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transportation
financed by the
Ada'a Woreda
Dairy Products
Marketing
Association

Azage Tegegne



Financing Urban Agriculture

Financial support can make a significant difference to poor urban families. An increasing group of urban dwellers live around the poverty line, but are involved in a diversity of activities such as shopkeeping, waste collection and recycling, trading and farming. These (informal) entrepreneurs require access to working capital for the maintenance of their investment and for its potential expansion.

Editorial

Urban agriculture is increasingly recognised as a vehicle for the development of more productive, sustainable and inclusive or democratic cities. Progress has been recorded and assessed on the political front. International associations of city governments and local authorities have debated urban agriculture in international fora. Regional inventories, networks and working groups are being created to facilitate the review and transfer of local policy experiences. Some cities have already created specific agencies for urban agriculture and many more have issued legislation, regulations and norms, or are facilitating or implementing specific programmes and policies. But both political and financial legitimacy are essential to support this development.

Most urban agricultural producers face limited access to credit and investment schemes. Moreover, information on those urban farmers who do have access is even

sparser. Evidence remains anecdotal or is highly localised. Very little is known and even less has been learned from financial support schemes that benefit a large number of producers and that may contain ingredients required for credit and investment interventions to enhance sustainable urban agriculture.

Recently, rural micro-finance has been given a lot of attention. Before the 1990s, providing finance to micro-entrepreneurs and farmers was generally evaluated as too risky, due to high transaction costs and lack of creditworthiness. However, a number of positive experiences, like that of the Grameen Bank in Bangladesh, have changed this attitude towards one paying attention to institutional innovation and adaptation of micro-finance institutions. An important lesson from rural micro-finance programmes is that the new or adapted institutions were the product of public action, by governments and civil society and donor institutions, while the challenge now is to further build on these experiences and include (partnerships with) the private banking sector. Examples of rural innovative micro-finance institutions are found in cooperatives with owner-membership; solidarity groups or credit groups (or rotating credit groups), which are less formal, and can be donor-driven or traditional like the *tontines* in West Africa

Marielle Dubbeling, *Regional
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(see box on page 5); village banks, which can be seen as a combination of cooperatives and solidarity groups; and micro-banks, which are not based on membership but more on individual contracts. All these experiences are aimed at reaching the poor micro-entrepreneurs and at creating sustainable financial support systems. Still, more work has to be done to advance on both fronts, in rural and in urban environments.

ACCESS TO CREDIT AND INVESTMENT

Lack of access to (affordable) capital to the poorer population involved in urban agriculture hinders or shuts off urban producers' ability to acquire materials, implements and equipment which may increase the returns on labour and investment or to add value through better processing, storage and packaging. It further prevents these farmers from using resource-conserving farming technologies, produce higher-value crops and livestock, and minimise the risks involved.

Lack of access to credit and investment is recognised by cities and urban producers themselves as a limiting factor for urban agriculture development. Participants in the Workshop on the Political Economy on Urban and Peri-Urban Agriculture in Eastern and Southern Africa (MDP/IDRC, Harare 2000) highlighted as one of the critical issues for enhancement of urban agriculture: control and access to key resources (including access to capital).

The Latin American City Working Group on Urban Agriculture and Food Security, which brings together 40 cities from the

The challenge now is to further build on these experiences

region, encourages "local governments to become strongly committed to the development of urban agriculture, mobilising existing local resources, institutionalising urban agriculture and procuring its extension at the national level; and to allocate municipal budget items to the execution of urban agriculture practices". Equally, this group

encourages "the development of credit and financial policies and instruments for urban agriculture, with special emphasis on the most vulnerable producers, to supplement technical assistance programmes" and to "produce and disseminate, at least once a year, methodology tools, guidelines and mechanisms that collect regional experiences and report on (amongst others) credit for urban agriculture production, transformation and marketing" (Quito, 2000).

"Local governments should commit themselves to the development of urban agriculture, mobilising existing local resources, institutionalising it and procuring its upscaling at national level; and assigning municipal funds to the implementation of UA practices".

Quito Declaration, signed by 40 cities.
Quito, Ecuador. April 2000.

Given the rising recognition of the sector by local authorities and the growing interest of development and financial agencies, a systematic survey and evaluation of significant and diverse modalities of credit and investment provision to urban agriculture seems very timely. This, because the growth of the sector at the margin of mainstream economies could not only aggravate the environmental and public health risks posed by bad practices; but could also undermine the ability of the sector to make an even greater contribution to food security, employment and income generation, as well as productive management of idle or underused urban resources (land, waste and water).

INTERNATIONAL SUPPORT

Members of the Support Group on Urban Agriculture (SGUA), during their annual meeting in New York in 2001, expressed the need for information on credit and investment programmes for urban agriculture and for establishing and strengthening a credit and investment component in SGUA. The programme

Credit and Investment Panel for Urban Agriculture

The cases and their analysis will be presented and discussed in an international panel, involving financial institutions and donor agencies (like SGUA members; ethical banks, local governments and credit co-operatives, amongst others). The next World Urban Forum, to be held in Barcelona in September 2004, is a tentative venue for this meeting.

component should enable SGUA (members) to turn more systematic global attention to credit and financing (next to the other identified components: information, research, training, policy and technical assistance).

The *Habitat Agenda*, adopted by governments at the end of the United Nations Conference on Human Settlements (Habitat II) in June 1996 in Istanbul, Turkey, commits them (governments) to support the efforts of human settlements in establishing sustainable land-use patterns and planning, as well as supporting suitable gardening and urban agriculture. The Agenda also recognises various reasons underlying poverty and proposes several actions that need to be taken to reduce urban poverty, to improve the access of the poor to finance and credit for shelter and for the development of income-generating enterprises, and to promote inclusive cities that recognise the participatory role and contribution of poor communities (Habitat Agenda, 1996).

The *Declaration on Cities and Other Human Settlements in the New Millennium* further highlights the same issues; i.e. the need for governments to implement policies and strategies designed to reduce urban poverty, improve access to finance and credit among urban poor communities and build inclusive human settlements in which the potential of the poor to participate in making decisions that affect their own lives is fully recognised and utilised.

SURVEY OF CITY EXPERIENCES

UN Habitat, through its Urban Economy and Finance Branch (in Nairobi) and its Urban Management Programme for Latin America and the Caribbean (UMP-LAC), together with the IDRC (International Development Research Centre, Canada) supported an initiative to promote a more coherent and efficient development and implementation of credit and investment schemes for urban

agriculture innovations. This initiative, the documenting and analysing of several case studies on credit and investment for urban agriculture, which was undertaken in 2002, was further supported with additional cases by RUAF. Most of these cases are described in their *UA Magazine* (the Kenya and Harare cases were presented in no. 7 of the *UA Magazine*).

The case studies come from Latin America, Africa, Asia and Europe. The studies intended to focus on the more consolidated experiences (ones in operation for more than three years, with at least 300 beneficiaries), that arrived at the phase of up-scaling of their experiences, and that are based on

City Case Studies

Argentina, Camilo Aldao
Botswana, Gaborone
Brazil, Mato Grosso do Sul
India, Bangalore
Kenya, Nairobi
Mexico, Texcoco
Nepal, Kathmandu
Philippines, Marilao
Sudan, Khartoum
UK, London
Zimbabwe, Harare

different kinds of financial interventions for (peri)urban agriculture. The financial systems covered are savings and credit cooperatives, producer or marketing cooperatives, and contract farming with private enterprises as well as grants and donations. They also show the involvement of various groups and levels of actors (NGO, municipality, national government, banks or financial cooperatives, international institutions, shared public-private investments). The case studies were completed by the end of 2002. The lessons described here are based on a first analysis.

TYPES OF INTERVENTIONS

The cases describe a variety of financial systems and mechanisms for (peri)urban agriculture production and marketing. However, what is most apparent is that financial mechanisms specifically adapted to urban agriculture practically do not exist. In addition, the statistics do not identify credit and financing for urban

agriculture separately. Financial support to (peri)urban producers and agro-industries seems to be taken on as part of rural agricultural support programmes, as is the case in Gaborone (page 16), Texcoco (page 10), Cordoba (page 8) and Addis Ababa (page 25); or in urban community development programmes (Philippines, on page 34, Quito, or Porto Alegre, see page 23). The question arises if there is a need for developing specific financial support systems for urban agriculture (adapting the systems to their unique characteristics), or for considering this as part of general funding for urban community initiatives and micro-enterprises.

Different forms of financing (peri)urban agriculture can be identified. Several cases describe systems of **savings and local mobilisation of resources**. Examples are given in Nepal (see page 13: cooperatives with regular or voluntary savings, marriage and festival savings), in Ethiopia (dairy production and marketing cooperative working with member shares) and in the box on *Tontines*.

A second type of system described here are **subsidies or donations** for agriculture in the city. And again, different forms exist, like private sector support: grants and charities in the United Kingdom (see page 20); support by NGOs and other civil society groups: mainly in the form of technical assistance and training (see ILRI and VOCA in Ethiopia) or input supports (ALDEP-Botswana, Nairobi-Kenya); or in an indirect way by local government such as the case of St Petersburg (page 28), where a positive environment for agricultural production in and around the city is created by subsidising transport; or lastly, as in the case of the HOPCOMS cooperative in Bangalore (page 18).

A third group is found in the **(micro-) credit systems**, as described in the case studies from Ghana (page 7), Argentina, Brazil, Nepal and Botswana. These encompass credit funds supported by international donors (like in Bulgaria given on page 22), national governments (Argentina), federal or municipal governments (Brazil), private banks, informal private credit (Ghana, and in the West Africa case on page 30), or NGOs or

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cooperatives (Ethiopia, Nepal, Sudan: see box on page 6).

Most studies indicate that financial support for urban agriculture is best based on a **combination of all three mechanisms**: savings, subsidies and (micro-)credit. Savings could for example work as collateral for receiving credit. Tax incentives or other subsidies could motivate people to become involved, and complement credit systems with training and assistance, and in this way better guarantee success and sustainability of the (integrated) support programmes. Financing of urban agriculture systems aimed at home-consumption or micro-enterprises in its early stages is mostly not sustainable. Aiming for full sustainability (adequate funding and repayment) would condemn these practices, and not take into account the perspective of social inclusion (see further under sustainability).

SOURCES AND MANAGEMENT OF FUNDING

A large number of actors are involved in providing and managing funds for (peri)urban agriculture (see the cases of Khartoum and Nigeria). A more detailed analysis is needed to be able to define which system is (or systems are) best adapted to the specific local circumstances. Some cases involve important governmental investments, in the context of poverty alleviation programmes, food security programmes (Argentina) or employment generation programmes (Brazil, Botswana). Funds are generated within for example the “Fund for Social Municipal Infrastructure” (Mexico), “Fund for Social Investment” (Brazil), within general “Financial Assistance or Entrepreneurial Programmes” (Botswana) or through specific “Agricultural or Horticultural Programmes” (as is done in India). More studies are needed to determine how and when to link up various levels of government (municipal, state and national) to allow for the most efficient financial support systems.

The studies also highlight that in general, there are no specialised structures to manage credit and financial support systems for urban agriculture. Institutional cooperation is given shape in various forms between for example governments and private banks (Brazil, Botswana), or between cooperatives and commercial banks (Nepal). Several cases claim the need for more involvement of the producer/user groups in the management of credits. In the further development of financial support activities for urban agriculture, the issue of how best to structure the management of funds and what specific needs arise from adapting the systems to characteristics of agricultural production systems, needs to be tackled.

SUSTAINABILITY

Sustainability can refer to “social sustainability” and “economic-financial sustainability”. “Social sustainability” refers to the development and management of credit and investment schemes that are based on a socially inclusive, or pro-poor, perspective.

Most existing credit and investment schemes are not accessible by the poor or

other vulnerable groups, as clearly identified in the Bulgaria experience. Poor urban farmers cannot afford the requested collateral or the high interest rates, while they often lack access to marketing or management experience. Different innovative experiences exist that allow for the participation of these

excluded groups. In Argentina for example, participation is restricted to those who do not have additional forms of income or whose family income does not reach up to more than two minimum salaries (US\$156). In Nepal, the system of peer or group lending incorporates a system of solidarity guarantees, so that

Support to Small-Scale Agro-Industries

In Mato Grosso Do Sul, Brazil

In June 2000, a programme to support the processing and commercialisation of small-scale agricultural production was created by the state of Mato Grosso do Sul, located in the central-west region of Brazil, to help generate rural and periurban agricultural employment. The programme basically aims to support the setting up of small agro-industries (like candy or processed dairy production) and to aid families or associated farmer groups in processing and marketing their produce without the intervention of intermediaries. The programme supports farmers through:

- ❖ credit extension for the construction of the agro-industries and inputs;
- ❖ training and technical assistance (in hygienic processing techniques, bookkeeping and marketing);
- ❖ organised transport, publicity and collective marketing; and
- ❖ social organisation.

