risks to invest in it. Several meetings were organised with this trader's most regular collectors and eventually eleven of them were willing to join the chain development and to follow the product specifications and working procedures. Involving the farmers in the value chain was challenging, since most of them had not yet invested time or money in avocado production, while contract based relations were a completely new way of doing business to both farmers and traders.

Incorporating the consumer perspective

After a quick diagnostic survey (desk research, point of sale observations, intercept interviews with consumers and expert interviews with supermarkets), the awareness campaign 'Discover the Magic' was developed. This campaign aimed at informing consumers on the virtues of avocado, and at persuading them to try avocado and buy the product on a regular basis. In addition, the campaign was a research instrument, to gain a better understanding of consumer knowledge, perceptions on avocado consumption, and the impact of in-store consumer communication. The results were shared with all project participants to further guide “demand driven” product development, and were used to develop a distinct brand positioning – DAKADO. At the website www.dakado.vn consumers can obtain information on product and brand, and are also invited to share their experiences and ideas.

Step-by-step approach

The success and sustainability of this project is explained by the fact that the value chain development included all actors and was designed by a “develop-and-experience” approach. Small implementation pilots delivered showcases to create confidence and trust among the farmers, collectors and traders, and among the consumers. For instance, the steps taken in avocado sourcing were:

- 1) *The creation of a homogenous product (2007):* The sector was dominated by scattered avocado trees in coffee plan-

tations, hence no single variety was cultivated and different types of avocados were offered at the market. The trader sorted and graded the best quality avocado to be packed in homogenous batches.



Dakado brand poster

Photo: Fresh Studio Innovations Asia

2) *Tree inventory programme (2007-2008)*: The creation of homogenous batches proved a big market success and urban sales channels were eager to source more. Initially therefore, the traders had difficulties in meeting the orders, because the traders had no information at all on the day-to-day supply. As a result, under or over supply occurred regularly. Transparency was created by compiling a database that stores information per avocado tree, such as location, planting year, fruit quality, harvesting time and productivity. Information on almost 5,000 avocado trees, spread over 7 districts of Dak Lak province, was gathered and stored, and

has been made available to all project partners. Year-round avocado sourcing is now possible; local traders can actively cooperate with farmers and collectors in developing harvesting plans that meet market demand, and inform the marketers about the available avocado volumes.

3) *Farmer integration (2008)*: Farmers had not yet invested time or money in avocado production, and contract based relations needed to be developed, based on proper access to market information to understand what the real potential of their production is.

Training, knowledge dissemination and exchange between the different stakeholders was part of the chain development process as well. The stakeholders started to show real interest in becoming part of this exchange after the chain had proven to be successful on a small-scale.

Results

The two-year project ended in 2008 and resulted in the first fruit value chain in Vietnam that has continued beyond the donor support period. The five ingredients for success were:

1. Participatory chain analysis and selection of chain partners.
2. A focus beyond farmers: local collectors and traders emerged as the main influencers of product quality, while early involvement of retailers turned out to be crucial.
3. The identification of a traditional trader with the vision and his willingness to invest as “lead firm” in chain organisation and quality assurance.
4. The incorporation of consumers as stakeholders in the value chain.
5. The step-by-step project approach with realistic, achievable goals and small pilots to gain confidence and trust among project partners.

Focusing solely on farmers is not always the best approach.



Dakado chain actors visiting an avocado farmer

Photo: Fresh Studio Innovations Asia

Rather it is essential to gain an understanding of the dynamics in the entire chain, as the long-term aim is to create a business that is beneficial to all stakeholders.

The chain partners succeeded in creating the first traceable fruit in Vietnam, marketing this fruit under the DAKADO® brand, thereby allowing price premiums of more than 40 per cent to cover increased production costs and realising higher profit margins for all actors involved (from retail to farmer). The fact that consumers were willing to pay higher prices for high quality fruits was an eye-opener for modern retailers in Vietnam, as they had always assumed Vietnamese consumers were first and foremost price conscious.

Not only did the DAKADO® sales of the traditional trader increase (from 17 MT in 2007 to 71 MT in 2009), but demand for the unbranded lower quality avocado also went up (from 92 MT in 2007 to 171 MT in 2009), providing increased market opportunities for farmers and collectors beyond the DAKADO chain. Farmers started to invest in avocado production and the traditional trader invested in a truck and built the first avocado warehouse in Vietnam.

The project initiated the development of a professional avocado sector that has become an engine for rural economic growth. The focus on quality rather than quantity has resulted in an agribusiness that is steadily growing. The local trader has signed cooperation contracts with 100 local farmers and together they have established the first Avocado Alliance in Vietnam.

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Notes

- 1) This article is based on the research paper “Avocado in Vietnam: value chain development beyond donor support”, which was submitted for the Wageningen International Conference on Chain and Network Management, held in Wageningen, The Netherlands in May 2010. It describes the results of a project which was funded by the German Ministry for Economic Cooperation and Development and GTZ and was executed by the following organizations: Centre for Science and Technology Application (CSTA), Western Agriculture Science Institute (WASI), the Department of Science and Technology of Dak Lak (DOSTE) and the agricultural consultancy firm Fresh Studio Innovations Asia Ltd.

The Learning Alliance on Chain Empowerment; The case of Burka Gudina Cooperative Union in Ethiopia

Wim Goris
John Belt

The Learning Alliance is a learning-by-doing project in value chain development initiated by Agri-ProFocus' members ICCO, SNV, KIT, Cordaid and Agriterra. It is organised in clusters, consisting of farmers' organisations and NGOs that already have existing working relations. In the Ethiopia Learning Alliance, 18 farmers' organisations upgraded their business and market position in the value chain through a cycle of workshops, field assignments and coaching visits by the coordination team of ICCO, SNV and Ethiopian partners IIRR and FFARM.

Challenges for Ethiopian farmers

Ethiopian smallholder farmers are organised in cooperatives and grain banks with the support of the Ethiopian government, service providers and donor agencies. Many of these farmers' organisations have been building basic technical, organisational and business capacities, but face the challenge of further improving their capacities for marketing and value chain development. Some critical capacities that these farmers' organisations need to develop are:

- market-oriented production
- quality assurance and logistics
- building business partnerships with other chain actors
- entrepreneurial skills
- ability to develop bankable business plans.

Learning-by-doing

Each of the groups in the Alliance identified a product for learning purposes and based on its business potential. The approach follows the four phases of value chain develop-



Farmers from Burka Gudina Cooperative Union with fieldstaff from CDI.

ment: mapping and assessment of the value chain, building of engagements between the chain actors, upgrading of the chain, and monitoring and evaluation. These phases correspond with the topics of the workshops, field assignments and coaching.

The project in Ethiopia started in November 2007 with an inception workshop. Over the next three years, five other workshops were organised on: Mapping the Chain (November 2007); Strengthening the Actors (June 2008); Finance & Services (February 2009); and Business Planning (September 2009). In between the workshops, all 18 groups completed assignments in preparation for the following workshop. In the last workshop (February 2010), a business plan contest was organised and lessons learned were documented.

The learning process is based on practice by integrating training and work activities in a continuous loop of learning, applying, and reflecting. Coaching in between the workshops proved to be a powerful intervention.

Results

Several changes in entrepreneurial attitude were observed; the confidence level of the farmers' organisations increased and they now continuously look for new business opportunities. Business planning is still improving, in particular where partnerships had already been established. The working relations between farmers and NGOs also changed; there is now more focus on supporting farmers as chain actors. Agri-ProFocus members have been applying the Learning Alliance approach in Rwanda (agribusiness clusters), Ethiopia (pastoralist clusters in livestock marketing) and Zambia (financial services). Lessons learned are being documented in a regular bulletin.

Schematic overview of value chain context in the Ethiopian Learning Alliance



Burka Gudina cooperative production development of haricot

Burka Gudina, a farmers' marketing organisation, is located near the city of Shashemene (93,000 inhabitants), 200 km south of Nazareth in central Ethiopia. Burka Gudina and four other farmers' marketing organisations form a cluster with 899 members, including 109 women. They buy and sell maize, white haricot and beans grown by their members.

These farmers' organisations were already cooperating with the Centre for Development Initiatives (CDI) in Shashemene when they joined the Learning Alliance. Together they selected white haricot beans as their study crop for its potential to improve income. For Burka Gudina it was a new crop, but other farmers were already positive about white haricot beans.

Chain analysis

In the first assignment, the farmers analysed the white haricot product chain from farmer to consumer. They interviewed farmers outside the cooperative, a local collector in Shalla, a big merchant in Shashemene and an export trader in Nazareth. The farmers identified the buying and selling prices of each of the chain actors, learned about the traders' problems with low quality (caused by impurities, high moisture content and small size of beans). The exporter discussed with the farmers and said he was interested in sourcing directly from Burka Gudina if they could clean the beans and guarantee quality at the gate in Nazareth.

Cost price analysis

In the second assignment on cost price calculation, the cluster used information from another farmers' organisation already producing haricot beans. The main problem they found was the volume traded; only 11 per cent (150 bags) of the members' total production was channelled through a farmer organisation.

Production for the market

In May 2008, the members of the five farmer cooperatives started to plant haricots. They secured credit from Oromiya Cooperative Bank and received 300 bags of improved seeds from the exporter. Haricot yields in November were good (on average 26 bags/ha). The farmers brought the haricots to Nazareth, where the exporter bought 2467 bags and rejected 243 bags (because of high moisture content caused by the rains at harvest time). This made the five farmers' organisations reluctant to bring more beans and hesitant to purchase from the farmers. In addition, the exporter requested 360 bags of seeds as a payment for the improved seeds, but the farmers returned only 202 bags. A number of farmers lost crops due to flooding and had to repay the following season. Still, the overall results were positive. The exporter was satisfied as 97 per cent of the bought supply met the export quality standard. Furthermore, the farmers' organisations proved that they could handle the logistics and secure good prices for their members. The five farmers' organisations made a net profit of Birr 4,000,000 (from all economic activities including haricots beans, maize and transport) and distrib-

uted an average 70 per cent dividend to their members.

Chain partnership

In August 2009, the five farmers' organisations, CDI and the exporter met to discuss the next planting season. The following agreements were made.

Burka Gudina farmers would:

- keep their stores clean
- control and maintain the quality of their product
- make buying price adjustments based on market prices
- make sure that members pay back the seed loan
- make sure that ordering cost and other related transaction costs are properly determined and accounted for.

The exporter company would:

- give technical advisory service on store management
- check the produce before it is loaded on trucks
- provide sacks for next season's produce
- provide financial resources for the purchase of inputs (improved seeds)
- provide information on the purchase price of produce.

The service provider CDI would:

- give a refresher training on product quality
- provide farmers with training on harvesting and post-harvest practices
- make efforts to strengthen the relationship between farmers and the exporter
- provide different trainings to members of farmers organisations.

Results for Burka Gudina

This cluster won a € 6000 prize in the Learning Alliance contest for best funding strategy. In short, the group proposed to invest in equipment for threshing, winnowing and control of humidity to improve the quality of the haricot beans and reduce post-harvest loss.

Moreover, the farmers and their organisations are now more confident when dealing with buyers; they know that they can deliver quality produce and continuously look for new business opportunities.

The learning activities helped the farmers better understand the exporter and successfully negotiate a chain partnership.

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Notes

- 1) Agri-ProFocus is a partnership of Dutch donor agencies, credit institutions, companies, training and knowledge institutions whose goal is to promote farmer entrepreneurship in developing countries.

Urban Agriculture in the Netherlands

Jan Willem van der Schans

Despite the domination of large-scale farming for export in the Netherlands, urban agriculture is growing in popularity. The reasons for this have not yet been studied systematically, but growing dissatisfaction with the conventional food system plays a part. This article looks at different strategies adopted by urban farmers and considers the implications of urban agriculture for public planning.

Concerns voiced include the environmental problems associated with large-scale and long-distance food chains (food miles), lack of sensory quality and diversity of food produced in the conventional system, and a general lack of trust in food coming from impersonal chains and anonymous origin (Wiskerke, 2009). Whereas many food-related issues tend to be defined as problems at the system level (e.g. greenhouse gas emissions), participating in or buying food from urban agriculture provides people with a way of actually doing something about the concerns they have (Van der Schans, 2010).

Citizen initiatives promote urban agriculture.

In several Dutch cities citizen initiatives have emerged which promote the regionalisation of food production and consumption. Urban agriculture is often part of these programmes. *Gezonde Gronden* (Healthy Soil) in The Hague is one of the first of these initiatives. Their goal is that citizens in the metropolitan area in the west of the Netherlands (including the cities of The Hague, Delft and Rotterdam) are able to enjoy food produced on healthy soil in their own town and region. To this end they organise activities such as courses for city dwellers and (periurban) farmers about more sustainable food production (using growing methods to strengthen the natural productive capacity of the agro-ecosystem, without using chemical inputs, and by closing water and nutrient cycles). *Gezonde Gronden* also has demonstration projects in allotment gardens and parks in The Hague. Other Dutch cities have similar initiatives. Interestingly these citizen initiatives have an integrated view of urban agriculture, seeing it as source of fresh and wholesome food, a mechanism to bring about social integration and economic regionalisation, and a strategy to improve the resilience and sustainability of the metropolitan food system.

Political support

Recently the Dutch Minister of Agriculture also embraced the concept of urban farming. In an explanation of the policy document on Sustainable Food (LNV, 2009) she noted the

important role of urban farms in re-connecting modern city dwellers with their food (DePers, 2009). The Ministry regards urban farms not so much as an instrument to improve access to fresh food (presumably the conventional food system in the Netherlands is able to deal with that). Instead, the focus is on their symbolic function: they have the potential to act as a bridge between city dwellers who are increasingly ignorant about food production and professional farmers, who increasingly feel misunderstood, especially when they adopt large-scale high-tech solutions in the pursuit of sustainability.

Unlike developed countries such as the US, there are no food deserts in the Netherlands; at least they are not an issue on the public agenda. Unlike developing countries such as Tanzania, growing your own food is not (yet) a basic necessity for the urban poor in the Netherlands: unemployment is relatively low and the social security provision is adequate at present. This does not mean there are no problems of access to food in this country, however. A recent study found that fresh produce is relatively more expensive than processed food and for people with lower incomes in particular, the price of food is an important issue in their buying behaviour (Waterlander et al, 2010).