The credit funds are made available through the Social Investment Fund and the “Bank of the People” (*Banco do Povo*). The producers are selected according to family income (at a maximum of 1 minimum salary per person), land tenure, and hired labour (should be less than the amount of family labour).

Participation is open to single families or a group of associated families (at a minimum of six). Individual families receive between 15,000 and 20,000 real (4500-6000 US\$) depending on their business plan, while associations can access up to 90,000 real. The programme uses fixed interest rates of 4% per year, a total period of payment of 6 years and a grace period of 2 years. Payments can be made on a monthly, quarterly or yearly basis. No physical collateral is required.

Under the coordination of IDATERRA (Institute for Agricultural Development, Technical Assistance and Rural Extension of the state government), the producers receive training and support in the development of their business plans, as well as for promotion, legalisation and marketing. IDATERRA is also responsible for monitoring programme results in terms of socio-economic impacts, gender analysis, technology transfer and environmental impacts.

Presently, there are 163 agro-industries functioning (157 individual and 6 associations), and 70 are in the process of being built, in a total of 30 municipalities in the state of Mato Grosso do Sul. First evaluations show positive impacts on income (a 4-time increase in gross family monthly income) and employment generation. Also positive impacts are noted regarding increased self-esteem of the entrepreneurs involved, as well as a new appreciation for the role of women and youth in the production process.

Programa PROVE-Pantanal, Mato Grosso do Sul, Brazil

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Tontines

no physical collateral is required. In Texcoco, grace periods are defined in relation to the type of production system and cycle (including for example longer grace periods for animal husbandry systems). All cases point to the need for integrated development strategies, where financial support is complemented with training (technical and business skills), legal advice and marketing support.

Financial-economic sustainability of the system or organisation is linked to the minimisation of investment risks by for example diversifying production (short- and long-cycle crops, and integrated farming systems, as in Khartoum); providing support to processing and marketing (like in Addis Ababa, Brazil, Bangalore); and the development of adequate marketing strategies. It is linked to defining the “products” that will be financed with a potential financial return (urban versus periurban agriculture; crop-production versus animal husbandry; production versus agro-industries). It is also linked to supporting social organisation (associations, cooperatives) and to the need for favourable normative and legal frameworks that for example secure access to land and services.

Financial-economic sustainability of the investment mechanisms is essential to lessen the dependence on external financial funding. In each situation it should be defined if (peri)urban agriculture is supported as a sector of the social economy (valuing its potential environmental and community development benefits) or as a sector of the “formal” economy that in principle should be totally self-sustainable.

GENDER EQUITY

In several cases, affirmative actions are promoted that specifically tend to the needs of women. In the case of Nepal and the Philippines, for example, women’s credit cooperatives have been formed. In Texcoco (Mexico), specific funds have been made available for supporting integrated farms managed by women. In Quito (Ecuador) the micro-credit programme PROQUITO prioritises access to credit for single women households and youth, groups that rank high among the unemployed in the city. In Botswana, women are given priority in

In West Africa, the majority of people obtain their loans from the informal finance sector. This sector consists of private moneylenders, informal traders, and *tontines*. These *tontines* are very diverse and difficult to merge into one definition. They comprise a mixture of social and financial functions. The members of a *tontine* are related to one another – whether as family, neighbours, or members of similar professions like farmers, including urban farmers (although very little is known about the latter group: IAGU in Senegal is interested in finding out more about the use of *tontines* in urban agriculture).

Tontines are flexible and able to adjust to changing social conditions, which is the reason why many different forms of *tontines* exist. One type is a rotating savings system, where the members meet regularly and pay a regular sum of money, which is lent to a different member each month. Another variant of this is the auctioning of money to those who have not yet received a loan. Yet another type of *tontine* is based on what people can afford. All *tontines* are characterised by building up investment loans or savings, and run on a short-term cycle (most *tontines* operate on a yearly basis of one cropping calendar).

Tontines are important especially to the people who cannot opt for regular credit or whose everyday life expenses normally do not allow them to obtain credit. However, obstacles lie in the fact that amounts are low and that they have an unsustainable character. Next to the current use of *tontines*, an innovative alternative would be to obligate not only an individual member, but to involve the whole group (thus an institutional form of *tontine*). In this way, those who are normally not eligible for credit may become so by applying as part of a group.

the disbursement of grants in one programme. In Mato Grosso do Sul (Brazil), the impact of the agro-industry credit system on the socio-economic conditions of women and youth has been assessed, by means of interviews with the producers. These first data show a positive impact on re-valuing the role of women within the family and the production process and increased self-esteem.

members (responding to their specific needs).

CONCLUSIONS

The cases confirm that there is a need for facilitating access to the financing of urban agriculture, to promote more sustainable, more socially inclusive and more productive cities. Financing however needs to be part of an *integrated development strategy*, linking it to other activities such as training, technical assistance and the creation of a favourable policy framework.

It should be discussed whether separate funding mechanisms for (peri)urban agriculture are needed or if the issue could better be incorporated into, for example, community development programmes. The multiple funding sources and actors involved are a rich element upon which to build.

Urban agriculture can potentially – and especially in the short term – be financed as part of community or urban development programmes and funds. However, specific conditions for urban financial support systems that are aimed at the urban poor and vulnerable groups, and that are compatible with urban agriculture are required. These include the use of collateral and guarantees that do not require certain physical assets,

Financing needs to be part of an integrated development strategy

It is important, however, to go beyond monitoring “who does what within the production system?”. Gender equity should be ensured in all aspects of the set-up and organisation of financial interventions: in the design of schemes, in the management and definition of target groups and monitoring systems; and should consider:

- ❖ the conditions of access to credit and financial support (who has access to which resources?);
- ❖ control (“who controls what?”: for example, access to resources generated by production and marketing); and
- ❖ the impact on different family

secured access to land, credit and financial support structures adapted to the specific urban agriculture “products” (example home-production versus agro-industries) and target groups (farmers’ associations or cooperatives).

Under current circumstances, specific support from municipal government will be necessary for urban agriculture, especially when dealing with urban poor and vulnerable groups. Even in London, agriculture in the city relies on subsidies or grants and can only be sustainable under specific conditions (volunteers, integration into recreational land use, etc.). A hypothesis for further research could be that more commercially

oriented urban agriculture does not necessarily need specific programmes, and that the current provision of credit (for rural agriculture or urban micro-enterprise development), although not always sufficiently available, are adequate.

In the development of (micro-)credit and financial intervention systems for urban agriculture, there is thus a need to specify the product to be financed, to determine the equilibrium between social and economic financial sustainability, and to

incorporate a gender equity focus in the definition of target groups and operational structures.

“Micro-credit programmes have demonstrated that they can be an efficient instrument in alleviating poverty and have supported citizen participation in the economic and political processes of cities”.

María Fernanda Garcés, Former Coordinator, Municipal Fund for Social Inclusion and Economic Development, Municipality of Quito, Ecuador.

This editorial is based on working sessions with and inputs from UMP-LAC staff and coordinator, staff from the IDRC-CFP, RUAF and the credit cooperative of CEPESIU, Ecuador.

The **Wadramli Cooperative Society** in Khartoum, Sudan

Khartoum State has a semi-desert climate, with 37% of its land suitable for cultivation: whether *Jirouf* (fertile land along the banks of the Nile) or land claimed under irrigation. Urban agricultural production consists of fruit, vegetables, fodder and live-stock. Wadramli is a periurban area of the capital city of Khartoum. Wadramli Cooperative Society (WACS) was founded in 1948, aimed at small and poor farmers, by providing credit and agricultural services to, amongst others, periurban agricultural production on the periphery of the city of Khartoum. These periurban agricultural systems are based on private investments into small-sized farms that run on modernised production methods (especially, animal production systems).

One main objective of WACS is to enable its small farmer members to access finances for agricultural production, especially for those who would otherwise encounter difficulties in obtaining access to formal financing institutions. Interestingly, cultural as well as social barriers discourage the farmers from seeking funding from the banks, but also from traditional systems of informal lending, because in addition to being limited, they incur high social and economic costs. Credit is provided for agricultural inputs, like seeds and land preparation. All WACS members are eligible for credit services under the agreed policies and the yearly chosen seasonal and crop rotation.

Islamic principles apply in lending modalities, in terms of interest-free banking. The most common types are:

- ❖ *Musharaka* (a partnership where partners contribute capital and agree to share profits and losses): especially used when large sums of money are involved;
- ❖ *Murabaha* (price plus profit margin): is used where banks are willing to provide in-kind financing, especially for agricultural inputs on a short-term basis. The profits are determined by the

Central Bank of Sudan, but WACS intervenes and extends credit without charging extra costs;

- ❖ *Hire/Purchase* (a sort of instalment payment system); and
- ❖ *Gard Hassan* (interest-free loan and the only type of pure cash loans permissible under Islamic modes of finance).

Many different actors are involved in WACS: international agencies like the World Bank and FAO, bilateral aid-giving bodies, (private) Agricultural Services Companies; government (several ministries); formal financial institutions; and farmers’ associations (the Sudan Farmers’ Union).

WACS’ success in providing the required finances to its members is led by its social role, which addresses its member’s needs. Members further feel that they are owners of the cooperative society and are committed to the cost-sharing system, in which one third of production is rebated, enabling WACS to pursue social objectives while applying flexible terms of credit. The most significant impact of the cooperative is the inclusion of disadvantaged groups within the community.

Nevertheless, WACS remains vulnerable to adverse external factors, e.g. marketing, crop failure or internal conflicts.

Furthermore, and compared to community-based organisations, WACS has a limited and restricted membership base, which tends to exclude other community members (it is practically impossible to expand due to the limited land available). Despite this, WACS has proven to be a sustainable organisation, though its future sustainability depends on its ability to undertake profitable agricultural production by diversifying towards crops with a higher market value, to adopt sound marketing strategies, and to deal with the issues of land tenure and limited land availability.

Based on a Survey by Khalid Elamin Abdelgadir: presented at the Nairobi workshop, May 2002.

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Many different actors are involved in WACS: international agencies like the World Bank and FAO, bilateral aid-giving bodies, (private) Agricultural Services Companies; government (several ministries); formal financial institutions; and farmers' associations (the Sudan Farmers' Union).

WACS' success in providing the required finances to its members is led by its social role, which addresses its member's needs. Members further feel that they are owners of the cooperative society and are committed to the cost-sharing system, in which one third of production is rebated, enabling WACS to pursue social objectives while applying flexible terms of credit. The most significant impact of the cooperative is the inclusion of disadvantaged groups within the community.

Nevertheless, WACS remains vulnerable to adverse external factors, e.g. marketing, crop failure or internal conflicts. Furthermore, and compared to community-based organisations, WACS has a limited and restricted membership base, which tends to exclude other community members (it is practically impossible to expand due to the limited land available). Despite this, WACS has proven to be a sustainable organisation, though its future sustainability depends on its ability to undertake profitable agricultural production by diversifying towards crops with a higher market value, to adopt sound marketing strategies, and to deal with the issues of land tenure and limited land availability.

The Marketing Manager in Ghana

While many agricultural activities in Ghana are financed either by the government or by external aid, the urban farmers producing for the market usually have to rely on self-financing (own funds) to start their businesses, or rely on credit from market women for the purchase of inputs (especially seeds and agro-chemicals). These women are intermediaries or market sellers, and visit the urban farmers to buy vegetables on a per-bed basis ¹.

In Ghana, women play a major role in the marketing of vegetables while most urban farmers producing for the market are men. Sometimes the women order the products beforehand. This oral contract is based on confidence, and the final amount of money received may differ from the earlier one agreed, as demand and supply might change during the growing period. In fact, it is the market women who usually take advantage of the farmers by paying low prices during periods of market glut. The urban farmers do not engage themselves in direct marketing as their farm work is tedious and time consuming

which belongs to the Ghana Military Authority (Burma camp). The farmers have no formal agreement with the authorities, which turn a blind eye to the use of the land for farming since it is lying idle. Farming on this land provides mutual benefits to both the authorities and the farmers. Farmers only mentioned water shortage as a problem during the period of wastewater discharge from the pond, which is annually carried out for fish harvesting (the pond is used for aquaculture by the camp security staff).

The farmer group is headed by two leaders: one supervises crop production and the other deals with the marketing of vegetables. With the active help of the two leaders, the five junior members take care of bed preparation, crop cultivation, irrigation, pesticide spraying, harvesting, etc. The marketing manager is responsible for input supplies, marketing of the products and acquiring the necessary farming information concerning production techniques and marketing. This man has a long history of trading of non-agricultural commodities from Nigeria to Ghana, but has actually never worked as a farmer before. At the highest peak of production, each of the five labourers' are supposed to have up to 100 beds under cultivation. The cropping pattern depends completely on the demand for a particular product at a particular time, decided by the marketing manager, who has studied the market in order to know when to produce what. As many vegetables are grown in a short rotation (e.g. lettuce can be cultivated 8-11 times per year), flexibility can



Discussion with the leader of the farmer group at Burma camp

make a big difference. A typical cropping pattern is: spring onions-green pepper-lettuce, in a three-month cycle.

A large portion of the produce is sent to specific vegetable markets in Accra, while the remainder is sold from the field, per bed. During periods of high demand, the marketing manager may purchase produce from other producers at different sites in order to improve the gains, but also to keep contact with the sellers, and thus acts as an intermediary. Major constraints associated with the farming activities of this group are: poor seed viability, lack of extension services and inadequate organic manure.

The two leaders earn US\$57 per month, while each of the other five members earns US\$29². A simple input-output calculation carried out by the farmers indicates that there is a quarterly net profit of US\$286 (excluding the monthly salaries) of the group, which is used to buy the necessary inputs. In addition, these farmers manage a special savings-fund account, which is only used when there are losses in production or a member of the group has a problem (family, health, funeral, etc).

NOTES

- 1) The price per bed depends on the season, crop as well as the size of the bed: approx. US\$1.4 - 3.6 per 20m² bed.
- 2) 1US\$ = 6,600 Cedis (Feb. 2002)

Table 1 Part of farmers' commodity chart for vegetable production

Crop	Shortage seasons
Lettuce	March – April
Cabbage	April – June
Sweet pepper	August – November
Spring onions	September - December

Source: Farmers own data, 2001.

enough, while on the other hand the traditional gender roles prevail: men cultivates and women do the marketing.

Some urban farmers however, do not rely on any "support" and bypass this dependency, or even replace the intermediaries. An example of this is a group of seven farmers within the Accra La area who cultivate around a partially treated wastewater pond,

Cooling
plant of the
dairy farm
project in
the Tambo
Community
Project

Municipality of Camilo Aldao



Micro-credits for Small Producers in Argentina

Cities absorb two thirds of the population increase. As urban settlers have low purchasing power, malnutrition problems increase. Poor households suffer the drama of unemployment, live in a polluted environment and are also deprived of basic services, etc. Their inability to face their fiscal obligations is progressively excluding them from their civil rights and obligations.

Urban Agriculture are mainly small-scale activities to supplement household income. There is no entrepreneurial concept, as in large industries. Human, technical and financial resources are available through temporary work plans, such as the Pro-Huerta (Pro-Garden) Programme of INTA (National Institute of Agricultural and Animal Husbandry Technology) and the PSA (Social Agricultural Programme). Despite the economic crisis, conditions exist that allow the generation of a positive change through urban farming activities. This situation prompted the Secretariat of Agriculture, Animal Husbandry and Food in Argentina to implement activities through the PSA, created in 1993 as a nationwide programme, to focus on conditions for change. The rural micro-credit programme was adapted to producers in periurban and urban areas. The core philosophy of the PSA is to produce a change among small producers in rural, periurban and urban areas, promoting transformations of their production systems via the provision of training, financial and technical assistance

in all stages of the production process. The work of the PSA can be observed in Camilo Aldao, Province of Córdoba in Argentina, where urban agriculture is widely practised. Projects include: a communal dairy farm; productive use of solid waste; a small-scale candy factory, poultry raising for own consumption, household gardens, organic community gardens, and a productive reforestation plan.

FINANCING SYSTEM

The PSA started as a programme providing assistance to small producers under the then Secretary of Agriculture, Cattle, Fishery and Food. The general objectives are:

- ❖ to increase the income of small producers;
- ❖ to promote their organised participation in political decisions, programmes and projects; and
- ❖ to overcome the economic limitations faced by producers, assisting them through the strengthening of sector associations and public and private institutions related to the sector.

The main instruments of PSA are:

Financial assistance: credits to produce crops to feed the family (own consumption) and credit for productive-associative enterprises (EPAs) aimed at improving commercial crop cultivation, developing new production alternatives or including small agro-industries.

Technical assistance: essentially a (participatory) activity, aimed at shifting production to non-traditional crops, diversification, vertical integration, and intensification. A technician appointed and hired by the PSA visits individuals and groups at least once a month.

Training: to improve the productive, technological and management skills of small producers, as well as to promote their participation and organisation.

Training activities are based on the demands of the beneficiaries, like assistance in defining annual operating plans.

Support Services for Commercialisation (SAC): to promote and facilitate the development of commercial activities by small- and medium-sized companies, associations or groups of producers, with the main objective of improving their insertion and presence in the markets.

The PSA has been organised as a small, flexible and decentralised structure. Provincial coordinators are in charge of executing central activities, promoting groups, funding, providing technical support to projects, and the follow-up and assessment of the projects. In turn, a central unit is charged with the development of concrete working guidelines on the basis of general principles issued by policy-makers, and with ensuring that provincial processes do not lose sight of the coherence and the general objectives of the programme.

CREDIT

The budget of the PSA is \$9,000,000 pesos (or US\$2,571,428) annually¹, of which \$ 5,000,000 is allocated to credit assistance, \$ 2,500,000 to technical assistance, and \$ 1,500,000 to training, marketing support and infrastructure. Between 1993 and 2000, the total budget was \$90,000,000 (or US\$25,714,285), but in the years 2001 and 2002 the annual budget only included technical assistance, training, and marketing support, due to the economic situation of Argentina (i.e. no funding for credit). The funds come from the Ministry of Economy and the Secretariat of the

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Treasury of Argentina. The Secretariat of Agriculture, Animal Husbandry, Fishery and Food submits the projects, which are then included in the national budget as set by law.

A portion of the budget is destined to social assistance in the form of credits for subsistence (consumption), which on average represents 7% of the amount of credit assistance. During the last two years, no funds for new credits have been available, and the project is only operating with reinvestment funds.

Micro-credits for subsistence or own consumption can be renewed twice (initial credit, first renewal and second renewal); then the beneficiary has to opt for a business credit or be left out of the system. The reimbursement for this credit consists of refunding the amount of the credit with produced goods and/or community work at a public institution (schools, school cafeterias, hospitals, etc.). Currently, this has been replaced by the establishment of a "savings cooperative" in each group, fed by selling part of the harvest, which has positive impacts, especially on the producers with large lots.

CREDIT CHARACTERISTICS

The PSA has devised a credit operating procedure based on the following:

- ❖ groups of no less than 6 households;
- ❖ Productive Associative Businesses (EPAs), as beneficiaries of the credits, involved in traditional, innovative and adaptive experimentation projects;
- ❖ no individual guarantees required, but it is a moral commitment of the group with the PSA and amongst the group members;
- ❖ flexible terms and periods of grace with a maximum period of 7 years, depending on the activity;
- ❖ a partially subsidised (6% per annum) interest rate;
- ❖ a maximum amount of credit per household of \$ 1200 (US\$333) for businesses and \$200 (US\$55) for own consumption projects; and
- ❖ business credits reimbursed in cash and in kind to a public service entity at the location where the group that received the credit is established, for subsistence projects.

The number of national projects, households and amounts per project line are shown in table 1. **Subsistence credit** concerns credit for (the production for home)

consumption. **Traditional and Innovative** credit deal with micro-enterprises (processing), either in the usual way or by using an innovative method, while other project deal with community infrastructure. Of the total amount of credit, the percentage used for horticulture is 27%, animal husbandry (46%) and other activities (seed production, forestry, processing, etc.) compose 27%. The producers have to meet the following general requirements: working directly on the plot, which is located within their permanent place of residence; no permanent hired labour; no other source of income (except in the case of income originating from temporary jobs outside the lot or from the sale of handicrafts, not exceeding the wage of a rural worker, that is, \$280 pesos per month; income generated on the plot does not exceed two monthly salaries earned by a permanent rural worker, that is \$560 pesos per month (US\$156).

CHANGES

The programme is *decentralised* throughout the Province of Buenos Aires, but all activities remain channelled through the municipal governments. Trying to incorporate a larger number of departments into each province, the PSA begins in each region with the greatest potential presence of small producers, progressively broadening the working area over successive years, to other administrative areas. A new type of project: (*Community Infrastructure*) combines credit with subsidies for both real estate and community infrastructure. The proposal combines training, technical assistance and credits, with different reimbursement modalities. *Direct contact* between producers and consumer centres are stimulated, like street fairs, supported by local municipal governments. *Diversification* and *improved housing* for small producers are two other new lines of activity. A final new area of

attention is the *dissemination of the programme* itself in the country.

IMPACTS AND RECOMMENDATIONS

This programme has proved to be important in surviving the economic crisis as well as in strengthening the ties of solidarity, since the activities financed are located within the undefined frontier between investment projects and social projects. The programme has made and continues to make efforts to draft an environmental proposal that differs completely from the current technological model (like organic gardens, environmentally sound chicken raising, biofertilisers, etc.). The experience has also made a valuable contribution to the implementation of an agro-productive development policy. It not only complements activities, but also creates spaces of participation for small producers in society.

Legislation should be passed to give small producers access to land (the right to the use of land by the people who cultivate it, whether on a temporary or permanent basis), to adapt tax assessment and collection procedures and to make animal and plant health services available to the beneficiaries. The activities discussed here need to be institutionalised further under the principle of equality.

This experience shows that urban agriculture is still profitable under economic hardship, thanks to the commitment and the effort of officials, technicians, organisations, institutions and business people who are fully aware of the challenge. Micro-credit provides one way to alleviate poverty in the poorest regions of the world.

Notes

(1) Conversion rate: \$3.60 pesos = US\$1.

Table 1 National projects

Type of Project	Number of projects	Percentage of total projects	Beneficiaries households/ persons	Credit amount Pesos/US Dollars
Subsistence	2,387	39%	19,085 / 90,986	2,914,905 / 809,696
Traditional	3,164	51.8%	22,420/ 98,744	25,335,630 / 7,037,675
Innovative	214	3.5%	1,869 / 7,917	2,228,149 / 618,931
Other	342	5.6	1,705 / 5,536	1,249,465 / 347,074
Community Infrastructure				
TOTAL	6,107	100%	45,079 / 203,183	31,728,150 / 8,813,375

In Mexico, large portions of farmland have been incorporated into the hierarchy and dynamics of big cities.

One of the territories that share the megalopolitan dynamics of Mexico City is Texcoco, located in the state of Mexico, 20 kilometres from the capital city of Mexico. Texcoco continues to grow, incorporating rural territories located in the periphery. New territorial forms and new productive and social processes emerge; new forms and ideas are developed to define these territories, identified as periurban or rural-urban.



Gabriel Ramírez García

Social Policy

the case of Texcoco, Mexico or an Unheard Claim

The Flower Growers Association in the community of San Miguel Tlaixpan also provides training

At present, according to data provided by the State Demographic Council (COESPO, 2000), the municipality of Texcoco has an estimated population of 204,102 inhabitants. There are 53 human settlements, plus the municipal capital. Of these settlements, 12 are considered as urban and represent 5% of the land use. Urban growth in the municipality has had effects on the occupation of farmland, which represents 25% of the total land; this has intensified due to lack of support for rural areas, of up to 60% during the last three decades.

In 1997, the Democratic Revolution Party (PRD), a progressive leftist party, took over the administration of the Municipality of Texcoco, which allowed several members of civil society to assume positions in the government, thereby changing the line, the strategies, and the conduct of government business. At the same time, in an open meeting held in January 1997, several representatives of the communities, the syndicates and the municipal president expressed their support to establish a Rural Development Unit (DDR) within the administrative structure of the municipal government for the promotion of agricultural activities. For the first time, the municipality had a unit designated to oversee rural agricultural work. The objective of having a DDR was to provide support through training and resources, and to organise the population that worked in the forestry and aquaculture sectors.

In Texcoco, 42 out of 54 communities are considered rural, and the mission of the DDR is to preserve their production space from the urban influence by:

- ❖ arresting the shift from rural to urban land;
- ❖ ensuring the permanence and generation of jobs in agricultural activities;
- ❖ providing food for the population in the sector; and
- ❖ re-assessing agricultural activities.

URBAN AGRICULTURE

Agriculture in Texcoco is an activity that is seriously threatened, although it has maintained food security in Texcoco for a long time. *Inner-city* agriculture is found especially within the neighbourhoods, on spaces of less than 50 m² (lots). Being located close to the dwelling, these lots are also used for washing and drying of clothes, animal raising etc. There are also spaces of more than 200 m² held as private property, used to grow certain crops (corn, flowers, cilantro, legumes, etc.). This type of agriculture could be considered *suburban*, because it takes place in a space designated to a farming activity, which is still within the city. Significant agricultural activities are also carried out close to the county capital on communal or private lands, not yet urbanised, while many of these *periurban* farming activities take place in areas where some of the basic urban services are available. This land is usually flat with good conditions for production. Typically, these plots are used for growing of legumes, cereals and

fodder, and raising animals in intensive farms for beef, milk and dairy products, eggs, pigs and rabbits. In some cases, urban farming is developed for the purpose of including some cheap products into the diet and reducing household expenditure.