A matter of definition

The Dutch Ministry of Agriculture seems to restrict the notion of urban farming to growing food within city limits. Internationally, the definition of urban farming also includes periurban areas: 'the entire area of land in which a city's influence comes to bear daily and directly on its population' (UNDP, 1996). Under this definition, many Dutch conventional farmers and growers would be classified as practising urban agriculture. Most Dutch agriculture (especially greenhouse vegetable growing and intensive livestock farming) is oriented towards the EU and world markets, rather than nearby town and city markets. In 2000 the Netherlands was more than self sufficient in potatoes (128%), vegetables (256%), pork (256%), eggs (256%) and cheese (246%) (Brouwer et al., 2004). The term 'metropolitan agriculture' has recently been coined for farmers and growers located close to large cities but whose production is oriented to the world market (Smeets, 2009).

Given the configuration of the agricultural sector in the Netherlands, one might wonder how urban agriculture initiatives survive economically, in the context of a predomi-

nantly export-oriented agricultural sector, which is also capable of providing fresh food efficiently and abundantly to Dutch towns and cities.

Market chain development

We now turn to some examples of urban agriculture in the Netherlands, looking at where they are located in relation to the city and how they market their produce. Dutch farmers, whether urban, periurban or rural, may choose to specialise, differentiate or diversify when adopting a marketing strategy (Van der Schans, 2007).

By specialising in one or few activities, farmers can fine-tune their operations and reduce costs of production, processing and distribution so that they are competitive on the world market. This is the strategy adopted by most farmers and growers in the Netherlands. Their aim is to increase the scale of their operation, particularly when they are located in the specially designated agricultural development zones, far away from urban populations. In order to compete with these more conventional supply chains, urban and periurban farmers with smaller production facilities have developed different strategies, notably differentiation and diversification.



Strawberry tree Jan Robben
Photo: Jan Willem van der Schans

Differentiation involves providing quality produce that is clearly different from conventional agricultural produce. Examples include heirloom vegetables, or exotic varieties, such as those grown by Gert Jan Jansen at the periurban farm *Hof van Twello*, close to the town of Deventer. Here there are different market gardens with forgotten vegetables, medieval varieties and vegetables for the ethnic market, all kinds of produce not found in a regular supermarket. Another example is specially developed varieties such as the *Lambada* variety of strawberry developed by Plant Research International (Wageningen University & Research Centre), and grown by Jan Robben, close to the town of Oirschot. Robben uses strawberry varieties that taste different ('better') than the conventional *El Santa*, but they are more vulnerable and therefore require more attention during transport. By making the supply chain shorter Robben is able to deliver strawberries to consumers on the same day that

they are harvested. He even takes the differentiation strategy a step further by offering his tasty strawberries individually at wedding parties, fashion events and food festivals. By creating a unique strawberry experience Robben differentiates his product from the regular strawberry commodity market in the conventional retail channel. Adopting this strategy enables him to command much higher prices for his strawberries.

Another approach to differentiation is called vertical integration, where you add more value to your produce by incorporating subsequent steps of the supply chain: processing, packing, distribution. *Hof van Twello* has adopted this strategy. Farmer Jansen processes fruits into juices and jams, and produces wines from his own grapes. But he quickly learned that adding value to a product often also adds costs, especially when the tasks performed are labour intensive. This is often the case when one tries to differentiate by producing 'artisanal' food as opposed to conventional industrially processed food. Although labour is quite expensive in the Netherlands, farmers have found ways around this. Urban and periurban farmers are at an advantage because they operate close to cities, where there is a plentiful supply of volunteers or people who are partly disabled but can still perform certain tasks. Jansen takes this strategy of engaging people at the farm one step further by organising jam or juice making workshops, and allowing participants to take some of the processed food home, but he also sells some of it for their benefit in his farm shop, and he takes a certain percentage of the produce from them to sell for himself in his farm shop.

The last strategy that Dutch farmers use to compete with export-oriented farming is to diversify their activities. Other activities include nature management and landscape services, social care (providing a protected working environment for the mentally stressed or partly disabled people), education and recreation (e.g. children's parties, planting or cooking workshops, bed & breakfast). An example of this is the urban farm *Maarschalkerweerd*, located in the south east of the city of Utrecht, which trains young people who are disadvantaged in the conventional labour market by allowing them to work on the farm. The farm also sells the food produced in this way to consumers through the farm shop and to local restaurants.

Diversification is a particularly successful strategy if there is synergy between the different activities, i.e. if the same facilities or social network are used for different purposes. An example is *'t Paradijs*, a farm close to the town of Barneveld which hosts a group of young people with social-psychological problems during the weekends and also sells produce to the children's parents. During the week, the farmers provide day care for elderly people, and also sell the farm produce to the canteen kitchens of the health care institutions where these clients come from. Farms in and very close to cities have a competitive advantage in providing social care services to people, because transport of clients to and from the farm is easier. Strawberry grower Robben has diversified in a very different way, becoming a party entertainer with his strawberry tree, a luxurious silvery ornamental tree, in which his

tasty strawberries are displayed individually. Partygoers can 'pick' them and dip them in specially developed gourmet dipping sauces. Recently Robben diversified even further, offering champagne and dark chocolate alongside his strawberries at parties to increase the allure.

The possibilities and opportunities for urban and periurban farms are to some extent defined by their location in relation to the city. 'Re-visiting the Von Thunen model', by mapping out systematically the relation between distance to city centre and the most likely type of farming activity, is a project beyond the scope of this article, but it certainly is an interesting way forward for future urban agriculture research in the Netherlands (Van der Schans, 2008).

Conclusions

Urban agriculture has become a popular term in the Netherlands, referring not just to farms and other production locations (e.g. allotment gardens) within city limits, but also to existing periurban farms. For the latter, the term 'urban agriculture' signifies a fundamental re-orientation from the rural towards the urban environment. Urbanisation is no longer a threat to these farmers (upward pressure on farm land prices, urban inroads on the large scale farmland structure), but it provides an opportunity. Farmers close to (or inside) cities may have smaller plots, but these plots are closer to city dwellers and can take advantage of direct sales, volunteer labour, and of speciality urban markets such as those for forgotten vegetables and ethnic food (Van der Schans et al., 2009).

Traditionally Dutch agriculture has been geared to global export markets. This has been facilitated by public planning that focuses on relocating farmers and growers to special agriculture development zones far away from cities and linking these production locations to a sophisticated logistical network geared at quickly and efficiently servicing world markets (Neuvel and Van der Valk, 2009). Urban and periurban farming in this country, however, is oriented toward customers living close to the production locations. This requires a different public planning philosophy, one that acknowledges the smaller scale, open landscapes close to cities as viable farmland worthy of protection, and therefore a move away from the current trend of converting these spaces into recreation areas and nature parks. Planning needs to focus on improving access to these farms for urban pedestrians and cyclists rather than the large vehicles generally used by conventional agriculture chains. It also requires public planning to acknowledge the multifunctional character of periurban and urban agriculture locations, and therefore a shift from strict single-use to more flexible mixed-use planning designations in the periurban farmland zone. For example, agricultural buildings could be used as education or recreation facilities, as processing sites, or as direct sales outlets.

The recognition of (peri)urban agriculture as a distinct but viable form of agriculture also means that logistical networks must be developed that use a finer geographical grid and are more decentralised. One can hardly expect each individual



Market gardens at Hof van Twello
Photo: Gert Jan Jansen

initiative to develop such an alternative logistical network (this would probably increase rather than decrease food miles). But if more initiatives shared a local network, or even better, if the conventional network also accommodated de-central food supply chains, then some critical mass could be reached and the disadvantages of ad hoc local-for-local solutions overcome.

The growing popularity of the term 'urban agriculture' signifies a reorientation in the public perception of the role of farming in the Netherlands. Whereas farming was previously seen as an activity functional to rural development, today (urban and periurban) farming is considered much more as an activity that may also be beneficial for urban development. A shift has taken place from 'how can the city help solve the problems of farmers?' to 'how can the farmers help solve the problems of cities?' Urban (and periurban) farming is one way to create greener, healthier and more attractive urban environments. 'Regional food' in the Netherlands is no longer thought of as food from a specified and protected region of origin (anywhere in the world, as long as it is from a designated region), but as the food from the specific region close to or within the city where one lives and where the food is consumed. Only if the food is from this region, my region, do I know that I can visit the farm, check the conditions of production, and enjoy the landscape as well.

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Urban Agriculture as Community Engagement in Manchester

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Manchester is the UK's third largest city. Approximately half a million people live in the inner city, located within the surrounding region of Greater Manchester, where 2.25 million people reside. Socio-economic inequalities and social exclusion are contributing to rising health problems, including obesity. Some parts of the city are known as 'food deserts', where residents have little access to healthy food. Urban redevelopment favouring supermarket chains has been blamed for these problems. One response has been local food initiatives, which provide broader access to healthy, fresh food.

Coming from several civil society groups, early initiatives and more ambitious proposals led the city authorities to adopt two important policy frameworks – the Manchester Community Strategy and Manchester Food Futures (see Box). The Partnership Strategy of Manchester Food Futures emphasises the health benefits of making fresh food more accessible, as well as the physical and mental health benefits gained through growing food. Through a series of events - *Feeding Manchester* - practitioners are elaborating a vision for the city to develop a sustainable food sector by 2020.

The Food Futures strategy links health, local economy, regeneration, food as a cultural force and its social impact, the environment, childhood diet, vulnerable groups and transport. Funds for urban food initiatives are allocated on the basis of the linkages made between these disparate issues. Diverse actors carry out the initiatives, including for-profit businesses, voluntary (or charitable) organisations, grass-roots projects, social enterprises and official bodies. Although most food initiatives in Manchester distribute food grown near the city, some promote urban agriculture.

Support bodies for food initiatives

Manchester Environmental Resource Centre (MERCi) was established with funding from the National Lottery in 1996 with the aim of making Manchester more sustain



Herbie Van's shop
Photo: Manchester Food Futures

able, and has stimulated many food projects addressing societal problems.

Manchester Food Futures (MFF), set up in 2004, is a partnership of Manchester City Council, the National Health Service, community voluntary and private sector groups. It aims to create a culture of good food in the city, especially wide access to healthy, sustainably produced food.

Manchester Community Strategy (2006-2015) sets out how public services will be improved, especially a vision for 'making Manchester more sustainable' by 2015.

Aims and means of local food initiatives

Manchester agro-food initiatives aim to re-connect producers and consumers, as well as rural and urban communities. Agro-food networks have been redesigned to incorporate benefits for community development, cohesion and inclusion. As market-value chains, these food networks also increase income for food producers and distributors, while keeping money flows within the locality.

Practitioners see their initiatives as 'innovative', 'verging on mainstream', or aspiring to such a role. This means empowering and expanding their initiatives within the public sphere – rather than creating a niche market for affluent consumers. Practitioners' motivations fall into two general categories:

- Concerns around social and economic inequality in Manchester, as grounds for enhancing access to healthy food, improving the immediate environment, and promoting food cultivation as a means to health and community cohesion
- Broader concerns including environmental protection, climate change, bio-diversity, peak oil and food security.

The initiatives take many forms, including allotments, community gardens and delivery services. Although some distribute conventional food, mainly from outside the city, others promote permaculture and organic methods for urban agriculture. Manchester was the centre of the 19th century cooperative movement, so many practitioners draw upon that heritage to promote cooperative relations in agro-food networks.

Illustrating the cooperative ethos, Unicorn Co-Op is a worker cooperative, owned and run by its workforce. Selling wholefoods, it supplies fresh produce on a daily basis. It aims to provide employment for its members and for people with learning disabilities. Unicorn promotes fair-traded products, supporting a 'sustainable world environment and economy'. It also encourages cooperation with other local businesses and cooperatives (Unicorn, 2009). According to a founding member:

It is based on a principle of buying products as directly as possible through a short chain between the producer and the customer – buying produce at a reasonable volume, trying to get a lower price and achieving the shortest time between the fresh produce and the customer.

Various societal problems have been addressed through alternative food delivery schemes, such as the Herbie Van and Dig Box Scheme. These food initiatives provide easier access and lower prices for fresh food, while facilitating social contact for marginalised people. The Herbie Van aims to 'reach as many people in their local community as possible and offer customers a good range of affordable fresh produce' (MERCi, 2009):

Some of our customers don't see another person for a whole week. When they come on the van and have a chat with the driver, it's more for people's mental well-being that they have someone to talk to. And it's a regular face; it's not just whichever person is on the check-out looking miserable because they don't want to be there. It's a natural interaction.

Since 2004 the Bentley Bulk Local Food Project has found ways to produce more seasonal food and to promote societal integration. According to an MFF representative:

The idea is to make beneficial connections to local producers, retailers and the community. The idea is to turn the people in this community into not just consumers but producers as well, so that they get involved in the production and distribution of food.

Based on permaculture principles and the successful results of Bentley Bulk, the Health Eating Local Food (HELFF) Partnership was established in 2006 under the Manchester Food Futures Strategy. According to its 'Recipe for Success', the

project has aimed 'to develop a city wide social enterprise, to engage people – especially younger people and people with mental health issues – in healthy local food activities, in order to improve skills, confidence and overall health'. HELFF has been re-launched as Bite, which uses the food grown on its allotments in its numerous cafes – 'providing healthy, affordable meals whilst promoting a greater awareness of how food can positively make a difference to mental health'.

Both projects – Bentley Bulk and Bite – have an innovative character related to the Local Exchange Trading System (LETS). This provides an indirect barter system for an alternative economy. According to a founder of Bite:

They are basically social trading networks... They are a means for people who define networks to exchange goods and services without using cash... There was a big LETS system in Manchester with about 600 people trading in it.

Lately, the UK has had a rising demand for allotments – predominantly inner city, municipally owned, plots of land divided into small blocks which are rented by the public and used for food production. Seen as 'a means to enjoy outdoor living and the satisfaction of growing your own food' (AMAS, 2009), allotments become 'mass community places', with the potential to link diverse societal groups otherwise experiencing social isolation. An informal exchange system has also been promoted through allotments and community garden schemes.



Food initiatives provide easier access to fresh food
Photo: Manchester Food Futures

Community engagement and resource mobilisation

Manchester's agri-food activities are not entirely measurable in terms of conventional 'value chains' or even money. Minimal financial support, mainly from local authorities and private foundations, has generated food projects that are dependent on a few paid posts, numerous volunteers and a wider social mobilisation. Key activists bear a continuous burden of investing increasing money and time for successful implementation. Some food provision schemes operate as a gift or barter economy.