The population involved in urban agriculture is of rural origin. However, in many cases it is not their main economic activity, as they combine farming with some sort of formal or fixed job. In this sense, support to the rural area by local, state and federal governments is vital to preserve farming and halt the growth of cities. Otherwise, as it has already happened, farmers who own farmland, pressed by the lack of economic resources, will be forced to sell their land for housing purposes.

THE MICRO-CREDIT PROGRAMME

In 1997, the Rural Development Unit (DDR) started the Productive Micro-credit Programme as a pilot. The goal of the programme was to strengthen farming activities in the region (still plentiful) especially for small- and medium-sized producers, through the provision of economic aid.

The project worked under the operating regulations of "Ramo 33", or the Fund of Federal Contributions for State and Municipal governments, aimed at assisting population groups living in extreme poverty. However, the DDR proposed guidelines to enable allocation of credit also to families that earn between 2 and 4 minimum monthly wages¹, generally low-income families, but not the poorest.

The micro-credit programme complemented this activity with two other support lines: support to women in micro-productive farms; and support to a flower growers' association. All projects included counselling and training, channelled through the University of Chilpancingo (a local university) and some units of the state government.

The projects for financing were presented by groups consisting of 4 to 12 families, but the credit was granted on an individual basis once approved. The logic was that these groups would act as the units of management responsible for the recovery of the credit. The credit was granted in kind (materials, inputs, seeds, machinery, animals, plants, and food), and could not be used to pay for labour or construction. The amount of the credit was established at 5,000 pesos (3) per household (US\$496), which allowed supporting projects ranging from \$20,000 to \$60,000 pesos (US\$1,986 and US\$5,958 respectively), on a group basis. The credit did not include any interest or a system to calculate its value at any given time.

The credit did not directly include "initial savings"; however, as it was a condition for the projects to have a minimal infra-

structure, this was considered a contribution by the beneficiaries, which was verified during visits to the projects. Sometimes these contributions represented 60% to 70% of the investment for the project; in such cases, the municipal government only had to add 30% to 40%.

The programme considered a mechanism to ensure the reimbursement of the credit, which consisted of a promissory note² in the name of the municipal government. This mechanism was enforced after the first year of operation (1998). In early 1997, the purpose was to recover the credits

The projects are in fact highly subsidised

within two years, with one year of grace. However, the projects did not respond as expected. Later on, it was proposed to cut down the recovery time to one and a half years, with a 6-month grace period. As a result, the projects have had a recovery rate of 7% over the last four years.

The projects are in fact highly subsidised; and it must be considered that nothing has been recovered from many projects over the last four years. If these families wanted to pay back what they owe as of now, the amount of money would be less than what was granted to them in the first place, and they would only have to pay back that amount of money granted to them as the initial credit.

Non-refundable financial support consists of a package that includes hens, rabbits, plastic for a greenhouse, chicken wire, a sheet of acrylic and seed. In 1999, this assistance amounted to \$950 Mexican pesos (US\$94), and \$1,100 pesos

(US\$109) in 2001. Women beneficiaries only had to put in \$100 pesos (about US\$10) as a personal contribution. Under this scheme, the DDR was able to support 370 projects in various locations in the municipality of Texcoco between 1999 and 2001.

SOURCE OF FUNDS AND CHANNELLING

The DDR of the municipality of Texcoco was in charge of securing funds, in addition to those provided by the municipality through existing State and Federal programmes. The economic contribution of the Federal and State programmes came for the most part from Ramo 33 and the Federal Fund for States and Municipalities. In some cases, the municipal government tried to supplement the contributions with an additional 30%, although most of the time this was only in the form of training to the projects.

The funds of Ramo 33 are available through the Municipal Social Infrastructure Fund (FISM). The FISM targets its funds to establishing infrastructure in poor neighbourhoods. The resources for productive projects were taken from this fund. The support to projects, between 1997 and 2001 under this credit modality, amounted to a total of \$4,241,731.90 Mexican pesos (US\$421,225), of which \$2,827,265.70 pesos (US\$280,761), or 67%, have been designated for farming activities.

The municipal government established the Municipal Development Council (CODEMUN), a body consisting of a representative of each community and the municipal president. CODEMUN was in charge of approving budget items of the funds of Ramo 33, in addition to monitoring the use of these resources.

The projects were selected from a basic file gathered by DDR. A "Review Committee" met to select the projects. The Committee consisted of a representative from the municipal government and from the internal comptroller's office, a representative of Ramo 33, and a representative of the Economic Development and Rural Development areas. Prior to the selection, CODEMUN visited the projects to verify the conditions of the projects themselves and of the beneficiaries.

My point of view is that urban agriculture has to be supported, because Texcoco is a large municipality with a lot of land that still can be cultivated. Unfortunately, the people who own that land do not use it to its full potential, because they are not economically capable and have little perspective. Instead they leave their community in search of other work. If a project on urban agricultural development would be introduced, these people would respond, because they really love their land.

Dr Emma Aguila, *Micro Productive Land Programme, Department of Rural Development, Municipality of Texcoco.*



Productive micro-farm in San Luis Huexotla

Initially in 1997, 12 productive projects received support. However, only 11 can be considered to be in the agricultural sector. During the following years the programme was open to other types of projects, including tailoring shops, shops selling natural products, bakeries, waste recycling, a candy factory, a welding shop etc. In 1998, with a fund of \$500,000 pesos (US\$49,652) 18 productive projects were supported; of these, 11 were in the farming sector. In 1999, 18 farming productive projects were assisted out of a total of 32. Finally, in 2000, support was given to 58 projects, of which 36 were in the farming sector.

Unfortunately, since 2001 the municipal government has given no more support to these projects. Many projects continue to benefit from state and federal policies, but without any coordination with the municipal government.

IMPACT AND SUSTAINABILITY

The programme has helped the local economy and generated jobs. Of all households, 93% have increased their income by at least 10%, and subsequently have improved their living conditions. Training and technical assistance has improved production techniques and methods, and raised awareness of the significance of these contributions.

The participation of women has been significant. Through the productive micro-farms initiative, women have conquered a space within the household they did not have before. They contribute through the project to the household economy, generating surpluses and healthy food. Also, their experience has left positive effects concerning self-esteem, development of skills, and mental health.

The establishment of associations should also be noted. These associations have allowed beneficiaries to obtain multiple benefits for their productive projects and

households. The counselling and training provided by the municipal government and other institutions have enabled capacity building within the groups, including management and negotiation skills, purchase of inputs, marketing and administration.

The programme has been implemented as part of governmental policies at federal and local levels. Financial sustainability depends on these conditions. The programme has not had an adequate recovery and does not consider any operating costs or the recovery of the value of the money. It is therefore not financially sustainable. Socially, the programme is con-



Gabriel Ramírez García

Members of the women association

sidered sustainable. Generating jobs, developing the local economy, improving family nutrition, family inclusion and integration and reaching families with limited economic resources are activities of great social value. From an environmental point of view, the programme is viable. And although the programme has had no follow-up since 2001, politically it is sustainable, in the sense that the programme has been implemented under public policy of the municipal government and has had positive results. It is clear that the programme is not political-

ly attractive to the municipal government at this point, but it is a goldmine that can be exploited. The challenge is to use the programme as a political springboard.

RECOMMENDATIONS

To ensure that, regardless of the political currents, these programmes can continue to be implemented, the autonomy of the municipal governments needs to be strengthened. It is important to develop a government policy aimed at raising the awareness of citizens on the significance of agriculture in urban environments. Subsequently, it will be necessary to provide training and foster more active communities.

The programme needs to provide adequate follow-up of the projects during and after the period of the credit. The recovery of the existing loans should be encouraged, re-negotiating the terms of payment. More should be done with the criteria used to select projects.

A community savings scheme is needed to be able to reach more people

The operating rules of the programme must be re-formulated, keeping in mind the needs of the communities, seeking a combination of micro-credit with community development plans and exploring the participation of the private sector, such as the establishment of a trust, the donation of equipment, promotion and dissemination etc. It is further suggested to carry out a pilot in community savings schemes (peoples' savings associations, community banks, etc), to be able to reach more people (shift of scale).

This experience, although at what scale, reinforces the idea that urban agriculture is a means to alleviate poverty, to improve the urban environment and to promote more productive, sustainable and democratic cities.

Table 1 Summary of credits granted 1997-2000

Concept	Mexican Pesos	US Dollars
No. of credits placed between 1997-200	76	76
No. of beneficiary households	516	516
Average credit per project	\$37,201	\$3,694
Average credit per household	\$5,478	\$544
Total amount of credit	\$2,827,266	\$280,761
Total recovered amount	\$185,454	\$18,416
Total amount of debt	\$2,641,812	\$262,345
Percentage of arrears	93%	93%

Source: information provided by DDR (1997-2000). Only farming credits are considered³

Notes

1) A minimum monthly salary equals US\$125.60 (November 2002)

2) A document whereby the beneficiary of the credit agrees to pay the sum received, specifying the date of payment. The document only lists the amount received, the purpose of the credit and the general data of the beneficiary, as well as his signature.

3) US\$1 = \$10.07 Mexican pesos (November 2002)

Nepal is a landlocked country sandwiched between China and India. There are 58 municipalities in Nepal and about 80% of the Nepalese population depends on agriculture, which is mainly based in the rural areas. Kathmandu, the capital city of Nepal, is the only metropolis in the country. At present the population of Kathmandu Metropolitan City (KMC) is estimated at 701,962 according to the census of 2001. The per capita income of KMC is US\$360.

Smita Premchander



Credit and Investment in Urban Agriculture in Nepal

Due to the high urbanisation rate, most of the arable land of Kathmandu is occupied by housing and agricultural production has thus been reduced. However, some local inhabitants still cultivate rice, wheat and vegetables within the metropolitan area on a small scale. They do not need credit for such cultivation. Some local inhabitants are also involved in cow and buffalo raising for milk production, for their own use as well as for selling.

Most of the arable land is in the city's outer ring area, where people are involved in agriculture (rice and wheat), horticulture and processing (jam, tomato and pickles) on a larger scale, the products of which are sold at the local market. People from Kathmandu and its adjoining areas are also involved in poultry farming and bee keeping. The Dairy Development Corporation of His Majesty's Government of Nepal in Kathmandu processes milk collected from different collection centres.

ECONOMIC SITUATION

Nepal is a predominantly agricultural country with the majority of its land defined as rural. About 82% of the population reside in

the rural areas and 86% of its labour force is engaged in agricultural activities. Nepal's average annual economic growth rate has stood at 5% over the past 15 years. However, the contribution of agriculture to economic growth is less than that of the non-agricultural sector. Nepal's fertile lands are being used for building houses. The government has formulated a twenty-year Agriculture Perspective Plan (APP) in which the development of advanced technology and infrastructure for achieving high production is emphasised as one of the main objectives.

APP can be considered the policy on urban agriculture even though it does not contain programmes, policies, laws or regulations that focus specifically on urban agriculture. National policy recognises micro-finance as an important means in poverty reduction and achieving economic growth. The government's micro-finance programme is going to be continued in the 10th Five-Year Plan of Nepal. However, the need for micro-finance investment in urban and periurban agriculture is not recognised.

The macro-economic situation of Nepal is not encouraging, with a high inflation rate and a low economic growth rate. This has encouraged big financial institu-

tions to decrease the interest rate on savings. Even under this situation, the savings and credit cooperatives are offering a high interest rate to their members on savings. There is a growing need among the members to invest in different income generating activities. Investments of micro-finance in urban and periurban agricultural activities contribute to the GDP of the country.

THE CREDIT AND INVESTMENT SCHEME

Mahila Prayas Savings and Credit Co-operative Ltd. (MPSACCO) is a women-only cooperative and has adopted two types of lending methodologies: Individual lending and Peer lending. Samudayik Savings and Credit Co-operative Ltd. (SSACCO) is a mixed membership cooperative, which has adopted Individual lending only.

Individual lending is characterised by:

- ❖ loans that are guaranteed by savings and/or co-signatories. However, in the case of SSACCO, loans are guaranteed by co-signatories for amounts up to Rs.20,000 (US\$260) and/or by physical collateral for loan amounts more than Rs.20,000 (US\$260);
- ❖ potential clients who are screened by credit checks and character references;
- ❖ loan amounts that are based on thorough viability analysis;

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- ❖ loan sizes and terms that can be tailored to needs of the business within a maximum limit;
- ❖ staff who work to develop close, long term relationships with members; and
- ❖ each member who represents significant investment of staff time and energy.