'Community engagement' is a key term, which refers to active involvement and social inclusion through agro-food activities. According to a member of several Manchester food networks, community engagement fulfils several roles:

Not only do we lack a food culture, we just lack a community culture generally. So by setting up local food production, it's a great way of getting people to have exercise and engage with each other. It's social integration. And they get to grow food and eat healthy food. It's a great way for people who don't have very much money to have access to affordable health organic food.

Public funds support collaborative projects among community groups to develop more allotment sites, some used for training in organic production methods. In moving towards a 'sustainable communities' model of local food, some practitioners advocate an ambitious expansion:

People are realising we need to re-localise not just at a community level but at a regional level as well. That has environmental and economic benefits, as you are rebuilding the local economy at the same time.

What is the future for Local Food Systems in an urban setting?

Within the FAAN project (see acknowledgements), a Scenario Analysis Workshop was held in Manchester. During this workshop, the research team analysed the outcomes of the interviews with stakeholders in more depth. They discussed four different scenarios for Local Food Systems: 1) industrial agriculture displaces local food initiatives; 2) supermarkets sell more food branded as local, sustainable and organic – thus undermining local food initiatives which sell products on a similar basis; 3) local food initiatives expand their markets via marketing intermediaries (such as 'food hubs'); and 4) local food initiatives expand via closer links between consumers and producers, including consumers as producers.

Participants discussed the possible causes and consequences of each scenario. The fourth scenario was seen as being the most beneficial because it strengthened local economies and brought many social and environmental benefits.

Manchester agro-food practitioners have expressed many views on future prospects and the need to revalorise urban agriculture. It is seen as providing unique 'community spaces' which contribute significantly to the environmental and economic sustainability of the region, especially by recycling money and human resources for community development.

The needs of small local initiatives and businesses, and the societal benefits that they provide, warrant greater recognition. Training for employment would help them. A city-wide hub would be helpful for storing agricultural produce from nearby farms and then distributing it to urban food suppliers and retailers. Public education would help consumers to appreciate growers' work, especially the labour that goes into good-quality food. Local initiatives will expand if the general public is prepared to pay more for their food.

Local Food Systems (LFS) involve a much richer vision of food chains than simply selling locally produced food in nearby

shops. Together, they comprise a specific sector that warrants specific support measures at local, regional, national and European levels. Relevant policies should look beyond individual profits and market competition, towards an ethical vision of economy, for example shared benefits, fair local exchanges and cooperation, especially through shared knowledge and experiences. Increased 'bottom-up' funding is needed for projects initiated by local communities, in partnership and taking innovative approaches. Action should also be taken to facilitate more local sourcing in public procurement (a major problem in the Manchester case study), for example by making better use of EC guidance on 'Buying Green'.

At EU level, the project recommended the establishment of a task force for LFS; infrastructure for information exchange; and a policy initiative to help shorten food chains. National governments should interpret EC rules more flexibly in order to remove over-burdensome interpretations of hygiene regulations (which restrict direct sales from farms in many countries) and review the impact of bureaucracy imposed by trading laws (tax, national insurance, etc.) on small enterprises in local food systems (Karner, 2010).

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References

- AMAS (2009) About AMAS, Association of Manchester Allotment Societies, <http://www.amas.org.uk/>
- HELF (2007) Recipe for Success, Report by Rob Squires, <http://www.harp-project.org/news.php>
- Karner, S., (ed.) (2010) Local Food Systems in Europe: Case studies from five countries and what they imply for policy and practice, http://www.faanweb.eu/sites/faanweb.eu/files/FAAN_Booklet_PRINT.pdf
- MERCi (2009) About Us, Manchester Environmental Resource Centre initiative, <http://www.bridge5.org>
- Unicorn Co-Op (2009) Who we are, <http://www.unicorn-grocery.co.uk/>

Motivations and Barriers to Stakeholder Participation in Local Food Value Chains in Phoenix, Arizona

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Interest in local food is increasing across the US, motivated by concerns about the environmental costs associated with transportation, community food security, and the perception that locally produced food is fresher, healthier and more nutritious. Although the definition of 'local' varies -with some defining it in terms of distance from home and others in terms of being produced within the state or metropolitan boundary- the growing demand for local food presents significant opportunities to revitalise urban agriculture and restructure local food value chains. This article presents results of a survey about the perceptions of stakeholders on motivations and barriers to the development of a local food system in Phoenix, Arizona.

Maricopa County in Arizona, which includes the city of Phoenix and the surrounding suburban areas, is currently the fourth most populous county in the country and among the fastest growing⁽¹⁾. Rapid urbanisation has put a great deal of pressure on agriculture, which has historically been very important in the county. According to the 2007 agricultural census, total farmland declined by 35 per cent from 1997-2007 and accounted for 11 per cent of total land in the county in 2007. The Groundwater Management Act passed in 1980, following concerns about groundwater overdraft in this arid region, prohibits the establishment of new irrigated lands in the county. This has implied that as farmland in the urban core gets out-competed, no new farms can be established in the outlying desert regions. This has led to a very different spatial distribution of farmland in the county compared to other metropolitan regions where expanding urbanisation pushes farms to the periphery.

While rapid urbanisation has led to a sharp decline in farmland it has also been associated with higher demand for locally grown produce. A survey of Arizona consumers in 1997 found that while a majority of Arizona consumers preferred state grown products over products from other regions, residents of

Phoenix had much stronger preferences; they were found to be 25 per cent more likely to prefer an Arizona grown product than other residents from the state (Patterson et al., 1999). Despite this growing interest in local food, there is a disconnect between expressed interest and actual participation in the local food system. Vegetable farms and orchards are well suited for local food chains, but accounted for only 12 per cent of the agricultural land in the county in 2002, with alfalfa and cotton being the major crops. A survey conducted in 2000 found that farmers' markets that sell local produce in the Rocky Mountain region (in which Arizona lies) struggled in comparison to other parts of the country, with average sales per market being the second lowest (USD 145,000 per year) despite a 74 per cent increase in number of customers from 1996 to 2000 (AMS, 2002). Restaurants, school cafeterias, and grocery stores that sell local foods are increasing in number, but are still few and far between.

Maintaining the viability of the local food system requires an understanding of the stakeholders involved, the forces that motivate them, and the obstacles they face. This study, performed by researchers at Arizona State University (ASU), seeks to unravel what is lacking in the current design of local food system in order to identify key issues for research and future projects.

Engaging stakeholders

The study is based on interviews with 30 food system stakeholders operating in Maricopa County regarding their values, motivations and barriers for participation, and recommendations for improving local food value chains. The interviews



A vendor explains how best to use her radishes at a city farmers' market
Photo: Carissa Taylor

were carried out from April to June 2009 and included the following stakeholder groups: six representatives of consumer/community organisations, nine producers, ten foodservice representatives (grocers, restaurants, institutional foodservice providers, etc.), and five distributors (produce distributors, farmers' markets and food banks). The producers interviewed were all commercial farmers. They included several small vegetable farms and a dairy within the urban core of Phoenix, large vegetable and animal product producers on the outskirts, and two cattle ranches serving the urban market from other parts of Arizona. The interview protocol was developed based on criteria compiled from a literature review. Through multiple readings of the interview transcriptions, frequently occurring themes were identified as the prominent perceptions of local food.

Interviewees' definitions of 'local food' ranged from a limited radius to the entire county or the entire state. The most frequently cited response (around 50 per cent) was that 'local' should encompass the entire state of Arizona. Stakeholders emphasised the importance of drawing from a wide geographical area due to the harsh desert summers in Maricopa County. The 'Arizona Grown' campaign, launched in 1993, and aimed at appealing to the parochial interests of state citizens to support the state economy may have contributed to the development of this perception of local food. In the absence of any other widely held definition to differentiate 'local' we have adopted the stakeholders' definition 'grown in Arizona' as the definition of local food for this study.

Barriers to local food value chains

The respondents highlighted several obstacles to participating in the local food system. The six most frequently mentioned barriers were: desert climate, lack of information, inconvenience, food safety issues, cost and urban development pressure. However, each stakeholder group had different opinions as to which were the 'major' barriers (see Table 1).

Phoenix's desert climate constrains the volume and variety of food available, thus leading to problems of scale in supporting a viable local food system. The arid environment also generates concerns about impacts of agriculture on the region's limited water resources. Consumers were divided as to whether or not buying locally was environmentally responsible. However, producers emphasised the fact that they use water judiciously – indicating conflicting perspectives regarding the environmental impacts of farming.



Selling oranges, flowers and greens at a city farmers' market
Photo: Carissa Taylor

For consumers, lack of *knowledge* about where to purchase local food was an obstacle. One distributor described this in part as a problem with labelling: "there's so *much* local produce in Arizona ... [but] people don't know ... because it gets packed up and is marketed under different names." Many consumers noted that few local foods are in grocery stores, and foodservice providers described frustration with the inability to make bulk purchases of local foods 'at the click of a button'. Producers and grocers explained that this was due to an absence of processing facilities for fruits and vegetables in the county.

Food safety regulations were frequently mentioned as obstacles by distributors, foodservice providers and producers. This is due in part to recent food contamination 'scars' and legislation that requires small-scale farms to obtain third-party audits if they wish to do business in mainstream markets. Small-scale vegetable producers reported the auditing and certification process to be very costly and burdensome. Grocers and distributors, however, emphasised that they are accountable to their customers, and therefore must require farmers to provide certification.

While regulations create barriers to entry into mainstream value chains, *lack* of regulation can prove problematic as well. Some producers expressed frustration with farmers' markets that allow 'box-farmers' (a term used to describe vendors who do not actually grow the produce they sell, but instead buy it from another farmer or produce warehouse, and re-sell it at the market). Some producers have been reported to become so frustrated with 'box-farming' that they choose to leave the farmers' market altogether.

Stakeholders had widely varying opinions regarding the economic value of participating in local food value chains. Small-scale producers explained that local value chains such as farmers' markets and restaurant sales provided them

with a viable alternative to larger markets where "the 'big boys' will just come in and undercut the price so badly they'll take us out." However, almost half of the producers expressed concerns about low profits, particularly given development pressure, and therefore high land prices for land associated with water rights in the county.

Similarly, consumers indicated that there was little economic incentive for them to buy local food, and that prices deterred lower-income consumers - making local food an exclusively 'yuppie' trend.

Table 1 Most frequently cited barriers (% of the stakeholder group that noted the barrier)

Consumers	Producers	Foodservice Providers	Distributors
Information Gaps (67%)	Food Safety (89%)	Climate (100%)	Volume (80%)
Climate (50%)	Inconvenience (78%)	Inconvenience (70%)	Inconvenience (80%)
Water Use (50%)	Information Gaps (67%)	Inconsistency (70%)	Development Pressure (60%)
Inconvenience (50%)	Lack of Profit (67%)	Cost (70%)	Urban-Ag Conflict (60%)
Inconsistency (50%)	Regulations (56%)	Heat Issues (60%)	Information Gaps (60%)
Cost (50%)	Marketing (56%)	Volume (60%)	Inconsistency (60%)
		Quality (50%)	Food Safety (60%)
			Variety (60%)

Table 2 Most frequently cited motivators (% of stakeholder group that noted the motivator)

Consumers	Producers	Foodservice Providers	Distributors
Supporting the Local Community (83%)	Economic Benefits (78%)	Economic Benefits (60%)	Supporting the Local Community (80%)
Quality (83%)	More Profit (56%)	More Profit (60%)	Supporting the Local Economy (60%)
Supporting the Local Economy (67%)	Quality (44%)	Quality (60%)	Quality (60%)
Knowing (50%)	Health Benefits (44%)	Freshness (50%)	Economic Benefits (60%)
Taste (50%)		Supporting the Local Economy (40%)	Convenience (40%)
		Marketing (40%)	Knowing (40%)
		Convenience (40%)	Environmental Benefits (40%)
			Nutrition (40%)
			Taste (40%)
			Farm Preservation (40%)

Finding strategies to increase profitability for local producers and affordability for consumers continues to be a major challenge for many local food systems throughout the US.

Motivations for participation

In spite of the barriers, there was overwhelming support for locally sourced food. Stakeholders described numerous social, economic and ethical reasons for participating in local food chains. The five major reasons that emerged included: better quality of products, economic benefits, supporting the local community, freshness, and knowing where one's food came from (see Table 2). Several important distinctions emerged between the stakeholder groups. Consumers were motivated by a desire to support the local community and to know where their food came from. They associated local foods with better flavour and less fossil fuel consumption. Many found that alternative value chains, such as farmers markets, met these desires better than mainstream markets. Distributors also described cost savings associated with shorter transport distances. Producers and foodservice providers were driven by economic benefits associated with branding food as 'local'.

Recommendations & ongoing work

The diversity of stakeholder perceptions regarding barriers and motivations for participation in local food market chain underscores the need first of all for increased dialogue and building of trust to facilitate collaboration among participants so that they can jointly explore and exploit emerging market opportunities. To this end, a Local Food Working Group was set up at Arizona State University in 2009 to build partnerships between university researchers and various stakeholders and community organisations. This group has begun to work on a number

of projects to increase awareness about local food. In particular the group is using participatory approaches to develop a map and directory of local food outlets.

To address the problem of ensuring a viable scale for operation of the local food system, several stakeholders suggested establishing cooperatives for the consolidation, processing, food safety compliance, packaging, branding and distribution of local products. Consumers could buy directly from these outlets, and the outlets would also help small-scale farms cater to the needs of large-scale grocers and restaurants. These cooperative ventures could also help defray some of the costs of training regarding marketing, food safety compliance, insurance, and organic certification for producers.

The need for local labelling and brand promotion was also widely expressed. In order to be effective, brand promotion programmes need to be well targeted and emphasise product characteristics that are unique to the local product in order to build value. Public-private partnerships could be explored to leverage greater funding and to tap on the strategic complementarities between the different public and private entities in the value chain.

Another challenge is to ensure that local foods are accessible to low income and minority groups. Farmers' markets in the county are increasingly participating in the Farmers' Market Nutrition Program, which allows low-income women, children or seniors already participating in state supported supplemental nutrition program to receive additional food coupons for use at farmers' markets.

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Nasturtium and lettuce proliferate in this urban farm
Photo: Carissa Taylor

Notes

(1) Based on US census estimates: <http://www.census.gov/newsroom/releases/archives/population/cb06-39.html> [accessed June 23, 2010].