Peer lending has the following characteristics:

- ❖ loans are mutually guaranteed by other members in the group;
- ❖ potential clients are screened by their peers;
- ❖ loan approval is based on the scheme presented;
- ❖ loan size and terms are determined by the nature of the business;
- ❖ staff has a distant relationship with large numbers of clients; and
- ❖ peer groups are used to reduce staff workload.

MPSACCO has individual lending in urban areas and peer lending in the periurban areas. The cooperative has different kinds of savings schemes like regular savings, voluntary savings, marriage savings and festival savings. Each member deposits Rs.100 (US\$1.30) every month as *regular savings* (or in the case of group savings, each group collects money from its members), for which the cooperative provides 12% interest rate. One can further deposit any amount at any time on a voluntary basis, for which the cooperative provides a 9% interest rate. Similarly, a member can save for marriage and for a particular festival. She cannot draw on these savings for other purposes. The cooperative provides 12% and 9% interest rates for marriage savings and festival savings, respectively.

SSACCO has only one kind of savings, compulsory savings, for which each member has to deposit at least Rs.100 (US\$1.30) per month at a 10% interest rate. According to the records, the members have deposited Rs.100 (US\$1.30) to Rs.500 (US\$6.50).

Members' savings are the main source of capital for these cooperatives. Other sources of capital of MPSACCO are:

- ❖ a *revolving credit fund* (RCF) of Rs.375,000 (US\$4,870) provided by the Asian Development Bank funded Micro-Credit Project for Women (MCPW), disbursed only to group members in the adjoining areas of the KMC; and

- ❖ *loans* of Rs.200,000 (US\$2,597) under the Self-Reliance Fund (SRF) of Nepal Rastra Bank (NRB), a central bank of Nepal, at a subsidised interest rate, invested only in group members in the periurban area of KMC; Rs.500,000 (US\$6,493) from NEFSCUN (Nepal Federation of Savings and Credit Co-operative Union) at 17% interest rate and Rs.325,000 (US\$4,221) from Aaincho Paincho, a Multinational Financial Institute, at a 14% interest rate.

Rules, regulations and a well-perceived vision and mission are needed

Most of the members of MPSACCO in periurban areas use credit for agricultural activities, like buffalo/cow/goat raising, poultry farming, vegetable cultivation, millet cropping, bee-keeping and nursery management. In addition some group members have opened shops. The urban members use the credit for opening shops. Some members purchase vegetables from the wholesale market and sell at retail prices in the local markets.

The members of SSACCO have predominantly invested in agricultural activities like buffalo/cow/goat raising, poultry farming and vegetable cultivation, using the credit. The milk produced by the members is partly sold in the local areas

and also supplied to the collection centres, giving reasonable profit. Some members have invested in shops. MPSACCO has both short-term credit, provided for six months, and long-term credit, provided for 18 months. The minimum loan size is Rs.5,000 (US\$65) and the maximum loan size is Rs.50,000 (US\$649). The cooperative charges 18% interest rate to the urban-based members, who join as individual members, whereas it charges only a 16% interest rate to the periurban based members. In the case of individual lending, members who know the borrower have to be the guarantor. Clients, who live in a rented house, must have the house owner as the guarantor in order to receive individual loans. However, in the case of peer lending, group members have to be the guarantor.

There are different types of repayment procedures provisioned in the cooperative. Some repay the instalment each month (for household consumption or running a shop), some repay after every three-month's period (for vegetable cultivation) and some repay after every six-month's period (for livestock raising). Loans issued for poultry farming can be repaid at three-monthly or six-monthly intervals.

SSACCO has only one loan term, in which the borrower has to repay the loan within one year in different instalments. Instalments can be monthly, bi-monthly and quarterly within a year. The coopera-

From Poverty to Dignity in Nepal

Sanikanchi Adhikari resides in ward no.3 of Kapan. She used to have great problems in providing even the daily subsistence needs of her family. Her husband managed to lose all of their property by taking out a number of loans using the property as collateral, and then misusing the money. In due course, Sanikanchi joined a cooperative in May/June 1999. It was difficult to pay the total amount of Rs.700 (US\$9), for five shares (at Rs.500 at the rate of Rs.100 (US\$ 1.3) per share), plus the Rs.100 entry fee and the Rs.100 in monthly savings for May/June, necessary for membership in the cooperative. However, by joining a group first, she was able to acquire membership. Sanikanchi intended to get a loan from the cooperative to do some agro-based enterprise activities, but other group members did not want to serve as guarantor for her, as she did not have any property. Fortunately, the chairperson of MPSACCO, Mrs Jamuna Shrestha, agreed to be her guarantor. In this way, Sanikanchi received a loan amounting to Rs.30,000 (US\$390) from the cooperative. She subsequently invested that loan into poultry farming by purchasing 200 chickens. Through her laborious work and concentration on poultry farming, she gradually became successful, and her income also increased. Sanikanchi earned Rs.300,000 (US\$3,896) from this enterprise, and has now upgraded to 1,800 chickens. From her earnings, she acquired wheat and millet crops, and cultivated potatoes and various green vegetables. She used the chicken dung to fertilise these activities. She then started selling the crops at the nearest market in Kathmandu and made a good profit from it. Gradually, Sanikanchi has been able to pay back her husband's loan, totaling Rs.800,000 (US\$10,390). This amount has by now decreased to Rs.300,000 (US\$3,896). In addition, she successfully recovered 0.15 hectares of land kept as collateral by her husband. All the while, she has provided good care and education to her children. With all of these things, Sanikanchi has also succeeded in gaining social respect.

The following table gives a comparison of the mixed (SSACCO) and women (MPSACCO) co-operative in terms of their features:

MPSACCO	SSACCO
❖ Two types of lending <ul style="list-style-type: none"> • Individual lending • Peer lending 	❖ One type of lending <ul style="list-style-type: none"> • Individual lending
❖ Criteria for acquiring loan <ul style="list-style-type: none"> • Become a member • Keep savings for at least six months. 	❖ Criteria for getting loan <ul style="list-style-type: none"> • Become a member • Deposit savings
❖ Type of saving products <ul style="list-style-type: none"> • Regular, voluntary, marriage and festival savings 	❖ Type of savings <ul style="list-style-type: none"> • Regular savings (compulsory savings)
❖ Interest rate in savings <ul style="list-style-type: none"> • 12% for regular and marriage savings • 9% for voluntary and festival savings 	❖ Interest rate <ul style="list-style-type: none"> • 10%
❖ Interest rate in savings in market <ul style="list-style-type: none"> • Range of 3% - 5% 	❖ Interest rate in savings in market <ul style="list-style-type: none"> • Range of 3% - 5%

tive provides a minimum loan size of Rs.8,000 (US\$104) and a maximum loan size of Rs.50,000 (US\$649). Members have borrowed Rs.8,000 (US\$104) to Rs.15,000 (US\$195) for vegetable cultivation and about Rs.50,000 for buffalo raising, cow raising, poultry farming and opening a shop. SSACCO charges 18% interest rate on the loans provided to its members. If a member takes a loan less than her or his savings in the cooperative, then the cooperative charges only 16% interest rate. To borrow an amount up to Rs.20,000 (US\$260) another member of the cooperative should be a guarantor. Members have to pledge their land ownership certificate as collateral to get a loan of more than Rs.20,000.

GENDER

The principal beneficiaries of the credit and investment scheme of the MPSACCO are women. There are 334 women members, who are the direct beneficiaries, while other family members are indirect beneficiaries. With an average household size in KMC of 5.2, the total number of indirect beneficiaries is 1,737. The beneficiaries of SSACCO are a mix of both men and women. Out of the total 356 members, 100 are women.

All three staff members of MPSACCO are female. SSACCO has one male staff member as its human resource person. There is transparency in each and every activity of both cooperatives. The decision making process is democratic. Leadership is dynamic in these cooperatives. Alternative leadership is lacking in MPSACCO but not in SSACCO. MPSACCO does not have any policy documents, although there is a provision to prepare

different policies for running the cooperative. The Management Committee makes decisions on all issues and keeps the minutes. SSACCO has many policy documents. The cooperative does not have a clear vision, mission and objectives in written form, however it has only its objectives in by-laws, which are common to all cooperatives. It is however difficult to run an organisation for a long period without written rules, regulations and a well-perceived vision and mission. There is no representation of female members in the Management Committee of SSACCO.

RECOMMENDATIONS

There should be diversification of savings schemes in a member-based cooperative. Credit should be combined with savings as savings could work as collateral to some extent. Diversification of different savings schemes could increase capital and in turn earn profit and address the credit needs of members.

Micro-finance programmes should be implemented instead of only micro-credit programme as micro-finance programmes consists of savings, credit and insurance services.

Member-based cooperatives should try to acquire loans from different financial institutions and invest it among its members and thereby earn profits to ensure financial sustainability.

Credit schemes should incorporate agricultural training to the members for urban agriculture activities and address major problems like irrigation. For this, the cooperatives should seek support from local governmental bodies, municipalities, donors and International NGOs.

The organisations should formulate different policies for its internal manage-

ment, savings and credit, and human resource development.

Financing family businesses generates more employment (for all family members) and is more sustainable than financing individual businesses.

Peer lending is more sustainable and inclusive in terms of reaching the poor and women, since it emphasises group membership and adopts the mechanism of group screening. This minimises risk and saves costs in terms of time and money.

Gender representation should be ensured in all aspects of the organisation (management, and design of the schemes).

Central and local government should link urban farmers with International NGOs and donor agencies and create an urban environment that attracts private investment. The government should further promote urban farmers' organisations, especially of women farmers and/or vulnerable groups. Tax incentives to the members of the schemes would motivate people to be involved in agricultural enterprises.



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NGOs should provide training and seed capital to urban farmers (members of the cooperatives). In this regard they should take the urban farmers' organisations (e.g., cooperatives) as partners.

Farmer organisations should include cooperatives as part of their network, and assist in technology transfer among its members, organise workshops to share knowledge and skills. Exposure visit programmes among its members could also be organised to learn new and innovative agricultural techniques.

Responsible authorities should facilitate the supply of agro-products from urban farmers to the markets, through collection centres and provision of information regarding availability of finance, inputs and product demand.

The city of Gaborone, with a population of 225,000 in 2001, has grown from a very small village to become the capital city of Botswana in a period of less than 36 years.

Subsistence and commercial agriculture are both found throughout Gaborone and Greater Gaborone and there are a variety of spatial contexts in which production occurs.

in Gaborone, Botswana



A.C. Mosha

Roasted maize

Focusing Credit on Urban Agriculture

While poverty in Botswana is predominantly rural, the rate of urbanisation (at 8.4% per annum) is the highest in Africa. Rural migration has led to increasing concern about social and physical changes in urban areas. One of the safety nets adopted by the poor has been urban agriculture either as a means of survival or to supplement low incomes, while some entrepreneurs have opted for urban agriculture as a means of making money. Poultry (40%), horticulture (20%) and piggeries (10%) dominate the main activities taking place in the city. However, there is very little dairy (8%). There is a gender imbalance in favour of women within this sector. A key problem to further development of urban agriculture is the lack of financial support.

The government shifted from the policy of issuing grants to giving loans

CREDIT AND INVESTMENT FOR UA INTERVENTIONS

The Botswana government has a long history of assisting the entrepreneurial development of businessmen and women through various schemes and programmes; it also provides credit in the form of outright financial grants, loans, inputs (machinery, seeds and seedlings, etc.), as well as other financial subsidies. In addition, NGOs and donors have mainly invested in the poor sector, while the private sector has provided credit for commercial farms in many areas including periurban areas. Of the various programmes, three have achieved some marked success in urban and periurban

agriculture. These programmes will be examined in depth and evaluated in the following sections of this paper.

THE ARABLE LANDS DEVELOPMENT PROGRAMME (ALDEP)

The ALDEP was conceived in 1977 and has gone through several phases since then. It provides assistance to needy farmers who are capable of increasing production and household income, the prerequisites for eligibility being their number of cattle and their yearly income. The assistance packages provide the approved applicants with an 85-90% subsidy for fencing materials, water tanks, agricultural tools and inputs and cattle. These conditions are attractive enough to attract a great number of citizens to be farmers, but only with minimal involvement.

In the Gaborone area, the target was to reach 11,388 individuals, but to-date only 5,484 farmers have been reached (48%). Packages received vary from a low of US\$852 to US\$4,326 per farmer (GoB-1999). The ALDEP has not been able to significantly improve the performance of urban and periurban farmers as they usually cultivate only small patches of land (GoB, 2000). At present, the ALDEP generally appears to be more of a welfare than a development programme.

THE FINANCIAL ASSISTANCE PROGRAMME (FAP) (1982-2001)

The FAP was introduced in 1982 as an incentive and subsidy policy aimed at creating employment and encouraging investment in a range of economic activities, including agriculture. The FAP has been a significant catalyst to the increase in urban agriculture. Funding has been given to set up chicken farms, horticultural farms, rearing of animals, etc., and is used to purchase inputs, and to help pay for training and

other costs. Women were given priority in the disbursement of grants; hence, 82% of the beneficiaries were women.

The total amount of FAP grants provided to commercial periurban and urban farmers in the Gaborone area is approximately P3, 000,000 (US\$500,000). The grants fall within the small- and medium-scale sectors, which support enterprises with investments in fixed assets of less than P75, 000 (US \$ 12,500) and between P75, 001 (US\$12,500) and P200,000 (US\$33,333), respectively. In a recent study by Hovorka, many respondents noted the FAP as a major incentive to begin agricultural production. Those not receiving FAP assistance, had bank loans or lines of credit, while the remainder used personal savings for financing their agricultural operations (Hovorka, 2001).

CITIZEN ENTREPRENEURIAL DEVELOPMENT AGENCY (CEDA)

In 2001, the government of Botswana shifted from the policy of issuing grants under the FAP to giving loans under the CEDA Programme. The financial assistance provided by CEDA is in the form of loans at subsidised interest rates, as opposed to outright grants. This is meant to be a "soft window" for citizens wishing to start or expand business operations and to buy into existing businesses.

Since the project is quite new and still trying to find its feet, it is difficult to make an evaluation of its impact in terms of benefits to the agricultural sector in the study area of Gaborone and its environs. However, up until the end of 2000, 229 applications had been accepted in principle, totalling P139 million (US\$23 million). Of these, 22 were allotted to urban and periurban agricultural projects (Botswana Guardian, 26 April, 2002).

Encourage investments in people-owned institutions

The minimum size of the loan for small projects is P500 (US\$900) and the maximum is P150,000 (US\$1,250). An interest rate of 5% per annum is charged on the loans. Repayment periods vary according to the size of the loan and the project cash flow, with a maximum repayment period of 60 months or 5 years, with some flexibility for projects of a special nature (urban and periurban agriculture included).

For medium-scale projects the minimum size of the loan is P150,001 (US\$1250) and the maximum is P2,200,000 (US\$366,666). An interest rate of 7.5% per annum is charged on the loans. Repayment periods vary according to the size of the loan and the project cash flow, with a maximum repayment period of 84 months or 7 years, with some flexibility for agricultural projects.

Assistance for large projects (such as big chicken, dairy or pig farms) takes on the form of equity capital and/or loan and management assistance. This is provided under the Venture Capital Fund. However, promoters are required to contribute a minimum of 25% of total project cost as equity and to pay market-related interest rates.

RESOURCES AND ACTORS

The three schemes benefit a broad spectrum of people. In all three schemes, several actors have played a key role. The central government provided funds, personnel, offices and other support, such as training and extension services. Other actors are local councils, financial institutions like the Women's Finance House and the National Development Bank, a commercial bank owned by the government, some donor agencies, the private sector and parastatals and CBOs.

All the above schemes were and are fully sponsored by central government and donor agencies, and administered by special institutions and banks. Apart from public sector financial assistance, support is also from NGOs, international aid agencies (through poverty alleviation programmes), national parastatals and also from commercial banks (mostly for large scale farmers in the periurban areas). Individuals have also contributed their own savings in starting agricultural projects.

EFFECTIVENESS OF INVESTMENT IN URBAN AGRICULTURE

The government has slowly shifted from giving outright grants or a mixture of grants and loans (as in FAP, and ALDEP) to giving loans (CEDA), which are well-monitored and controlled through a bank, and impose (subsidised) interest rates.

❖ *Financial Grants* were the hallmarks of the FAP and to a small extent, the ALDEP. Such grants are useful in situations when the people are extremely poor and cannot raise credit through the formal or informal systems. However, a reliance on grants leads to complacency and can in the end kill the spirit of self-reliance, like with some people who took FAP grants as free-for-all financial handouts.

Loans are the only financial assistance mechanisms that have sustainability in the long run. Obviously, they suit middle- and high-income earners. People are encouraged to work hard in order to pay back such loans. This is the new philosophy of CEDA.

❖ *Input supports* in agriculture like tractors, seeds, fertilisers, etc. (e.g. under the ALDEP) are justified where promoters cannot afford to buy them. Targeted inputs can be quite effective in getting people started.

❖ *Tax incentives* are useful in attracting major investors in agriculture and manufacturing. If properly targeted and selective, they can be very effective in creating employment and incomes. However, the time factor should not be more than 3-5 years; otherwise they can be abused as in the case of the large-scale FAP grants/loans and CEDA loans.

❖ *Cooperatives* can be quite an effective means of getting people started in urban agriculture. The government, donor agencies, and NGOs find it better to lend to cooperatives than to individuals. It is suggested that the Cooperative Bank should be resurrected and that the government should intensify the promotion

of institutional Savings and Credit Cooperatives.

CONCLUSION AND RECOMMENDATIONS

More and more people are engaging in Urban Agriculture, creating jobs, improving nutrition, providing income and alleviating poverty. There is a need for policy interventions, to improve the access to specific financing for urban agriculture in Gaborone. Specifically policies oriented at financing urban agriculture, credit procurement (especially for the poor) and specific credit lines could be developed.

Central Government should target serious producers. Flexible credit and credit-support systems should be put in place to provide farmers, especially small-scale farmers, with various credit options and market information for developing their enterprises, and attaining training in basic bookkeeping, business skills and marketing. The national and local governments, the private sector and the NGO community could provide farmers with marketing support; for example, opening up a market for fresh produce.

Institutional cooperation is needed. Different ministries, government departments and private institutions should interact and collaborate to improve agricultural partnerships between the government and NGOs. It is highly recommended that specific sources and mechanisms should be introduced to finance urban agriculture as it has peculiar and specific characteristics warranting separate treatment. Credit and investment should be flexible and different for urban and periurban farming, due to the scarcity of land in urban areas and harsh weather conditions in Botswana. Under market forces, urban farmers will be squeezed out; hence, measures such as zoning, price subsidies, and relaxing some of the stringent town planning and environmental laws are necessary.

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HOPCOMS: a Success Story of Horticultural Co-operative Marketing

Smita Premchander



HOPCOMS has made a major investment in the infrastructure

The city of Bangalore in India covers an area of about 650 square kilometers with a population of over 6 million. There has been a 600% growth in population during the last four decades, which has resulted in an increase in poverty.

The state government has been unable to meet the needs of the people and the growing city. Civil society organisations, including NGOs like Janaagraha and Public Affairs Centre, are already beginning to take on the added responsibility of informing the public and advocating for change. However, there remains a particular need for credit and investment in urban agriculture in. One of the ways in which the many problems can be addressed is to encourage investments in people-owned institutions. One such daily need is fruit and vegetables, by people of all classes. HOPCOMS offers an example of an organisation that provides benefits of collective marketing to both producers as well as consumers.

HOPCOMS

The Horticulture Producer and Cooperative Marketing Society (HOPCOMS) was established in 1959.

Currently, it is a primary cooperative society covering three districts of Karnataka state - namely the Bangalore Rural, Bangalore Urban, and Kolar Districts. The stated objective of this society is to promote and encourage the development of horticultural produce. This is achieved by selling horticultural produce and providing training, technical advice and agricultural inputs as well as cold storage and marketing facilities to its members.

Since then, the total membership has increased to 11,680 farmers, with 100 tonnes of horticultural produce being traded per day in eight districts. These societies were managed by HOPCOMS until 1998, at which point each cooperative society was made independent, sixteen of which were subsequently federated at the state level, as members of the Karnataka Horticulture Federation.

The society has 231 outlets in Bangalore, 650 permanent employees and 790 temporary staff. A committee formed according to the provisions of the Cooperative Societies by-law manages HOPCOMS. The committee consists of 20 members, of whom 11 are representatives of growers, elected by the members of the society. The government nominates five members and another four are government officials.

Farmers are members of HOPCOMS. The members are divided into the following categories: **Class A** is comprised of farmers and producer members (11,680 in 2002) who own under 10 percent of the total shares; **Class B** consists of the NGO sector, other cooperatives and banks, who have a stake accounting for less than 1 percent; and **Class C** is the state government of Karnataka which holds 91 percent of the total shareholding.

HOPCOMS has made a major investment in the infrastructure for marketing and processing of horticultural produce.

There has been a steady increase in the sales over eight years, from around Rs. 10 million in 1992-1993 to over Rs. 40 million in 2000-2001. Fruit and vegetables formed 91% of the total sales, chemicals formed 6%, and seeds and fertilisers remained a very small component of the total sales. Because fruit and vegetables are highly perishable products, the control of wastage directly affects the amount of profits made.

HOPCOMS earned a gross profit in each year of operations, from 1991 to 1999. However, while the gross profits have grown, the net profits have shown a variation from the trend of gross profits. This is due to the high operating expenses, which have almost been equal to the gross profits made for these years, leaving a very negligible net profit. This negligible profit has been attributed to the increase in the employees at HOPCOMS, with the number of employees per retail outlet being an average of about four. The society plans to increase the number of outlets to increase its sales and profits.

BENEFITS AND IMPACT

The most significant benefit arises from the fact that HOPCOMS purchases its produce directly from the *farmers*. This eliminates the intermediaries, and consequently, a remunerative price is paid to the farmers - usually 10-15% higher than the open market prices. Furthermore, during periods when there is an excess supply of certain produce in the market, the open market price drops. HOPCOMS, however, assures a minimum price for produce during times of poor sales. Another major benefit is that cash is paid to farmers on the day of the transaction, thereby eliminating the need for extending credit, which is prevalent in private business.

HOPCOMS has weighbridges at each procurement centre, hence assuring farmers of correct weights. HOPCOMS also has infrastructure facilities like cold storage and godowns to store produce, as well

procurement centres where farmers can sell directly to consumers. At the procurement centres, HOPCOMS also sells seeds and fertilisers at subsidised rates, as well as plastic crates for transport. In addition, because farmers travel long distances with large quantities of produce, HOPCOMS provides lodging and boarding facilities.

The largest market of HOPCOMS is among the city dwellers in Bangalore. HOPCOMS assures good quality produce that is pre-packaged and sometimes cut, and sold at reasonable rates that are normally less than prevailing market rates. The weights used at HOPCOMS are also reputed to be correct. Another important factor is the convenient location of the retail outlets, in residential areas and near office areas. The existence of HOPCOMS is also of great benefit to its own employees. The cooperative carries a staff of over 1,400 employees who are not farmer members. These employees draw a salary from the organisation and are important stakeholders of HOPCOMS.

LESSONS LEARNED AND RECOMMENDATIONS

HOPCOMS is a profit-making enterprise, thereby making it financially sustainable. However, it is important to note that much of the gross profits are eliminated by high overhead costs - mainly the

members do not demand accountability from them, as their capital contribution is only 8 percent of the share capital.

Members need to take an active interest in the affairs and management of the society and demand greater transparency in its operations. For this to happen, the organisation must make a concerted effort to build the capacities of its members and elected members must take greater control of the management of the organisation.

The first and foremost condition for *replication* is that of a favourable legal and regulatory environment and a polity that is positively oriented towards the basic principles of co-operation. This awareness should be present in all those people who want to come together and form a co-operative, and not just at the higher levels. The second most important consideration is the viability of the business undertaking. For a business to be truly viable, member involvement must be much higher.

In a vibrant democracy such as India, there has always been space for cooperatives, and several large and successful cooperative sector enterprises have emerged over the years, including the famous example of milk cooperatives. The legal and regulatory environment in India encourages the establishment of cooperatives. Cooperative law has been amended in different states of India during the last decade, to bring in greater autonomy, control by members, and greater transparency in their operation.

HOPCOMS experiences several advantages and disadvantages because of its origins as a government organisation. The main advantage to being government-sponsored is the equity contribution made, which helped to create a vast organisational infrastructure, including several procurement centres, storage centres, processing centres and retail outlets. Linkages with cooperative banks have also enabled it to smooth out cash transactions with members. The main disadvantage has been the lack of active involvement from its farmer members, who constitute the organisation's main clients. In spite of their large numbers, they do not even own 10 percent of the total shares of HOPCOMS. Care needs to be taken to include members from among the more marginalised groups, and those who need the support from an external initiative. There

should also be a large investment made in member education and training.

HOPCOMS is a good example of collective marketing of horticultural produce and tapping of the urban market for the benefit of farmers. It is an outstanding example of the benefit of successful marketing, rather than a case of the successful provision of credit. The organisation extended credit to farmers for some years, but as it could not recover the money, the credit scheme was discontinued. Marketing and credit activities are better done by separate specialised organisations, and not by one organisation. HOPCOMS must be clear about the clients that it wants to reach. Creating an organisation of the urban poor, to market horticultural produce would also be a good idea, as there is a growing demand for these products. However, such an organisation must add some features and be quite different in some ways from HOPCOMS.