References

- Agriculture Marketing Service (AMS) (2002) U.S. farmers markets – 2000: A study of emerging trends. U.S. Department of Agriculture: Agriculture Marketing Service.
- Patterson, P.M., Olofsson, H., Richards, T.J. & Sass, S. (1999) An empirical analysis of state agricultural product promotions: a case study on Arizona Grown. *Agribusiness*, 15(2), 179-196.

General View on Potato Production in Khartoum State, Sudan

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Elmoiez M. Fadul

Sudan has undergone rapid urbanisation since the 1980s as rural people have migrated from drought-stricken areas and war-affected regions. Squatter settlements in the urban areas continue to grow, especially in the city of Khartoum, which now covers an area of 20,700 km² and has a population of seven million.

Khartoum benefits from rich water resources (including the Nile and its tributaries) and the fertile cultivable land along the riverbanks is a valuable natural resource. The land suitable for cultivation accounts for about 750,000 ha, of which 11 per cent is allocated to urban and periurban agriculture (Abdelgadir, 2003). Farms growing leafy vegetable crops are concentrated in the heart of the city, producing crops such as rocket, purslane, cowpea and Jews mallow (Corchorus). Mixed dairy farms grow crops including potato, onion, tomato, maize and alfalfa, and these predominate in the periurban area.

It is mostly men, from different ethnic groups, that are involved in urban food cultivation, although women are engaged in planting, weeding and harvesting. Most of them originate from rural areas and had some farming experience before coming to Khartoum.

Potato production

Production in Khartoum supplies over 70 per cent of the country's potatoes (Elsir M. Elamin, 2005). Most production occurs on small farms of 0.25 to 5 ha, and is mainly for subsistence and for sale in the capital. Potatoes are an important component of the diet, especially in the urban area, and are mostly consumed as a vegetable in soups, mixed with ground meat or boiled. Potatoes are also an important cash crop for small-scale growers, and have the potential to increase incomes in periurban areas, improve living standards and create employment opportunities.

Potato production is steadily increasing in Khartoum; the acreage devoted to this crop has more than tripled in the last ten years. The total acreage under potato cultivation in the Khartoum region amounts to about 6,500 hectares, with yields of 17 to 25 ton/ha. However, production costs of potatoes are high in comparison with those of other crops; seed potatoes have to be imported and account for more than

half of the total production cost of potatoes. This is a major constraint to further expansion of potato production (Elrasheed and Ballal, 2009). Early in the harvest season (mid-January), prices are high. Many farmers therefore harvest the tubers before they reach maturity since, during and immediately after harvest, prices plummet as farmers try to sell before spoilage occurs. Farmers with access to modern storage facilities take advantage of premium prices in the post-harvest season.

Two types of markets are found in Khartoum: central (wholesale) markets and retail markets. Urban market traders buy the potatoes either directly from farmers or from periurban traders to supply both markets. Retailers include kiosks, hawkers and supermarkets; they buy the potatoes from the wholesale market through small brokers. Sometimes the hawkers buy the crop at the farm gate. Hotels and large restaurants buy the crop from the wholesale markets directly. Although buyers control the markets, and the farmers are not able to exert influence on them, the gross margin of potatoes is better than of other vegetables like tomatoes. Processed potatoes (French fries and chips) have promising market potential in Sudan as imports increase each year. The number of fast food outlets is increasing in particular. Various improvements can be generated throughout the potato production chain to supply this market. In the longer term, improvements in cost efficiency terms can be achieved by increasing productivity of potato production (e.g. higher yields and lower production costs are possible to small farmers through adopted new technologies such as by introducing new cultivars, suitable for French fries and chips production, and by introducing equipment (EVD, 2009).

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References

- Abdelgadir, K. E. (2003) Survey of city experiences with credit and investment for urban agriculture intervention, Sudan Case: Wadramli Cooperative Society (WACS)
- El rasheed, M. M. and Ballal, F. H. (2009) Economics of Potato Production and Marketing in Khartoum State, Department of Agricultural economics, Faculty of Agricultural Studies, Sudan University for Science and Technology, P.O. Box 71, Shambat, Sudan.
- Elsir M. Elamin, A. (2005) Profitability analysis of potato production in the Sudan, ARC Journal, Volume 5, pp.97-114.
- EVD (2009) Sudan: Feasibility of an integrated french fries production chain in Sudan <http://www.evd.nl/zoeken/showbouwsteen.asp?bstnum=157645&location=>

The Role of Farmer Organisations in Marketing Periurban 'Safe Vegetables' in Vietnam

Paule Moustier
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In Vietnam, urban agriculture still represents a substantial share of food supply and employment. Its contribution to the food needs of the entire population of Hanoi was estimated at 44 per cent in 2002 (Mai et al., 2004). In the same year, over 70 per cent of leafy vegetables originated within a 30 km production radius of the city (Moustier et al., 2004). Cu Chi district, a suburb of Ho Chi Minh City, is the major provider of leafy vegetables to this city (Cadilhon, 2005). About 30 per cent of the population around Hanoi Province and in the periurban districts of Ho Chi Minh City is engaged in agriculture (Hanoi Department of Agriculture and Rural Development, 2009; Dang, 2008).

Yet, the more than 100,000 vegetable farmers in Hanoi face a number of constraints to sustaining their activities. Surprisingly, despite the short distance to urban markets, marketing is the first constraint expressed in a survey of farmers. Analysis of price data shows strong price fluctuations. For example, the maximum prices of tomato and cabbage are ten times the minimum prices in the period 1996-2001 (Moustier et al., 2004). Another issue is consumer distrust of vegetable safety. A recent survey, conducted in 2005 among 800 consumers in Hanoi and Haiphong (the third largest city of Vietnam) shows that 75 per cent of consumers are extremely concerned with food safety in general (Luu et al., 2005). Food safety is deemed of primary importance in vegetables, fruit and meat, together with the freshness of these products. In Hanoi, sample analyses show that farmers commonly use banned pesticides and apply more nitrates and pesticides than are authorised (Vietnam Ministry of Agriculture, 2009). Lowering the use of chemical inputs is not easy because pests and diseases thrive in the humid conditions. Besides, cheap pesticides from China are easily available.

Concerns for food safety among consumers actually represent market opportunities for farmers, if they are able to respond to them. They may also help farmers to protect their land from urban development. The city authorities are

prepared to keep some land for agriculture provided it is 'ecological and innovative'. Otherwise, it is likely that the process of conversion of agricultural land will continue. As in other cities of the world, urban development proceeds rapidly at the expense of agricultural areas. For instance, in Hoai Duc district, farm land decreased from 8355 hectares to 4373 hectares between 2000 and 2008, as roads and buildings encroached. Donadieu and Fleury (1997) argue that, if it is to be sustained in the city, agriculture needs to develop in alliance with urban concerns.

Success factors

Some farmers have proven able to meet this challenge; they have realised new market opportunities and increased the profitability of their businesses. Three factors are strategic in these success-stories: technical training through public programmes, the capacity to join farmer organisations that are focused on quality development, and the integration of some stages of marketing. These are further explained below.



Internal control in a safe vegetable cooperative in Hoai Duc district, Hanoi

Photo: Nguyen Quy Binh

In 1995, public interest in the safety of vegetable products led the Vietnamese Ministry of Agriculture and Rural Development to implement an ambitious programme called 'safe vegetables'. Based on integrated pest management (IPM) principles, this programme educated farmers in moderate use of fertilisers and pesticides as well as in the use of water from wells and non-polluted rivers. The programme also helped to market 'safe vegetables' through various communication strategies. These included the organisation of annual safe vegetable fairs and support to farmers and traders who wanted to open 'safe vegetable' shops or market stalls. The Danish NGO ADDA also organised training programmes for farmer groups on IPM vegetable production in Hanoi Province.

In Ho Chi Minh City, the programme was implemented by the Department of Agriculture of the city in 1997. The first targeted area of this programme was Ap Dinh hamlet in Cu Chi district where households that had belonged to a cooperative in the early 1980s were now farming individually. In 1997, five of them formed an association so that they could join the training programme. From 1997 to 2000, membership expanded from five members to forty. After the city's vegetable fair in September 2000, the Ap Dinh Association received numerous orders from vegetable companies, city caterers and shops. To meet the increase in demand, the association has gradually expanded its membership, which now numbers 200 households divided into 4 smaller groups in four villages. They produce a wide range of leafy and fruit vegetables (Phan and Loan, 2006).

In 2008, twenty-seven Hanoi cooperatives held a certificate of safe vegetable production issued by the Plant Protection Department. But not all are successful when it comes to marketing their products. In fact, 'safe' vegetables are commonly mixed with ordinary vegetables. This is partly because the cooperatives only produce a limited range of vegetables, so traders who buy from safe vegetable cooperatives also buy from neighbouring conventional cooperatives. Moreover, there is no control of the use of the safe vegetable label by public or private organisations. Yet nine (of the 27) cooperatives have developed an efficient marketing strategy. Among these nine cooperatives, six are regular suppliers of supermarkets, and six (including three selling to supermarkets) have market stalls or shops where they sell directly to consumers. Approximately 500 farmers are involved in these cooperatives.

All of the nine cooperatives regularly supply directly to canteens. Unlike the traditional market supply chain – which is characterised by a chain of collectors, wholesalers and retailers – the distribution of 'safe' vegetables generally involves one or no intermediaries. This is a deliberate strategy of the farmers themselves, so that they see their quality efforts rewarded. The farmers' strategy of integration of marketing stages (i.e. removing intermediaries) is an effective way of reducing food safety uncertainties and of commanding higher prices. The farmer-consumer or farmer-retailer relationship is an opportunity to exchange knowledge on production methods. This fulfils the purchasers'

needs for reassurance, as producers are perceived as the most competent persons to give this information. At the same time, direct farmer-consumer exchanges enable farmers to better appreciate consumers' demands.

Organisation is important

Traditionally, cooperatives in Vietnam concentrate on service provision, especially irrigation. The nine safe vegetable cooperatives in the Moustier et al. study are characterised by their collective action for quality promotion and marketing (2010). This active role is the result of government support for quality improvement (especially training on IPM), which has deliberately targeted farmer groups as a strategy for overcoming the problems of Vietnamese agriculture, in particular those faced by small-scale farmers. It is also the result of the initiative taken by certain dynamic farmers, who have taken advantage of this support and the emerging demand for specific food qualities.

The first advantage of collective action for farmers is the centralisation of marketing operations. This brings economies of scale in terms of quantities collected, contacts and negotiations with purchasers, investment in a common operator with adequate skills and time for marketing tasks, and participation in flexible contracts with supermarkets, shops and schools. The second advantage of belonging to a farmer organisation is that it enables the farmer members to have access to training on quality improvement. A third advantage concerns joint investments by members of farmer organisations in the areas of quality development, labelling and certification. These investments are necessary to satisfy the quality requirements of supermarkets.

Safe can be profitable

A study carried out in 2002 provides data on the profitability of periurban safe vegetable production compared with that of conventional production. A survey was done on costs and benefits for 30 conventional farmers and 32 safe vegetable farmers in Hanoi Province. The results obtained for cabbage and choy sum indicate that safe vegetables have higher costs

Retail shop of a safe vegetable cooperative in Gia Lam district, Hanoi
Photo: Paule Moustier



of production, mainly due to higher labour costs. Yields are lower because of greater prevalence of disease, but higher resale prices generate higher profits (see Table 1).

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Table 1 Comparison of costs and profits of conventional (Van Duc commune, Gia Lam district) and safe vegetable production (Van Noi commune, Dong Anh district) in Hanoi Province

	Unit	Cabbage		Difference safe/conv.	Choy sum		Difference safe/conv.
		Conv.	Safe		Conv.	Safe	
Total costs:	Vnd/kg	850	1090	28,2%	464	639	37,7%
Input costs	Vnd/kg	552	599	8,5%	204	261	27,9%
- Seeds	Vnd/kg	170	229	34,7%	40	74	85,0%
- Fertilisers	Vnd/kg	187	250	33,7%	54	72	33,3%
- Insecticides	Vnd/kg	153	87	-43,1%	94	95	1,1%
- Other	Vnd/kg	42	33	-21,4%	16	20	25,0%
Total input costs	Vnd/kg	552	599	8,5%	204	261	27,9%
Labour costs*	Vnd/kg	298	491	64,8%	260	378	45,4%
Total costs:	Vnd/kg	850	1090	28,2%	464	639	37,7%
Sale price	Vnd/kg	900	1200	33,3%	1025	1500	46,3%
Profit/kg	Vnd / kg	50	110	120,0%	561	861	53,5%
Yield	Ton / ha.	32	28	-12,5%	21	19	-9,5%
Revenue/10m ²	Vnd	28800	33600	16,7%	21525	28500	32,4%
Profit/10m ²	Vnd	1600	3080	92,5%	11781	16359	38,9%

*Family labour cost is converted into its equivalent as salaried labour cost; note – 1usd = 15,000 vnd at time of survey.

Source: (Son et al., 2003)

Yet the profitability of the safe vegetable business is fragile. The reputation of the farmer groups is vulnerable because of the lack of an external, rigorous control and certification system. The limited range of vegetables that each group sells intensifies the problem. As a result, they buy vegetables outside the group but sell under their own label, without any control (and thereby undermining the validity of their own label). Lastly, the protection of agricultural areas (even ecological ones) from urban development is still uncertain.

Nevertheless, there is still some room for manoeuvre for producers of safe vegetables to increase profitability and sustainability. First, using more organic inputs instead of chemical inputs could reduce the costs of production. Safe vegetable farmers still purchase expensive organic pesticides and fertilisers instead of using natural green manure and pesticides (see UA Magazine no. 23). Second, getting farmers to be more organised, for example in farmer groups, and forming an alliance of safe vegetable farmers, will aid communication with local authorities and private land developers to ensure that land is kept for agricultural uses. Forming an alliance will also help overcome the problem of the lack of variety of vegetables sold, because it will encourage safe vegetable groups to network and to make joint deliveries to buyers. The building of such an alliance has started under the Superchain project but still needs to be consolidated (Moustier et al., 2009).