Smita Premchander

HOPCOMS purchases its produce directly from farmers

The main advantage is the contribution to equity

salaries of its employees. HOPCOMS has decided to expand its operations by establishing more retail outlets and introducing new products. With this growth in turnover and increased cost control, it will be possible for HOPCOMS to not only be financially sustainable, but to also expand its business and profits. However, it does not report a high return to investment, as HOPCOMS still works more as a government-promoted cooperative society than a business concern.

In terms of managerial sustainability, however, the organisation does not perform well. The organisation is and remains government managed. The management team, although paid by the organisation, usually consider themselves as government employees rather than staff of a competitive business unit, and

It is better to place an organisation at the facilitating end if the objective is to reach the poor. The basic precept is for facilitators and promoters to do as little as possible by way of provision of services, and as much as possible by way of capacity-building, networking, linking and mainstreaming.

Ultimately, the most important investment that can be made is to consult with clients. An effort to build people's organisations must be made and the people themselves must be aware of the functioning of their institutions.

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Financing City Farms in London

City farms as a form of urban agriculture is a recent but increasingly important urban phenomenon in the United Kingdom. The future of urban agriculture lies in the ability to adapt and mainstream it into prevailing development themes such as education, community cohesion, social inclusion and biodiversity.

An explicit definition of urban agriculture in the UK is hard to come by although writers appear to equate it to the use of urban sites primarily for cultivation and food production. Howe (2001) reminds us that such food production in cities is practised in back gardens, window boxes, community gardens, greenhouses, urban farms and allotments. In practice, urban agriculture in the UK is associated with any activities that promote food growing and enhance Agenda 21 (Iles, 2001).

City farms play an increasing role in the urban sustainable agenda

This reference to sustainability and agenda 21 broadens the definition of urban agriculture from mere concerns for food production and livestock rearing to any use of urban space in ways that:

- ❖ contribute to social inclusion;
- ❖ contribute to biodiversity;

Greenwich in London



Beacon Mbiba, Urban and Peri-Urban Research Network (Peri-NET), South Bank University, UK
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Young and old volunteers working on the pond

- ❖ promote environmental, plant and animal education; and
- ❖ contribute to urban regeneration, health, recycling and innovation.

Garnett (1996) provided what remains the most prevalent typology of urban agriculture sites in the UK, namely: that it occurs on allotments, urban/city farms, community gardens and orchards, local authority and tenanted farms, gardens and yards, school grounds and prison grounds. In terms of numbers of units and of people involved, allotments are the most prevalent, the most visible and well-documented form of urban agriculture in the UK. Iles (2001) estimates that there are some 65 city farms, 1,200 community gardens, about 70 school farms and over 300,000 allotment plots in the country.

Allotments are small pieces of land largely owned by and rented from local authorities throughout the UK. The majority of the allotments is owned by the local authority (Bradford 100%, Leeds 90%) with the remainder in private or community ownership (Howe and Wheeler, 1999: 17). This local authority dominance is a country-wide pattern. However, local authorities only provide the infrastructure such as fencing, road access and water points. Resources for the actual agricultural activities are largely the responsibility of

each individual gardener, allotment renter or a group of these. Only non-commercial urban agriculture is permitted on allotments. Vegetables and fruit are the main products from allotment gardens.

Compared to allotments, city farms have a recent history in the UK, are a less documented and a less visible feature of the urban landscape, but are slowly playing an increasing role in the urban sustainable agenda. Most of the city farms were set up by groups of enthusiasts on formally derelict land or waste ground. An estimated 3 million people per year are involved in city farms alone (Iles, 2001). Their emerging significance is not so much in terms of food production but in their role as community resource for social inclusion, biodiversity, environmental education and heritage (Howe, 2001; FCFCG, 2002). They have been selected for documentation in order to highlight the different perceptions that urban agriculture can embrace as well as to fill a gap in the UK's urban agriculture literature that is currently synonymous with allotment gardens.

LONDON CITY FARMS

London has about 17 city farms, only three of which are fully local authority owned and managed¹. Except for these three, the rest are run by independent charitable trusts that are community led and managed by a management com-

mittee. Whereas allotments have a history of over 300 years, none of the city farms in London is over thirty years old. Their umbrella organisation, the Federation of City Farms and Community Gardens (FCFCG) was set up in 1980 and the London office was only recently established in 2000 with meagre resources for two part-time members of staff and office support (FCFCG, 2002: 5).

As highlighted in the last row of Table 1, the direct contribution of government and local authorities to city farm resources is low. Figure 1 depicts the sources of resources for Woodlands Farm in 2001, indicating that there was no grant from the local authority. The major component of resources required for farm operations comes from charities, private donations and locally generated revenues. Also very significant is the role of regular volunteers on these farms whose contribution reduces the employment budget very considerably. The Federation of City Farms and Community Gardens (FCFCG, 2002) estimates that there are over 1,000 regular volunteers per year on London city farms. Through volunteering, partnerships and in-kind donations, high value inputs are given that would normally be unaffordable by the city farms.

SUSTAINABILITY OF FUNDING SOURCES

The future of lottery funding

Farms receive significant funding from the Lottery Fund for both capital investment and running costs. Bids for these

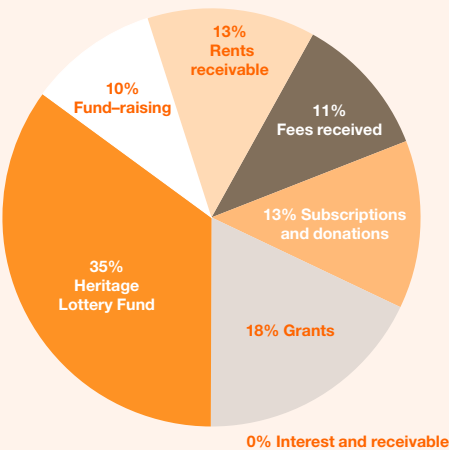


Figure 1 Typical sources of income for year 2001: Woodlands Farm

Table 1: Diversity of London City Farms - Two Examples

Variable/Feature	Woodlands Farm	Vauxhall City Farm
Size	About 90 (ninety acres)	About 1 (one) acre
Location	Outer London, London Borough of Greenwich (on border with London Borough of Bexley)	Inner London, London Borough of Lambeth
Poverty Levels	One of the deprived areas in London (and the UK)	One of the poorest outer London Boroughs
Management Structure	Registered Charity and Company Limited By Guarantee	Registered Charity and Company Limited by Guarantee
Turnover	About £160,000	£140,000
Staff	Volunteer management committee, one full-time officer, several task committees and volunteers	12-member management committee; four full-time staff, two part-time staff and 26 volunteers
Activities	Offers wildlife, environmental sanctuaries, and educational, training and social opportunities to a variety of individuals and groups in the community	Offers educational, training, social and recreational opportunities to a variety of groups and individuals in the urban communities Work Placements are offered annually in association with colleges such as Bromely College - the trainees get National Vocational Qualification Certificates in animal care (Level 1) that enable them to get employed full-time elsewhere
Source of Funds	20% LA and the rest from donations, charities and private sector. At least £100,000 for annual running costs.	30% LA, 40% Trusts and Charities, 10% other. At least £65,000 for annual running costs.

funds are made to the Community Fund, The Heritage Lottery Fund and the New Opportunities Fund. The farms have to compete against many other project bids from all over the country. In the 2002-2007 period, The Community Fund gave its priorities as children, young people, black and ethnic minority groups, refugee and asylum seekers, older people and people in areas disadvantaged by social and economic change. This is the framework in which farms like Vauxhall Farm secured funds for its project for refugees and asylum seekers. However, funds from these public sources are not very secure and allocations are dependent on prevailing political opinions and pressures brought to bear on the Fund Managers. To reduce social friction and enhance continued support, community

groups should put an emphasis on how their projects promote existing development policy. In the case of the UK, the farms have to “speak the language of” old people, children, education, social inclusion and the disadvantaged.

Competitive bidding

Many of the city farms in London are under-resourced and would close down if grants from charities were to disappear (FCFCG, 2002). However, even these grants are accessed through competitive bidding using problematic criteria that favour high profile and high return schemes (Howe, 2001). They favour highly organised groups with the skills and knowledge base to produce good bids. In contrast, small community groups wanting to set up community gardens or to

improve their local allotments will not find this easy. In the UK, community groups should consider pulling their resources together, especially where they are pursuing related or common project themes and combine forces to prepare bids for submission to key funding organisations. Community groups should also consider more sharing of skills in fund-raising.

Environmental health, safety and built development threats

As in cities of the developing world, urban agriculture in London faces challenges and constraints with access to land being the most critical. Other challenges have to do with infrastructure, soil contamination, theft, vandalism, access to inputs and marketing of produce. Public health and safety concerns regarding these farms were heightened during the Foot and Mouth epidemic in 2000-2001. Although no cases of the disease were reported on any London city farms, the farms had to be closed to the public for a long time (FCFCG, 2002). Since then, the public remains wary about working with farms. For farms that keep livestock, there is increasing opposition from animal rights campaigners and rising insurance costs. Thus, to survive, urban agriculture and city farm projects have to continue to maintain high health and safety standards as well as publicity campaigns to reassure the public. Joint project campaigns would be a more cost-effective way to deal with these issues.

Security of tenure

Given that in the UK start-up costs of these farms are in excess of £150,000 while minimum annual running costs are at least £50,000, any projects will need significant support from government or local authorities. Existing farms are struggling to raise the required funds and therefore, before any new farms can be contemplated, there

is a need to strengthen the financial and management capacity of those that exist. Clearly, the tenure security of the city farms is of concern and it needs to be guaranteed by the government through government grants, or where this is not immediately possible, for the local authorities to guarantee a long-term lease to the sites. It is with this security that members of the community and business can invest their efforts into the projects.

Community groups should consider pulling their resources together

Resources and matching up

Resources for urban agriculture project activities do not necessarily have to be in the form of money. They can be in other forms of materials, services and expertise. Companies are a good source of support. Most would like to show that they care about community needs and are not "rogue capitalists". Most company workers are ordinary family people who understand the need to survive and if approached appropriately will be happy to offer community funding as a way to advertise their businesses.

Education and training

Urban agriculture is not just about food production. In cities, environmental, educational and recreational dimensions are very important and can be a major source of income. Despite the varied origins of the farms (in some cases they are explicit sustainable Agenda 21 projects), the emerging trend is that educational activities are now the dominant feature. However, the potentials in this sector are far from exhausted. The levels of utilisation and direct involvement of schools could be much higher, like regular lessons,

or after-school activities especially in the summer. Following the Johannesburg Earth Summit in 2002, where education was put forward as one of the priority development sectors, community groups need to integrate this aspect into their projects and to articulate it clearly when seeking support from both government and international development organisations.

Community motivation and volunteering

Sustainable development is about community empowerment and capacity-building. City farms should be seen as multi-functional spaces where a variety of inter-linked community-driven projects take place. This enables expansion of activities with minimal manpower and financial costs to the farms. Since ownership of assets is crucial, the groups should be given opportunities to own the land on which they operate. This is also critical for communities in developing countries where communities continue to lose their land resource assets. Volunteers contribute significantly to these community projects and this has to be encouraged in all contexts.

Income-generating activities

Although city farms in the UK cannot legally operate commercially, any income they generate from sales and services has to be ploughed back into project activities. Currently, income from this source remains below 5%. Potentials for further income-raising opportunities need to be tapped but mindful of the need not to reduce access by the poor.



Woodlands Farm Trust

Members of Woodlands Farm Trust at work

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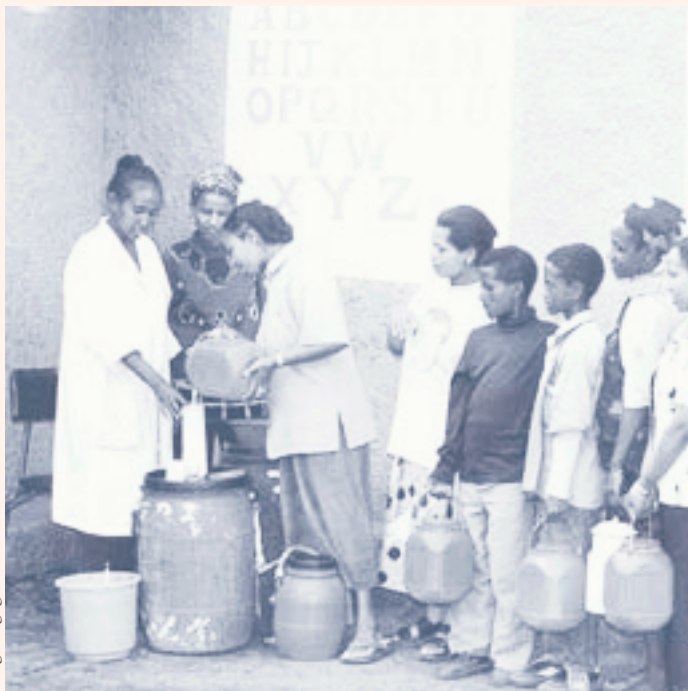
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Notes

- 1) The three local authority owned city farms in London are Newham City Farm, Hounslow Urban Farm and Brookes Farm in the London Borough of Waltham Forest.