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References

- Cadilhon, J.J., 2005. Business-to-business relationships in the vegetable marketing system of Ho Chi Minh City (Vietnam). University of London, Wye Campus, London.
- Dang, N.A., 2008. The mega-urban transformations of Ho Chi Minh City in the era of doi moi renovation. Colloque international : Les tendances de l'urbanisation et de la périurbanisation en Asie du Sud-Est. IRD, Ho Chi Minh Ville.
- Donadieu, P., Fleury, A., 1997. L'agriculture, une nature pour la ville. In: Annales de la recherche urbaine, 74, pp. 31-39.
- Luu, H.M., Nguyen, T.M.H., Nguyen, T.T.M., Pham, H.T., Tran, H.N., Ngo, N.H., 2005. The demand for organic agricultural products in Hanoi and Haiphong, VNFU/ADDA organic agriculture Project, (Ed.), Hanoi.
- Mai, T.P.A., Ali, M., Hoang, L.A., To, T.T.H., 2004. Urban and peri-urban agriculture in Hanoi: opportunities and constraints for safe and sustainable food production, AVRDC Technical Bulletin nr 32.
- Moustier, P., Dao, T.A., Sacklokham, S., 2009. Linking small-scale farmers to supermarkets and other quality chains. Final Superchain report. CIRAD, CASRAD, Hanoi, <http://www.malica-asia.org>.
- Moustier, P., Phan, T.G.T., Dao, T.A., Vu, T.B., Nguyen, T.T.L., 2010. The role of Farmer Organisations Supplying Supermarkets with Quality Food in Vietnam. In: Food Policy, 35, pp. 69-78.
- Moustier, P., Vagneron, I., Bui, T., 2004. Organisation et efficience des marchés de légumes approvisionnant Hanoi (Vietnam). In: Agriculture, Cahiers d'études et de recherches francophones, 3, pp. 142-148.
- Phan, T.G.T., Loan, L.T., 2006. The participation of the poor in vegetable chains to Ho Chi Minh City, in: Moustier, P., Dao, T.A., Hoang, B.A., Vu, T.B., Figuié, M., Phan, T.G.T. (Eds.), Supermarkets and the poor in Vietnam. The Gioi, Hanoi, pp. 292-324.
- Son, H.T., Nguyen, H.A., Moustier, P., 2003. Coûts et résultats économiques de certains cahiers des charges de production des légumes CIRAD, internal document, Montpellier.
- Vietnam Ministry of Agriculture, M.O.H., Cida, 2009. Report on Supplementary Food Safety Survey Results. CIDA, Hanoi.

Influence of Public Policies on the Urban Production in Piracicaba, Brazil

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Piracicaba, a city of about 365,000 in the southeast of Brazil, has a strong agricultural tradition. Although a large area around the city is cultivated, only a small percentage is dedicated to food production. As a result Piracicaba has to import most of its food products, which increases the prices.

In 1982, municipal representatives created a system of *varejões*, distributed over 24 different locations in the city, mainly to improve the supply of vegetables and fruit, since this had not been a priority in private businesses. The *varejões* are retail markets managed by local municipality, in defined places, where a maximum price is fixed for each product. They operate as public markets specialised in food commercialisation (Crocomo, 1992).

An important objective of the Municipal Secretariat of Agriculture and Food Supply (SEMA) is to increase food production in and around urban areas. To do this, the local government provides incentives, including tax breaks and training courses to help farm producers to increase and diversify their activities and to encourage other or new farmers to switch to food production.

This article summarises the context of food distribution in Brazil, focusing on the role of the *varejões* on the preservation of urban agriculture in Piracicaba.

Food supply in Brazil

Brazil's food supply has always been controlled by large supermarket and hypermarket chains (Mainville et al., 2008). As in many countries, the large supermarket chains tend to dominate the retail food market. They form a barrier, as small establishments and other kinds of retail food market are too small to be able to compete. According to Silva et al. (1998), supermarkets account for about 85 per cent of the total volume of sales in Brazil, although they represent only 15 per cent of the total number of commercial enterprises. However, contrary to the international trend, the numbers of traditional vegetable retail markets, such as street markets, small groceries and *varejões*, have remained stable and in certain cases even increased (Mainville et al., 2008). The reasons for this are their proximity to customers (supermarkets are

fewer in number and less widespread), their lower prices, greater variety of fresh products, and direct contact with the producers, which for many customers means better product quality assurance.

The decisive factor in this flourishing of small-scale marketing of agricultural produce is the local food policies, which focus on providing safe and healthy food to the population. Initially national policies, they later became the responsibility of municipalities, following a trend in Brazilian politics of strengthening the political power of municipalities.

The *varejões* of Piracicaba

The creation of the *varejões* in Piracicaba, in 1982, solved several problems of the local horticulture trade, among them the horticulture commerce at the local market whose area had become too small for the local demand, the old street fairs which were showing signs of decay, the prices of products at private local supermarkets which had become abusive and most of all, the local food distribution which required more trade opportunities.

At the *varejões* products are sold by the producers themselves (they may also sell the yield of other producers) and by entrepreneurs who get their products from two regional wholesale food markets (CEAGESP in Piracicaba and CEASA in Campinas). It is estimated that 25 per cent of the food sold in Piracicaba is produced in the municipality.



Varejão in Piracicaba
Photo: Cristiano Gustavo Vitorino



Varejão in Piracicaba
Photo: Cristiano Gustavo Vitorino

SEMA monitors the *varejões*, ensuring that they provide mainly fresh fruit, vegetables and cereals of good quality and at low prices. Food prices are established by the Supply Department of SEMA, which checks the food prices at CEAGESP twice a week. The final price for the consumer is calculated by taking the average wholesale price and adding 20%. The prices are fair for both producers and consumers: they are lower than prices in supermarkets, but still enough to cover production costs and generate profits for the producers.

As the number of customers has grown since they started, the *varejões* have started to offer a wider variety of products, such as meat, poultry, fish, bread, appetizers, homemade sweets, kitchen utilities and flowers. An average of 863 tons of food is sold every month.

Study on urban agriculture

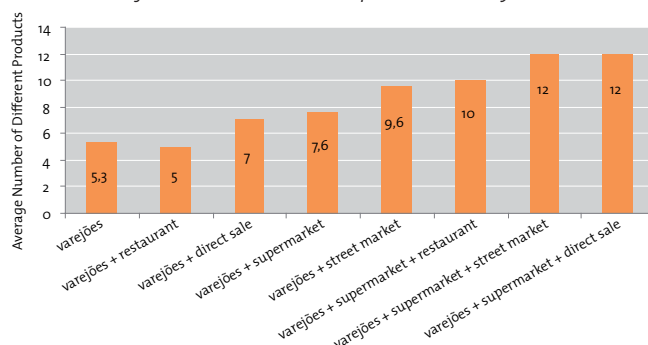
In 2009 a study was undertaken of urban producers in and around Piracicaba. A total of 19 different producers that supply horticultural products to the *varejões* of SEMA were interviewed, using semi-structured interviews. The farms are small: the average plot size is 2.1 ha, varying from 0.3 ha to 6.0 ha. They rely largely on family labour, and the main products are leafy vegetables for the market.

Besides these urban producers, there are 6 rural producers that supply the *varejões* systems but these were not considered in this study.

Of the farmers who were interviewed, 3 sold their products through one channel only (the *varejão*), 12 used two other channels and 4 producers used three channels. Besides the *varejões*, the two main channels for produce selling are street markets and supermarkets.

The street markets demand a great variety of products. So the farmers that sell directly at the street markets must diversify their own production. The farmers that supply to wholesale markets do not need to diversify their production, but they have to be able to comply with the demand for reliable and large quantities. This motivates some farmers to specialise in large-scale production of only a few products.

Channels of commercialisation and product diversity in Piracicaba



Final Considerations

Varejões play an important role in the food security of low-income groups in Piracicaba, both consumers and producers, because of the fixed maximum prices. Farmers are also supported, because they do not have to produce, or rather sell, large amounts. Some producers mentioned that they would probably not produce at all, if it weren't for the *varejões*.

Other benefits for these small-scale producers include the stable clientele (the consumers prefer this kind of market), the tax exemption and the availability of market stands. The latter two reduce the farmers' expenses, and thus improve their income. The role of the local authorities is also important, as they regulate quality and prices, as well as assisting the producers to improve their production and product quality.

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References

- Crocom, F. (1992) A administração pública municipal e o abastecimento de hortigranjeiros: o caso dos Varejões Municipais de Piracicaba, Estado de São Paulo. 1992. 159p. Dissertação (Mestrado em Economia Agrária)–Escola Superior de Agricultura “Luiz de Queiroz”, Universidade de São Paulo, Piracicaba.
- Mainville, D.Y., Reardon, T., Farina, E.M.M.Q. (2008) Scale, scope, and specialization effects on retailers procurement strategies: evidence from the fresh produce markets of São Paulo, Rev. Econ. Sociol. Rural, Brasília, v.46, n.1.
- Silva, R.O.P., Souza, R.A.M., Mandelli, C.S., Tasco, A.M.P (1998) Comercialização Hortícola: análise de alguns setores do mercado varejista de São Paulo. Informações Econômicas. Instituto de Economia Agrícola, São Paulo, v.28, n.10, p.7-23.

An Analysis of Markets in Rosario, Argentina

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Mariana Ponce
Raúl Terrile

Commercialisation of urban agriculture can lead to exclusion. Therefore, the challenge for governments is to implement public policies that generate and encourage an economy that is close to the people, including avoiding (too much) dependency on subsidies, while still recognising the importance of the role of the state in supporting the most vulnerable groups. For groups that participate in such government initiatives, especially those involved in urban agriculture, the challenge is to develop creative ways to integrate each actor in the process.

The Urban Agriculture Programme has been in place in Rosario since 2002 (see earlier issues of the UA Magazine). It is implemented by the Secretary of Social Outreach of the Municipality of Rosario, in cooperation with the NGO CEPAR and the Pro-Huerta INTA National Food Security Programme. Converted into public policy, it is currently in the process of consolidation. It works alongside urban farmers to create a different kind of economy; one which integrates people and generates inclusive spaces for production, commercialisation, organisation, participation and political advocacy.

The programme supports urban growers by providing technical assistance and training and supplying inputs and basic infrastructure for production, processing and commercialisation operations. The local government subsidises urban agriculture, with the support of international cooperation agencies (ICLEI, IPES, IDRC, RUAF and others). At this point in time it was worthwhile reflecting on the role of the commercialisation of urban agriculture as a tool in this process of creating a social and solidarity-based economy.

A solidarity-based economy is understood to be a system that promotes the flow of resources at the local level, thereby connecting local actors. It is a space for action in which individuals, families and social organisations exchange goods, but also values, know-how, and culture, based on the principles of solidarity. It is about building markets where the prices and relationships are more oriented toward integration and equity than financial profit.

Such a system promotes the building of the capacities of citizens who were excluded from the job market, and aims to



Producer selling its products to a consumer at the Fair Plaza San Martín in Rosario
Photo: Raúl Terrile

restore their rights and encourage the development of social ties. Urban farmers (who live in socially vulnerable conditions) are seen as being major stakeholders in this local economy.

The experience of Rosario

The Urban Agriculture Programme emerged in the midst of a great socio-economic crisis (see also UA Magazine 22), and one of its main objectives was to become a productive alternative for generating income, both by helping households save money by growing their own food, as well as by allowing them to sell their surplus crops. Through this process of commercialisation, various points of sale have been identified in Rosario and supported by the Programme. These increasingly complex market channels reflect growing appreciation of urban agriculture in the city and necessitate new ways of organising producers, such as through the formation of the Network of Urban Farmers (*Red de Huerteros y Huerteras*).

The following market channels have been established:

- The *huerta*, or the urban garden/farm itself, where the consumers visit the production sites in search of fresh produce.
- Sales in the neighbourhood, where the farmers sell to their neighbours. In some cases, they travel the streets with a sales cart.
- The weekly farmers' markets of which there are currently six operating from Monday to Friday in different public spaces in the city (plazas and municipal centres). Among the products sold here are ornamental and aromatic plants, natural cosmetic products and trays of processed vegetables.
- Door-to-door delivery of approximately 6 kg bags of organic vegetables.
- Sales in local supermarkets, where the products are



Packing bags of organic vegetables for sale in Orchard Park
Molino Blanco
Photo: Raul Terrile

displayed in an exclusive section (since 2009).

- Sales to agro-industrial produce and natural cosmetics companies promoted by the Programme.
- Specialty stores selling primarily trays of processed organic fruits and vegetables.

These market channels have some common characteristics:

- The products are marketed by highlighting their ecological and social characteristics.
- The relationship between the producer and consumer is strengthened through short chains.

- The products' origins are easily traced because of these short chains; the consumer can even visit the plots and meet the farmers. For some products, like the bags of organic vegetables, progress has been made in labelling (e.g. including the name of the farm and the farmer).

One important stakeholder that has emerged in recent years is the Vida Verde (Green Life) Consumers Network, which is a group of people conscious about the quality of their food. In addition to buying farmers' products, the consumers visit the farms, encourage the consumption of the products, participate in solidarity lunches organised by the *Huerteros* Network, and collaborate in product quality evaluation activities.

Commercialisation strategies

The urban farmers' profiles need to be considered when analysing various commercial strategies. All of these farmers belong to a vulnerable social group, but they have different levels of literacy, agricultural knowledge, organisational experiences, access to secure incomes, etc. The different productive groups are thus unequally positioned to take advantage of each commercialisation channel that has been identified.

Commercialisation channel based on:	Prerequisites	Strengths	Weaknesses
Sales at farms	A prepared space	Low infrastructure requirements	Unstable income
	Organisation to optimise the use of time, space and equitable access to the benefits by all of the farmers	Strengthens the direct consumer-producer relationship	In highly vulnerable and poor neighbourhoods, the income earned is limited.
	Basic literacy	Does not require transportation of products	Weakness in pricing (risk of bargaining)
Sales in open air farmers' markets	Political will of local authorities: equipment, infrastructure	Visibility of urban agriculture activities Production in the neighbourhoods is valued	Unstable income due to adverse weather events Dependency on the local government (transportation and setting up the farmers' markets)
	Basic literacy	Intercultural dialogue (periphery-centre) Construction of citizenship Social validation	Does not require planned production (limited variety of supply)
		Space for dialogue among farmers Women: greater territorial mobility and ability to manage money	
Door-to-door sales of bags	Organisation, planning and logistics adjusted to the demand	Promotes stable income Captures socially/ environmentally conscious consumers Encourages loyalty	Weakness in organisation, planning and logistics
	Planned production adjusted to the demand	Encourages production planning	Costs for the farmer. Currently subsidized (transportation)
	Infrastructure and conditions throughout the chain in order to conserve the quality of the product; i.e.: appropriate packaging	Promotes association among farmers	Demands a sustained level of delivery over time in terms of volume
Sales to supermarkets	Organisation, planning and logistics adjusted to the demand	Ensured sale, agreements with the buyer	Prices benchmarked to conventional products
	Prior agreements	Stable demand, constant income Regular payments	Payments are deferred Requires promotion
Sales to agro-industries (of vegetables and aromatic and medicinal plants)	Organisation to ensure supply/ production	Assured payment	Seasonal purchases
	Product quality	Prices are set by agreement, as is the supply (in the case of vegetable processors)	Differentiated prices, because the products serve as raw material for a more complex process
Agro-ecological or organic markets	Consolidated organisation of farmers	Formalisation	Weakness in organisation, planning and logistics
	Initial investment and local maintenance of sales	Possibility of outsourcing sales services	Risks are more diffuse when outsourcing
	Political will, setup	Availability of a permanent sales site	Requires constant attention



Garden sales to a neighbour
Photo: Antonio Lattuca PAU

The urban farmers in Rosario have the opportunity to choose the commercialisation channel that is most appropriate for their own situation, depending on their capacities in terms of knowledge and production and their household income generation strategy.

It is important that these commercialisation chains are sustained by all of the stakeholders. In general, the farmers' markets appear to be the most appropriate space for small and medium-sized urban farmers, given the fact that they do not require planning, and one sells what one brings. Strategies involving on-farm sales and neighbourhood sales are also suitable for these kinds of producers.

On the other hand, production chains linked to the bag deliveries, the supermarket and the organic market are very promising alternatives for farmers engaged in urban agriculture on medium and large-sized plots, and who have chosen urban agriculture as their main source of income. These chains require organised urban farmers who are able to plan and sustain their production in terms of quantity and quality.

Final remarks

Through these various markets, organised farmers are able to build their capacities, which allow them to achieve even greater levels of organisation. This in turn helps them to achieve autonomy.

It is not yet clear to what extent local government can facilitate the proper conditions under which urban agriculture can become a primary source of income for the urban poor; especially within a context where agriculture is devalued and overexploited, and the production of food conflicts with the logic of industrialised agriculture.

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Supermarket stand with vegetables produced in the city of
Rosario

Photo: Raul Terrile

Community Supported Urban Agriculture: The *Orti Solidali* project in Rome

Brunella Pinto
Andrea Pasqualotto
Les Levidow

In Italy local food networks are mostly farmer-driven initiatives, with little consumer involvement. An exception is the *Progetto Orti Solidali* – solidarity gardens project – an ambitious example of Community Supported Agriculture (CSA) in Rome. Since its start in early 2009, the *Orti* has aimed to create a more sustainable way of producing and consuming food. Its slogan is ‘We don’t sell vegetables; we grow *your* garden’.

One of a variety of urban agriculture initiatives, CSA has become a means to create closer relations between producers and consumers. According to Henderson and Van En (1999) each CSA initiative is unique. CSA can be considered as a tool for change with which to take advantage of the current food climate to encourage more sustainable production with greater accountability to the consumer and fair returns for producers.

Urban land access

In Italy access to urban land is guaranteed only to citizens’ associations or companies (e.g. in town and country parks or urban gardens) or to particular population groups (such as vegetable gardens for the elderly or educational gardens for children). Access to land is not granted simply for general community use.

To expand land access in today’s urban spaces, some activists propose to revive and adapt the old concept of commons. These were the lands, forests and streams that could be freely used by the peasants in medieval Europe. For example, arable land can be seen as commons that should be preserved; likewise urban commons could have collective alternative uses.

***Orti Solidali* project as a partnership**

In the *Progetto Orti Solidali* the farm workers come from a semi-autonomous care home (*Il Tetto Casal Fattoria*), which hosts refugees and socially disadvantaged youth, with the aim of helping them to develop their full potential. One of their tutors working in the care home is also an organic agronomist and member of the *Free School of Synergistic*

Agriculture ‘Emilia Hazelip’. These activities gave her the idea of starting an urban local food initiative – which became the *Orti Solidali* project.

More than a producer-consumer relationship, the *Orti Solidali* aims to be an economically and environmentally sustainable initiative. It also aims to create social inclusion, both for the subscribers and the farm workers – who in this case are four young refugees from the care home. A direct partnership allows them to learn skills that they will be able to apply independently wherever they continue their lives. After a training course on synergistic agriculture, the farmers (together with the tutor) built 60 family-sized garden plots on about one hectare of land on the outskirts of Rome. The tenancy came from a social cooperative that produces organic food in the urban green belt.

Each garden plot is allocated to a family (or individual) who pays an annual subscription and receives a home delivery with a fixed amount of vegetables every week. Vegetables come from their specific plot, which can be customised according to the subscriber’s preferences, with a choice of several crops cultivated according to the seasonal sowing plan of synergistic agriculture. In this CSA all the necessary labour is provided by the four refugees. The yearly subscription is designed to cover the direct costs of the initiative (such as seeds, plants and tools) and the workers’ yearly salary, so that the activity is entirely self-financing. Many essential items – e.g. farm implements, irrigation material and seeds – were donated in response to appeals on the website, made so that the *Orti* could avoid or minimise financial debt.

This initiative combines three aims of sustainability. The environmental aim is to promote an agricultural method with low environmental impact. An economic aim is to create stable income for young refugees through low-scale agricultural activity. Social aims are to rebuild a relationship of cooperation between producers and consumers, to create social inclusion for the refugee farmers through work opportunities and to link subscribers through participation in a food community.

Synergistic Agriculture

The plots are cultivated according to the 'Synergistic Agriculture' method, refined by the Spaniard Emilia Hazelip, in turn based on the ideas and experience of Masanobu Fukuoka (1985; see also El Jardín de Emilia Hazelip). This method consists of an ecological approach that provides solutions to the problems of industrial agriculture and the environmental damage it causes. Synergistic agriculture improves soil quality by using permanent beds, with mulches to keep the ground permanently covered, and by planting different crop families together according to the principles of phytosociology. Synergistic agriculture allows no fertilisers and no tilling of the soil. Most of the work required by conventional agriculture is not necessary in this method, making it the best choice for such a low labour initiative, as well as for its environmental and economic benefits. Vegetables cultivated under a synergistic regime are top quality, completely organic and usually cheaper than organic products in farmers' markets or supermarkets because there are no costs for fertiliser and only low costs for labour. Although similar methods may be used also in permaculture, they are distinct systems.

Building subscribers' commitment

As seen in many similar initiatives around the world, CSA is more than just a short-chain supply model. It is also an instrument to create and strengthen social relationships in an urban context, by building food communities around common needs such as food quality and food security. Community links can be built through greater interaction between farmers and other participants, especially through sharing responsibilities and rewards. And this has many benefits beyond the CSA itself.

As one of the first steps for building the Orti initiative, the tutor organised public presentations to find committed subscribers. Initially 200 applications were received for only 60 available plots. The tutor carefully selected those who showed a strong commitment to the distinctive social aims of the initiative; no social, economic or age requirements were stipulated.

At the beginning of the subscription campaign, the tutor gave Synergistic Agriculture workshops free-of-charge to interested subscribers. This subscriber education campaign attempted to move from the consumer (*consumatore*) concept to the active consumer-citizen (*consum-attore*), a term which has been popularised in Italy (<http://consumattore.wordpress.com>, <http://www.altromercato.it>). In return for the workshop, subscribers were expected to do some volunteering in the gardens. Subscribers were asked to help in the initial establishment of the gardens, though this voluntary labour was not required to cover part of their share.

The *Orti Solidali* initiative is structured as a shareholder CSA, where subscribers and farm workers share responsibilities and rewards, unlike some CSAs. Subscribers have paid the

same fixed share from the start, approximately 300 Euros for 52 vegetable boxes per year. This has been enough for the 60 subscribers to maintain the salaries of the four farm workers, despite many difficulties in production. The farm workers receive less money than from conventional food chains, but they gain financial security. With payments at the beginning of the season, they can purchase seeds, equipment and other supplies. Subscribers receive more and better-quality produce for lower prices than at farmers' markets; they also have a personal, highly customised garden plot compared with other short supply chains.

As in all CSAs, the main strengths are the subscribers' trust, participation and long-term commitment, rather than lower prices of food products or other commercial benefits. This commitment has allowed the project to surmount many obstacles that could have undermined it.

Ways forward: a new ethic

The initiative encountered many misunderstandings and conflicts with the cooperative farm that provided the land and infrastructure, apparently because of different organisational aims. Furthermore, the *Orti* faced drought and strong winds; sheep entered the plots, eating and destroying everything. By autumn 2009 the initiative had to move to another site and rebuild the garden infrastructure from scratch.

These difficulties caused a great delay in producing and distributing food boxes, thus limiting the involvement of subscribers in the CSA network. Minimal participation of subscribers may also be due to the heavy time-burdens of urban workers and especially the periurban location of both garden sites, requiring a long journey from the city. Nevertheless the CSA subscribers maintained their commitment, partly thanks to the careful initial selection. Despite the long delays in providing food boxes, none of the 60 subscribers has complained: only one decided to end his contract.



CSA subscribers do volunteer work
Photo: Michele Vitiello

To investigate the subscribers' attitudes, especially their commitment to the *Orti* project, we gave them questionnaires asking about their motivations, satisfaction and involvement in the CSA initiative. In order of importance, their motivations were ethical, environmental and social. Most respondents emphasised their broad ethical commitment to such an initiative, though the answers also included 'economic' and 'food safety' choices. These responses illustrate the emergence of a new ethics which affects economic, social and environmental factors; this ethics gives rise to new alternative relationships for food production and distribution (Dalla Costa, 2007).

In the *Orti* project, communication between farmers and subscribers takes place mostly through the internet – via the mailing list and a blog. In subscribers' responses to the questionnaire, communication was seen as sufficient for the subscribers to feel involved in the initiative, despite the delays in receiving food boxes. When asked how these difficulties should be addressed, many suggested to '*wait for the obstacles to go away*' and '*use group strength and resources*' to continue the *Orti*. When asked how the project could be enriched, subscribers suggested the following activities: building a network, combining different types of knowledge, strengthening the group and its interrelations.

The table below summarises the main strengths and weaknesses of the *Orti Solidali* after one year of activity.

Based on this assessment of our experience, we would suggest that a CSA initiative could usefully begin with the following measures: a careful initial selection of the participants for their motivations to ensure an essential commitment; close spatial proximity between the field and the subscribers' community, and community activities around the gardens to improve social cohesion among subscribers.

Strengths	Weaknesses
- The agronomic method reduces pressure on environment and reliance on fossil fuels. - Economic benefits – both labour and net income per unit land area – are greater than in conventional agriculture. - Soil value increases due to the introduction of social function in agriculture. - Periurban territory becomes an everyday reference point for city dwellers. - Subscribers pay directly for the farming activity, with no intermediary	- Potential employment, and therefore economic sustainability, is little developed. - Geographical distance deters involvement by urban subscribers. - Subscribers have little involvement, especially in the agricultural activities.

The *Orti Solidali* project shows that CSA initiatives can develop alternatives to economic growth, ever-increasing consumption and large-scale retail chains, driven by profit maximisation. Some alternative strategies have been conceptualised as degrowth – attempting to fulfil human needs with minimal use of natural resources, thus operating

outside of a rationally calculable economy (Fotopoulos, 2007; Fournier, 2008; Latouche, 2006, 2009). An example of degrowth, the *Orti* obtains resources and provides benefits that are not measurable by conventional value chains. At the same time, its methods have a broader relevance beyond degrowth objectives.

Acknowledgements

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References

- Consum-attore, <http://consumatore.wordpress.com>, <http://www.altromercato.it>
- Dalla Costa, Maria (2007) 'Food as common and community', The Commoner no.12, www.thecommoner.org
- El Jardin de Emilia Hazelip*, a video on Synergistic Agriculture, <http://nueva-era.es/el-jardin-de-emilia-hazelip/>
- Fotopoulos, T. (2007) 'Is degrowth compatible with a market economy?' International Journal of Inclusive Democracy 3(1), http://www.inclusivedemocracy.org/journal/vol3/vol3_no1_Takis_degrowth.htm
- Fournier, Valerie (2008) Escaping from the economy: the politics of degrowth, *International Journal of Sociology and Social Policy* 28 (11/12): 528-45.
- Fukuoka, Masanobu (1985) *The Natural Way of Farming*. Japan Publications (JP/US).
- Hazelip Emilia, *Agricoltura Ecologica – Ecologia Profonda*, http://www.agricolturasinergica.it/articoli/eh_agricolturaecologica.pdf
- Henderson, Elizabeth and Van En, Robyn (1999) *Sharing the Harvest: A Guide to Community Supported Agriculture*, White River Junction, Vt: Chelsea Green Publishing Co.
- Latouche, Serge (2006) 'The globe downshifted', *Le Monde Diplomatique*, <http://mondediplo.com/2006/01/13degrowth>
- Latouche, Serge (2009) *La città lacerata*, <http://www.altragricolturanorddest.it/dettaglio.asp?id=836>
- Pinto, B. and Pasqualotto, A. (2009) Community-Supported Agriculture as a Model of Local Food System, report of a workshop held on 7 November 2009, Rome, http://crepeweb.net/?page_id=204
- Progetto Orti Solidali, <http://ortisolidali.wordpress.com>

Promoting Value Chains in Urban Agriculture for Local Development in Quito

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Alexandra Rodríguez Dueñas

Local government support to urban agriculture in Quito was born as a response to food insecurity in the poorest areas of the city, and was later expanded to the entire Metropolitan District. The production technology used has been adapted to the diverse climatic zones (between 500 and 4,800 metres above sea level, see also the article in UA Magazine no. 22).

The Participatory Urban Agriculture Project, AGRUPAR, has been working in the area since 2002, focusing on food security and promoting food processing, access to microcredit, microenterprise management and marketing and sales.

At first, the various products grown by the productive units promoted by AGRUPAR provided fresh and healthy foods to the producing families and generated surpluses that encouraged solidarity-based exchange processes and small sales at the gardens or in the neighbourhood. Over time, some urban farmers began to sell in specialised areas called Bio Trade Fairs, set up by AGRUPAR, or formed networks of farmers to deliver organic produce baskets.

In this way, a process of adding value to urban agriculture started. In addition to facilitating the Bio Trade Fairs, this includes the following aspects:

- Improved harvesting and post harvesting activities, to meet the quality standards for commercialisation, thus involving farmers in further processing and marketing. These activities include cleaning, washing, shelling, sorting, drying, processing and milling of the surplus product, as well as taking into account that a certain percentage of the product will not qualify for sale in the fresh market, due to its shape, size, colour or ripeness.
- The use of containers, packaging and labels identifying the enterprise, and business cards, price lists and recipes.
- The use of appropriate slaughter techniques (for animals) with emphasis on the application of good manufacturing processes, the cold chain and marketing controls.
- Obtaining organic certification for those production units that generate more surpluses and improved access to other markets (sales to embassies, private and public institutions). The cost of this is shared equally between AGRUPAR and the farmers.

- Supplying meals prepared with organic foods and animals from the farms in the productive unit, which contributes to the cultural recovery of certain foods.

Experience so far shows that there is a need to focus more on capacity building and supporting the value chain (development) processes: you cannot demand that the farmers “do well” at something that they “know nothing about” with resources “they don’t have”.

For this reason, it is important to consider the adoption of alternative technologies that reduce or eliminate dependence on external resources. AGRUPAR encourages productive units to rationalise the use of labour throughout the year by horizontally diversifying production and vertically integrating the agricultural process. This involves all stakeholders from the family, association or solidarity group that is in charge of the activities prior to the production process and the post-harvest activities, such as processing and marketing.

Microcredit

A critical factor that was incorporated in the value chain is access to microcredit for the urban farmers who had no credit to meet their specific needs. Starting in 2009, AGRUPAR implemented a self-managed microcredit scheme in the form of the Grassroots Investment Societies (*Sociedades Populares de Inversión*, or SPIs in Spanish)¹. This is adapted to the needs and characteristics of the urban farmers and gives an additional push to their business activity. To join the 35 SPIs currently in operation in Quito, the urban farmers each contribute between \$10 and \$20, depending on their financial situation. However, thanks to the high profitability of the sale of organic vegetables (especially the greenhouse-grown kidney tomatoes), the SPIs were able to raise enough capital themselves. A study carried out in 8 SPIs, which have 120 urban farmer members, shows that their accumulated capital for 2009 amounted to \$50,800.

Looking to the future

The use of alternative and appropriate technologies made it possible to process the surplus products, keep food longer, decrease losses and extend the sales period. The organisation of promotional events, such as trade fairs and business meetings, has allowed the producers involved in the value chain to learn about businesses, establish contacts with key members, and to make their own decisions.



Packed vegetables at the Bio Trade Fair
Photo: Jatun Ayllu, AGRUPAR 2010

The kidney tomato (*Solanum lycopersicum*) delivered the highest value addition, and was therefore considered the most promising product by the farmers. The productive enterprises supported by AGRUPAR include various certified vegetables such as carrots, radishes, beetroot or beets, lettuce and broccoli. These are marketed in organic produce baskets and at Bio Trade Fairs. In addition there is now a wide range of processed products, such as pickles, jams and jellies, sauces, tarts, sweets, nutritious cakes, snacks (such as broad beans, banana and potato chips), glazed fruit, toasted corn, granola, honey by-products, natural condiments, cookies, bread, cheese, yogurt, slaughtered or roasted guinea pigs, free-range slaughtered chickens and a healthy food catering service. In 2009, the Bio Trade Fairs marketed 28,675 kg of produce valued at \$69,500 and distributed 722 organic produce baskets worth more than \$5,000.

To date, 56 productive enterprises have been created, involving 228 urban farmers (165 women), who have gained recognition and consumer loyalty by diversifying the range of products available at the Bio Trade Fairs. By looking for ways to add value to their production, they have innovated and

strengthened their organisation, and have overcome many problems, such as the acquisition of sanitary registration certifications (these are very expensive) and occupancy permits for spaces where they can establish points of sale in secure areas. However, these types of problems require continued support from AGRUPAR and other authorities, in order to ensure the continuity of an activity that represents an important source of income for the urban farmers who, in a traditional and small-scale manner, process and market their production surpluses.

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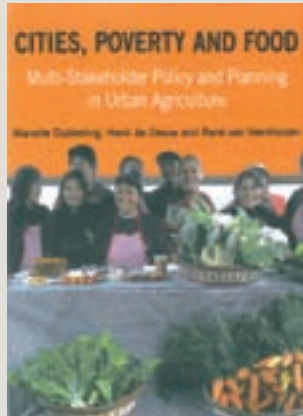
Notes

(1) For more information on the SPLs visit
<http://www.cepesiu.org/38.0.html>

Books further readings

Cities, Poverty and Food; Multi-stakeholder Policy formulation and Action Planning in Urban Agriculture
Dubbeling, M., De Zeeuw, H. and Van Veenhuizen, R., RUAF (forthcoming)

This RUAF Foundation publication, with financial support from IDRC (Canada), seeks to synthesise the lessons learned from the Multi-stakeholder Policy formulation and Action Planning approach (MPAP) in urban agriculture as applied in 20 RUAF partner cities participating in the RUAF "Cities Farming for the Future" programme. The book describes the MPAP approach from a methodological (the process, steps, and tools) and a content point of view (effective policy measures and actions needed to facilitate sustainable and safe urban agriculture). The approach is further illustrated by case studies on the experiences gained with the MPAP approach and policy development in 7 RUAF partner cities. This publication was launched at the World Urban Forum V in Rio de Janeiro and will be published by Practical Action Publishing. http://www.renoufbooks.com/pdfs/Practical_Action_2010.pdf



Effects of the global financial crisis on the food security of poor urban households

Gordon Prain, RUAF Foundation (2010)

RUAF Foundation published the results of a study during the second half of 2009 into the effects of the global financial crisis of 2008 on the food security of low and middle income populations in 5 cities: Rosario (Argentina), Bogota (Colombia), Accra (Ghana), Kitwe (Zambia) and Colombo (Sri Lanka). The studies assessed current socio-economic circumstances of households, food practices, coping strategies, the policy environment and current nutritional status of women and young children. Data were generated through household surveys (600 households per city), 24 hour food recall, anthropometry of under-five year olds and women from 15 to 49, Focus Group Discussions and Expert opinions on policy issues. The study was undertaken in coordination with United Nations HABITAT, Nairobi, Kenya and the International Development Research Centre (IDRC), Ottawa, Canada and was carried out with the aid of a grant provided by IDRC. The synthesis report and the five case study reports can be downloaded at <http://www.ruaf.org/node/2259>

Manual of Low/No-Space Agriculture-cum-Family Business Garden

Ranasinghe, T. T., RUAF Foundation and International Water Management Institute (2010)

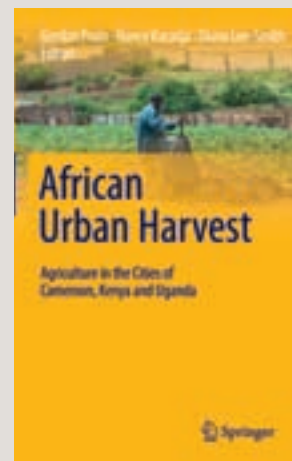
In part one of this book, technology development in urban

agriculture under the concept of the Family Business Garden is discussed. It shows simple methods for preparing more than 25 creative "Vertical Cultivation Structures" for use within urban limits. In part two, the author discusses the technology dissemination process of low/no-space-cum-Family Business Gardening in the context of urban development. The author can be contacted at thithura@sltnet.lk

African Urban Harvest – Agriculture in the Cities of Cameroon, Kenya and Uganda

Gordon Prain, Nancy Karanja and Diana Lee-Smith (eds) (2010)

In this book, leading specialists in the fields of urban agriculture and urban environment present a unique collection of case studies that examines the growing role of local food production in urban livelihoods in sub-Saharan Africa. Amongst many issues, the authors probe the changing role of urban agriculture, the risks and benefits of crop-livestock systems, and the opportunities for making locally produced food more easily available and more profitable. Concluding chapters reflect on the policy and governance implications of greater integration of urban natural resources and the built environment, an expanded role for urban agriculture in sub-Saharan Africa and the crucial role of women in urban food systems.



Making the Strongest Links: A Practical Guide to Mainstreaming Gender Analysis in Value Chain Development

Mayoux, L. and Mackie, G., ILO, Addis Abeba (2008)

The guide helps users to improve the accuracy, relevance and usefulness of their work and policy recommendations through the inclusion of women's perspectives and needs in value chain analysis and development. It ensures that their work leads to recommendations that empower women and further gender equality; provide effective and sustainable value chain development for pro-poor development; and promote gender training and gender awareness among different stakeholders. http://www.ilo.org/wcmsp5/groups/public/---ed_emp/---emp_ent/documents/instructionalmaterial/wcms_106538.pdf

Producer organisations and market chains; Facilitating trajectories of change in developing countries
Ton, G., Bijman, J. and Oorthuizen, J. (eds), Wageningen Academic Publishers, The Netherlands (2007)

This book presents various approaches to supporting producer

Books

further readings

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organisations in terms of providing economic services to their members, with a focus on developing countries. Markets are increasingly fragmented in value chains that link farmers with specific processors, retailers and consumer segments. Several contributions in this book analyse these dynamics in specific value chains, such as the fair trade and organic agriculture chains, and their potential to provide market outlets for smallholder farmers. This book is the result of a Dutch partnership between policy makers, researchers and practitioners designed to confront ideas with realities. <http://www.wageningenacademic.com/pomc>

Inclusive Value Chains in India - Linking the Smallest Producers to Markets

Harper, M., World Scientific (2009)

The inclusion (or exclusion) of the poor, particularly small farmers and artisans, from modern value chains such as supermarkets and export markets is a highly topical subject in India. This book addresses the issues in a positive way by showing that the poor can be and are being included, not as an "act of charity" or "corporate social responsibility", but because their inclusion is profitable for all parties, including the producers themselves. The aim of the book is to show by example that "modern" integrated value chains need not necessarily exclude the smallest producers. Following a brief introduction to the problem, 14 case studies are presented to illustrate how it is being solved in practice. http://www.booksfordevelopment.org/inclusive_value_chains_in_india

Fair miles; Recharting the Food Miles Map

Rae Chi, K., MacGregor, J. and King, R., Big ideas in development series, Kiser, B. (ed.), IIED, Oxfam, Oxford (2009)

A fresh take on the food miles debate, this approach highlights the ethical dimension of the trade in fresh produce between developed and developing countries. This pocketbook delves into the realities of the produce trade between Africa and the UK, examining both sides of the equation in search of a diet that is ethically, as well as nutritionally, balanced. http://www.oxfam.org.uk/resources/policy/climate_change/fair-food-miles.html

Think big. Go small. Adapting business models to incorporate smallholders into supply chains

David Bright, Don Seville, Lea Borkenhagen, Oxford: Oxfam international (2010)

This paper tries to show the advantages – both in productivity and consumer appeal – of domestic and global companies connecting with smallholder suppliers. While many companies are now starting to realise the sourcing potential of smallholder-based supply chains, Oxfam and Sustainable Food Lab (SFL) recognise that these companies also struggle with the challenges of linking diverse smallholders to formal markets. This briefing paper aims to show – incorporating programme experience and case studies – how domestic and

global companies in the food and drinks sector can deliver value for their business so that smallholder suppliers gain value too. <http://www.oxfam.org/en/policy/think-big-go-small>

Making Value Chains Work Better for the Poor - A toolbook for practitioners of Value Chain Analysis

Markets4Poor – Making markets work better for the poor, Vietnam (2006)

The first section of this "tool book" gives a theoretic background to value chains and also explains the pro-poor entry points for Value Chain analysis described in this book. The second section contains a set of eight value chain analysis tools. <http://www.markets4poor.org/Making%20Value%20Chains%20Work%20Better%20for%20the%20Poor>

ValueLinks Manual – The Methodology of Value Chain Promotion

GTZ (2007)

This manual presents the ValueLinks methodology – a compilation of action-oriented methods for promoting economic development with a value chain perspective. It can be used by development projects or by public agencies promoting specific agribusiness, handicraft or manufacturing sub-sectors of the economy. The ValueLinks manual structures the know-how of value chain promotion into 12 modules according to the project cycle. Text boxes present tools and templates as well as concrete examples of value chain projects supported by GTZ around the world. The manual has no specific sector focus. The emphasis is on those product markets that offer better market access for micro, small and medium-sized enterprises and farmers, and provide new job opportunities for the poor.

http://www.value-links.de/manual/pdf/valuelinks_complete.pdf

Community Food Enterprise - Local Success in a Global Marketplace

Wallace Center at Winrock International Business Alliance for Local Living Economies (2009)

This report is about the full range of locally owned businesses involved in food, whether they are small or big, whether they are primary producers or manufacturers or retailers, whether their focus is local or global markets. The publication provides a detailed field report on the performance of 24 Community Food Enterprises (CFE), in the United States and internationally. It shows that CFEs represent a huge diversity of legal forms, scales, activities, and designs.

<http://www.communityfoodenterprise.org/>

http://acdiroca.org/site/ID/ourwork_valuechains

ACDI/VOCA has developed a selection of tools for applying emerging best practices in value chain approaches to economic growth with poverty reduction. ACDI/VOCA offers a broad range of services in this area at all stages of the project cycle, from strategic planning to impact assessment. They offer participatory training courses on value chain analysis to donors, project implementers and private sector business owners.

<http://www.value-chains.org/>

Inter-agency database on developing value chains, linkages and service markets - adopted by the Donor Committee for Enterprise Development. The site is dedicated to results achieved through systemic approaches, particularly in Private Sector Development.

<http://www.seepnetwork.org/>

The Small Enterprise Education and Promotion (SEEP) Network connects microenterprise practitioners from around the world to develop practical guidance and tools, build capacity and help set standards.

These initiatives fall into three overlapping Communities of Practice: Financial Services, Enterprise Development, and Associations but include many cross-cutting initiatives. Also check out: <http://communities.seepnetwork.org/urban/node/121> (on urban value chains) or <http://communities.seepnetwork.org/edexchange/node/362> (market facilitation to make markets work better for marginalised producers)

http://www.sdc.admin.ch/en/Home/Themes/Employment_and_the_economy/Private_Sector_Development/Value_chains_and_cluster_development

Website of the Swiss Agency for Development and Cooperation (SDC) includes information and methods on local economic development, pro-poor value chains and private sector development. SDC's activities focus on the development of local and regional value chains and clusters in rural regions in which poor farmers, as well as small and medium-sized enterprises, can participate.

<http://marketdev.itcilo.org/index.php?id=1>

The International Training Centre of the ILO offers the modular distance learning course *Enterprise Development through Value Chains and Business Service Markets: A Market Development approach to Pro-Poor Growth*, with practical tools and strategies for developing value chains and business development services. The course is designed for a wide audience, since enterprise development contributes to private sector development, job creation, income stability and local economic development in a wide range of contexts. The following areas are covered: Small enterprise development; Value chain development; and Agricultural development / agricultural marketing / animal husbandry.

<http://portals.kit.nl/smartsite.shtml?id=12505>

This information portal on Value Chains for Development provides access to free, full-text electronic documents on the VC4D approach, both as an analytical concept and a development tool. The target audience is professionals, researchers, policy-makers and students active in the field of pro-poor value chain development. The portal provides access to newsletters, discussion groups, websites, bibliographic databases, and directories of organisations and projects. Subtopics include business development services, finance, governance, learning & innovation, public-private partnerships, standards & regulations, and sustainable procurement.

<http://genderinvaluechains.pbworks.com/>

This wiki by Agri-Profocus is about gender sensitive development of agro-value chains in developing countries. It is for practitioners (from local and international development organisations) looking for accessible information on concepts and tools that they can apply in gender sensitive value chain development (VCD) programmes. This wiki provides the practitioner with a road map, to find his/her way in the wealth of international available material. The wiki also plays a role in harvesting unlocked material within organisations. Readers are encouraged to comment, suggest and provide materials for the wiki so they become accessible to others. You can also join a learning group on gender in value chains: <http://genderinvaluechains.ning.com/>

Value Chain Concepts (VCC) course: Value Chain Analysis and Development 2011

[MDF training centre, Ede, The Netherlands]

In a joint venture with MDF Ede, Hans Posthumus Consultancy (HPC) offers the fifth edition of this course. Participants will gain understanding of the Value Chain Conceptual Framework, which entails Economic Mapping, Sub Sector Analysis and Value Chain Development. The course will enhance analytical skills to identify constraints, opportunities and leverage points for developing value chains. Participants learn how to design and steer programme interventions that promote equitable growth. Info: hans@hposthumus.nl or <http://www.mdf.nl/vcc-nl>

ValueLinks Introductory Training Seminar

[Ouagadougou, Burkina Faso, French]

6-10 September 2010 in Oestrich-Winkel, Germany (English) and 4-8 October 2010

The seminar gives participants a profound introduction to the concept and methodology of ValueLinks, the value chain promotion approach developed by GTZ. ValueLinks is one of the most recognised VC development approaches and is currently implemented by a large number of programmes worldwide. The training follows an interactive method, in which the presentation of concepts, facts and methodology alternates with exercises to apply hands-on tools and know-how to concrete cases. The seminar develops the methodology inductively. Participants apply the concepts in working group sessions and gain insight into real-world practice during a field trip to a wine industry cluster in Germany. The objective of the seminar is to enhance the skills of participants in designing, implementing and monitoring value chain upgrading projects. The know-how covers both technical subjects and facilitation skills working with groups of entrepreneurs, business associations and public institutions.

More information: http://www.idc-aachen.de/2_4.html

CUFC9 Water, Trees and Communities

[Truro, Nova Scotia, Canada]

5-8 October 2010

The 9th Canadian Urban Forest Conference (CUFC9) will bring hundreds of arborists, foresters, city planners, environmentalists and engineers together to discuss and share knowledge under the theme of "Water, Trees and Communities". Trees are being increasingly recognised as playing an important role in "green infrastructure" by regulating the hydrologic cycle and protecting municipal drinking water supplies. More information can be found on www.cufc9.ca

Managing the Urban Rural Interface

[Faculty of Life Sciences, University of Copenhagen, Denmark]

19-22 October 2010

The conference is organised jointly by the Peri-urban Land Use

Relationships project (PLUREL) project, ASEM 4th Symposium on Urban Forestry, Landscape Tomorrow, Danish Association of Landscape Ecologists, Danish Architecture Centre and International Union of Forest Research Organizations. The conference is the final event of the PLUREL project, funded by the European Commission's sixth Framework Programme for research (EC FP6 036921). It aims to present the status of scientific approaches to assess the periurban land-use relationships and associated effects on sustainability, set the agenda for future research in the field, and enhance international research cooperation. More information can be found on <http://www.plurel.net/Default.aspx?id=87>

AESOP 2nd European Sustainable Food Planning Conference

[Urban Performance Group, University of Brighton, England]

29-30 October 2010

In the wider context of global climate change, a world population of 9 billion and growing, competing food production systems and diet-related public health concerns, are there new paradigms for urban and rural planning that are capable of supporting sustainable and equitable food systems? This conference will promote cross-disciplinary discussions between active researchers and practitioners in response to this question, and related issues articulated during the first European Sustainable Food Planning Conference held in 2009 in Almere, the Netherlands. They will review and elaborate definitions of sustainable food systems, and begin to define ways of achieving them. Four different themes have been defined as entry-points into the discussion of 'sustainable food planning'. These are (1) Urban Agriculture, (2) Integrating Health, Environment and Society, (3) Food in Urban Design and Planning and (4) Urban Food Governance. <http://artsresearch.brighton.ac.uk/research/projects/continuous-productive-urban-landscape/aesop-2nd-european-sustainable-food-planning-conference>

It takes a region - 2010

[Albany, New York, USA]

November 12-13 2010, with pre-conference trainings on November 11

This year, Northeast Sustainable Agriculture Working Group (NESAWG) and partners will draw on the success of the 2009 "It Takes a Region" conference and build from the work groups established last year. Topics include alternative supply chain networks, research and food system assessments, infrastructure initiatives, and policy advocacy. www.ittakesaregion.org

International Symposium on Urban and Peri-Urban Horticulture in the Century of Cities: Lessons, Challenges, Opportunities

[Dakar, Senegal]

5-9 December 2010

Together with partner organisations, FAO and the Ministry of Agriculture of the Republic of Senegal have convened this international symposium in order to review experiences and lessons learned; assess UPH's contribution to urban food supply, nutrition and livelihoods; capitalise on current experiences and knowledge; foster UPH initiatives and networking; lay the foundations for increased policy and institutional support for UPH. The symposium will cover key links in the production, supply and value chains including: securing access to land and water, integrated plant production and protection, post-harvest handling and processing technologies, product quality and safety, and marketing. The symposium is also expected to provide guidance for the preparation of FAO's report on the State of Urban and Peri-Urban Horticulture in Africa (SOUHPA), to be published in 2011. <http://www.fao.org/agriculture/crops/core-themes/theme/hort-indust-crops/isd/en/>

Future of Cities – ICLEI's world congress 2010

[Incheon, Korea]

5-7 October 2010

Natural resources and urban infrastructures will not be able to sustain increasing urban populations unless rapidly-growing cities of the 21st Century adjust their relationship with the natural environment. The Future of Cities congress will address four key themes that the cities of the future need to address: Eco-efficiency, Resilience, Green economy and Happiness. Attendees will get to know factors that make cities and urban livelihoods sustainable, learn from others, share experiences, hear new ideas and develop solutions to reach the goals that large, expanding cities of the future should aspire to achieve. <http://incheon2010.iclei.org/>

Healthy People, Healthy Places, Healthy Planet: Integrating Food Systems into the Planning Process

[Online]

8 and 9 November 2010

For the second year in a row, eight planning organizations have

come together to support a joint “virtual” conference for planners from around the globe in honour of World Town Planning Day. There is more than enough food on the planet to feed all its inhabitants, yet the distribution of food and availability of healthy food is uneven. This results in a range of outcomes from starvation to over-eating, from malnutrition to obesity. The food system involves processing, distribution, consumption, and waste management. The provision of food is an essential element of our community, as important as shelter and water. Yet food rarely appears on the planning agenda. There is little consideration of the relationship between land-use, environmental quality, transport systems and energy use. This online conference will bring together a conference featuring speakers from around the world. It will include live voice and presentation links to presentations that will be held at various times on the two days of the conference.

For more information, visit: <https://sites.google.com/site/wtpdonlineconf/>

Living Concrete/Carrot City

[The New School, New York City]

October 1 – December 15, 2010

Living Concrete/Carrot City features creative and research projects that demonstrate the possibilities of urban agriculture. It showcases design interventions and pedagogies that reconnect people and food production while simultaneously transforming neighbourhood liveability, health and the environment. Faculty and students at Parsons, Eugene Lang College, and across the New School engaged with mapping urban food and water systems in New York as well as with social innovation and design interventions collaborate in this experimental installation. Maps, interactive websites, garden logs, videos and models, some specifically generated for the show, explore the relationship of urban agriculture initiatives to their local communities and examine the potential and impact of design interventions. Living Concrete is co-curated by Nevin Cohen and Radhika Subramaniam. For more information go to: <http://bit.ly/cQpfIM>

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References

Brouwer, F.M., De Bont, C.J.A.M., Leneman, H. En Van der Meulen, H.A.B. (2004) Duurzame landbouw in beeld
LNV (2009) Sustainable Food, Public summary of Policy Document, 29 October 2009
Neuvel, J. and Van der Valk, A. (2009) Voedsel en planning: een verkenning, Wageningen University
Smeets, P. (2009) Expeditie Agroparken Ontwerpend onderzoek naar metropolitane landbouw en duurzame ontwikkeling (Expedition Agroparks, research by design applied to metropolitan agriculture and sustainable development), PhD thesis Wageningen University
UNDP (1996) Urban Agriculture, Food, Jobs and Sustainable Cities, Jac Smit et al, UNDP
Van der Schans, J.W. (2007) Strategie in Ondernemen ken uw kracht, Strategy in the project “An entrepreneur should know his strengths and weaknesses”, Internal Document, LEI-WUR

Van der Schans, J.W. (2008) Von Thunen re-visited, Urban Food Systems, presentation European Eemland Conference, Bunschoten, 22 October 2008
Van der Schans, J.W. (2010) Interview Nederlands Dagblad, 20 March 2010
Van der Schans, J.W., Dvortsin, L, Berg, van der I, Haubenhof, D.K., Hassink, J., Vijn, M.P. Buck, de A.J. (2009) Quick scan ethnic food & services, Report LEI, Wageningen UR
Waterlander, W.E., De Mul, A., Schuit, A.J., Seidell, J.C. and Steenhuis, I.H.M. (2010) Perceptions on the use of pricing strategies to stimulate healthy eating among residents of deprived neighbourhoods: a focus group study, International Journal of Behavioral Nutrition and Physical Activity 7:44.
Wiskerke, J.S.C. (2009) ‘On Places Lost and Places Regained: Reflections on the Alternative, Food Geography and Sustainable Regional Development’, International Planning Studies, 14: 4, 369 — 387.

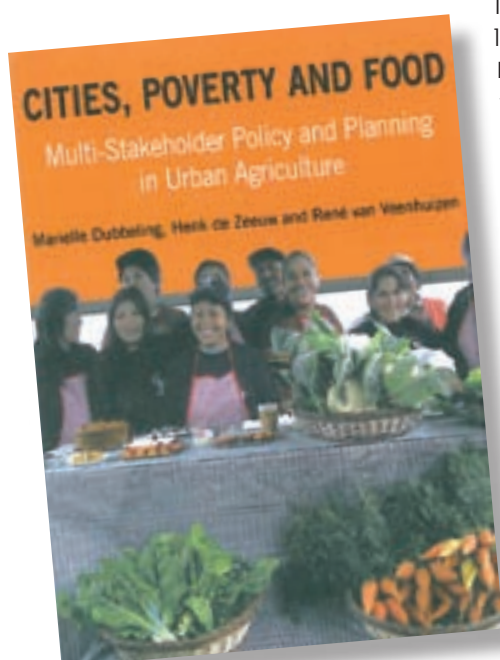
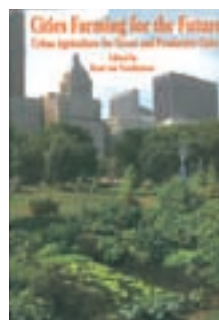
NO. 25: RUAF 10 Years; Promoting Urban Agriculture

Please send us your contribution as soon as possible

This special issue will be published by the end of this year. We have already received a number of contributions, for which our thanks, but we would like to receive more. We are looking for contributions in the form of **photos and short stories** that show the development and impacts of urban agriculture over the past 10 years in a certain city or country, or that analyse the role urban agriculture can play in addressing major challenges in the near future (e.g. urban food security, climate change, productive reuse of wastewater and nutrients). Please send your idea or contribution as soon as possible to ruaf@etcnl.nl.

RUAF Publications

In addition to UA-Magazine (24 thematic issues in 6 languages), RUAF has published a number of materials and maintains a global website as well as several regional websites. An overview of main RUAF publications to date can be found at the RUAF website (www.ruaf.org). These include the leading publications "Growing Cities, Growing Food" (DSE, 2000), "Cities Farming for the Future" (IIRR, 2006), "Women Feeding Cities" (Practical Action, 2008) and our latest publication, "Cities, Poverty and Food" (Practical Action, 2010).



This new publication seeks to synthesise the lessons learned from the Multi-stakeholder Policy Formulation and Action Planning approach (MPAP) in urban agriculture as applied in 20 RUAF partner cities participating in the RUAF "Cities Farming for the Future" programme. The book describes the MPAP approach from a methodological (process, steps and tools) and a content point of view (effective policy measures and actions needed to facilitate sustainable and safe urban agriculture). The approach is further illustrated by case studies on the experiences gained with the MPAP approach and policy development in seven RUAF partner cities.

This publication will be released by Practical Action Publishing in October 2010 (pre-orders through <http://practicalactionpublishing.org/publishing>).

RUAF Survey

We appreciate your input, support and views on these materials. To encourage feedback, we will conduct a short survey on the website (www.ruaf.org) starting in October 2010, and we will send an email questionnaire to a selection of readers of UA Magazine. Of course, you can send us your feedback at any time by email to ruaf@etcnl.nl

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Urban Agriculture magazine

From Seed to Table: Developing Urban Agriculture Value Chains

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UA Magazine is published two times a year by the Network of Resource Centres on Urban Agriculture and Food Security (RUAF), under the From Seed to Table Programme, which is financed by DGIS, the Netherlands, and IDRC, Canada.

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Editors, No. 24

This issue was compiled by Femke Hoekstra (Responsible Editor), together with René van Veenhuizen and Mariëtte Dubbeling of ETC

Web Editing, Events, and Books

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