The Ada'a-Liben Woreda Dairy and Dairy Products Marketing Association was established in 1998 in Debre Zeit town, 45 km southeast of Addis Ababa, Ethiopia with the main objectives to minimise the high transaction cost for the sale of milk and reduce seasonal price fluctuations. Over the last few years, the association has made significant progress, with current membership of 428 full members while another 181 non-member dairy farmers supply milk to the association. The major source of finance has been contributions from members, sales of milk and support from a number of government offices, NGOs and international organisations.

Azage Tegegne



Financing Market-oriented the case of Ada'a-Liben Woreda Dairy Association, Ethiopia Dairy Development

Ethiopia has the largest cattle population in Africa, estimated at about 35 million tropical livestock units (TLU). The highlands of the country cover about 40% of the total area, home to home to 88% and 73% of the human and cattle population in the country, respectively.

Livestock are closely linked to the social and cultural lives

Livestock have multipurpose uses and serve as a source of meat, milk, skins, fibre, fertiliser, fuel and cash for smallholder farmers. The contribution of livestock to the agricultural economy is significant accounting for 40%, and could be even higher if the non-monetary contributions are taken into account. Furthermore, livestock are closely linked to the social and cultural lives of several million

resource-poor farmers for whom animal ownership ensures varying degrees of livelihoods, sustainable farming and economic viability. At the household level livestock enhances income, provides food security and social status.

However, productivity of animals is low compared to improved breeds. For example, the total milk production is very low. It is estimated at about 1.5 million tonnes per annum and is growing at a rate of only 1.4% per year. On the other hand, the human population, estimated at 65 million, is growing at a rate of over 3% per annum. This shows that the per capita consumption of milk in Ethiopia is about 16 kg/year, which is much lower than the world's per capita average of about 100 kg/year. Hence, about 6 million tonnes of additional milk is required to feed the population as per the world's standard. This indicates the existence of a wide gap between the potential demand and supply of milk in Ethiopia. In order to meet the

demand of the growing population of Ethiopia, milk production has to grow at least at a rate of 4% per annum. Milk is usually produced in small herds that are scattered under smallholder production systems. Due to the highly perishable nature of milk, this causes problems in its safe collection, transportation and distribution to rural communities and urban centres. Moreover, milk passes through several channels from production to consumption and therefore there is considerable deterioration of its hygienic and nutritional qualities and consequently its monetary value.

The dairy industry needs to be optimised through organising milk production, processing, preservation and marketing in a well-coordinated way. With the recent changes in government policies featured by liberalisation and encouragement of the private sector to participate in the development of almost all aspects of the national economy, there exist immense opportunities to devel-

Table 1 Milk collection centres, number of suppliers and amount of milk supplied per day

Milk collection centre	No. of suppliers	Amount collected (l/day)
1	49	516
2	88	1229
3	81	956
4	25	416
5	57	906
6	19	329
7	17	727
Total	336	5812

op and improve the agricultural sub-sector. With the increasing demand for diverse and quality animal products, prices are bound to escalate unless production increases proportionally. Bridging the wide demand-supply gap calls for the designing of appropriate and sustainable dairy development strategies based on the specific agro-ecology and felt needs of smallholder farmers. Currently, a number of smallholder and commercial dairy farms are emerging mainly in urban and periurban areas. Smallholder rural dairy farms are also increasing in number in areas where there is market access. However, the transaction cost of milk marketing is a major problem for individual smallholder farmers. The natural evolution resulting from such problems is the formation of milk units and dairy marketing associations where farmers can collect, process and market milk and milk products. One of the pioneer associations recently established in Debre Zeit town is the Ada'a Liben Woreda Dairy and Dairy Products Marketing Association (PLC).

There are a number of dairy, sheep and poultry farms in urban and periurban areas of Addis Ababa. Apart from government production under the Dairy Development Enterprise (DDE), there are about 5167 dairy farms with about 58,568 dairy cows. Most of the farms (93%) have only 1 to 5 cows, while the rest have 6 or more cows. About 50% of the dairy farms are owned and run by women. Annual production is about 44 million litres. According to the information of the Agricultural Development Bureau of the city administration, smallholder dairy farmers in urban areas produce about 79% of the milk supply while periurban dairy farmers and the DDE each contribute about 10% of the supply. Out of the total volume, about 36,470,296 litres (83%) is sold annually in Addis Ababa city.

Milk marketing is a major problem for individual smallholder farmers

In the periurban areas, which includes Debre Zeit town, almost over half of the households make their major source of living from agriculture and livestock keeping. The contributions of urban and periurban livestock production systems to overall development include income and employment generation, poverty alleviation, and improving human nutrition and health. Urban livestock production systems are complex with diverse activities including production, processing and marketing and several technologies at each level in the commodity chain that make up a system. Each activity of the system is affected by diverse biological and social factors and their interactions. In addition, the major technical



A milk separator in Debre Zeit town, Ethiopia

and non-technical problems associated with these livestock production systems, policy issues, land rights and ownership, availability and cost of inputs (genotype, feed resources, trained personnel, animal health), access to financing and credit systems need to be addressed.

ESTABLISHMENT OF THE ASSOCIATION

The Ada'a Liben Woreda Dairy and Dairy Products Marketing Association was established in September 1998 with 34 founding members who purchased a single share of 100 Birr each and an additional Birr 10 as registration fee. The initial capital was only 3,400 Birr (US\$400). The first two years were devoted to organisational arrangements to ensure effective operation. The main objectives were to:

- ❖ minimise the high transaction cost for the sale of milk and reduce seasonal price fluctuations, particularly during fasting;
- ❖ reduce wastage of products due to poor handling procedures and lack of processing facilities so as to increase shelf-life of products;
- ❖ increase production and productivity of dairy farms and improve the overall incomes of member farmers;
- ❖ supply inputs such as feed, health services etc. to member farmers at reasonable prices
- ❖ provide training in dairy cattle management, milk hygiene and handling and milk processing to member farmers;
- ❖ ensure urban-rural linkages for dairy development, assist farmers to form milk units and establish a milk union at Woreda level;
- ❖ introduce a saving and credit system to member farmers;
- ❖ collaborate with other dairy associations (nationally, regionally and internationally) to enhance dairy development.

The milk collection and marketing activity started in January 2000 with the above objectives. The amount of milk collected from founding members was 308 litres per day or about 24,319 litres per month. The association, although informally

Table 2 Achievement of the dairy marketing association from 1998 to 2002

Year	1998	2002
No. of members	34	486
Share sales, Birr	3,400	65,000
Capital, Birr	3,400	500,000
Number of cows	729	1,716
Milk collected per month, litres	24,000	174,360

1 Ethiopian Birr = US\$8.50

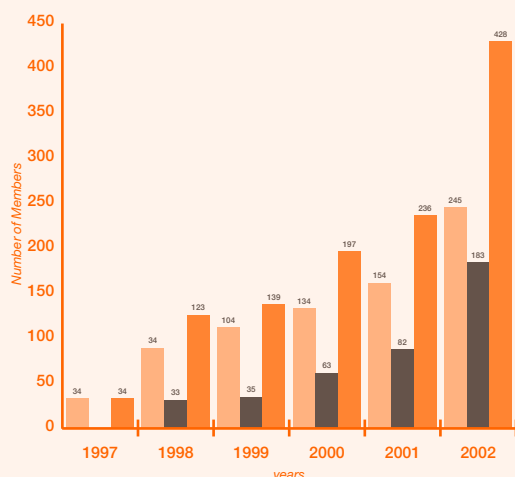


Figure 1. Ada'a Liben Woreda Dairy and dairy products marketing cooperative members, males (■), females (■) and total (■).

established in 1997, got its legal Certificate of Registration from the Oromiya Regional State in September 2000.

CURRENT STATUS

There are some dairy producer and marketing associations in urban and periurban areas of Addis Ababa. However, the largest proportion of smallholder dairy farms are found in inter-urban Addis Ababa. The Ada'a Liben Woreda Dairy and Dairy Products Marketing Association is one of the youngest associations established in the periurban areas of Addis. Over the last few years, the association has made significant progress with about seven collection centres in and around the town and has taken significant strides in development (Tables 1 and 2). Currently there are 428 full members, composed of 245 male and 183 female (Figure 1). In addition, 181 non-

175,000 litres per month. A small cream separator, a butter churn, a 3,800 litres milk tanker, 60 milk cans with 65 litres capacity, milk quality testing devices and a 2.8m x 5m prefabricated house have also been purchased by the association. The association supplies grass hay and concentrate mix to members at reasonable prices. The number of shares has also increased. It is hoped that many rural dairy producers will join this association thus providing markets for their milk and milk products.

FINANCING

A number financing institutions and collaborators have contributed to the establishment and development of the association. The Bureau of Cooperatives has been instrumental in the establishment and legalisation of the cooperative. The Bureau of Agriculture has provided technical assistance. The International Livestock Research Institute (ILRI)'s, Debre Zeit Research Station has played an important role in the project preparation and general advice on organisation of the association. ILRI has also contributed in training, particularly in dairy cattle management including feeding strategies, animal health, milk handling, milk hygiene and milk processing. The major sources of financing for the association have been from sale of shares and profits from sale of milk and milk products. The government has provided land for free to implement the planned project for establishment of a dairy plant and a feed processing mill.

A number of dairy farmers have expressed interest in expanding their dairy activity. However, shortages of funding and access to credit have been limiting factors. Volunteers in Overseas Cooperative Assistance (VOCA) - Ethiopia, an NGO, has financed the training programme so far. Another NGO

from the Netherlands, known as Genesis Farms, has been instrumental in provision of long term loans with an interest rate of about 8% for the purchase of a mini truck and cooling tanks. In addition, it has provided free financial support in the order of 10,000 USD over a period of five years.

FUTURE PLANS

The association would like to strengthen and expand its activities. As a result, it has developed a project proposal with broader objectives to support modern, environmentally sustainable dairy production systems and contribute to the development of the national dairy production sector. Components of the project include establishment of a dairy processing plant, a feed processing plant, provision of artificial insemination ser-

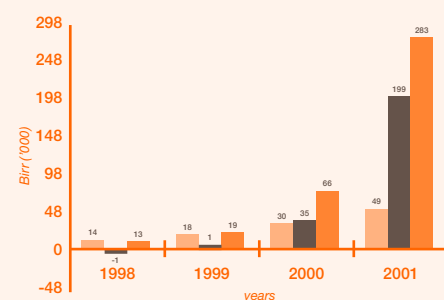


Figure 2. Annual capital (■), shares (■), profit and loss (■) statement of Ada'a Liben Woreda dairy and dairy products marketing cooperative

It is hoped that rural dairy producers will join

member dairy farmers supply milk to the association. Members of the association now have a total of 1716 dairy cows and a capital of 500,000 Birr (US\$58,823.5). The number of milk collection sites has increased to 7 around Debre Zeit town. The association employs 25 regular staff, with salaries ranging from 60 to 300 Birr per month. Recently, the association purchased 2 coolers with 25,000 litres capacity. The current milk collection has increased to 5,500 litres per day or about



Logo of the dairy association showing both Zebu and cross-bred cows

vices to members, provision of veterinary drugs and dependable animal health services, a shop to provide inputs and services, waste management strategies and technologies to benefit members, training programmes, seminars, workshops on various aspects of dairy production, expansion of dairy production and processing technologies to rural communities and establishment of strong rural-urban linkages. The project is estimated to cost about US\$5 million. For the implementation of the project, the association plans to use some of its capital, fund raise from members and solicit support from donors and supporters of the dairy sector.

Annually, up to 2.5 million city inhabitants are involved in agricultural activities in St. Petersburg. More than 500,000 of them live in their summer residences on garden plots during the summer period. The total area cultivated by city dwellers around the city is 560,000 ha.



Oleg Moldakov

Micro-credit and Investment for Urban Gardening in St Petersburg, Russia

Vermicomposting

The main reasons to practise gardening and farming in the city are self-sufficiency, especially in fresh green food; access to “healthy” food; getting an additional income through the sale of fruits, vegetables, eggs, milk, and flowers; and leisure. Urban agriculture is practised in the inner city: in backyards, on public lands and vacant spaces near the houses, in basements, on rooftops and balconies etc., and in the periurban areas where the gardens may be located at the city boundaries (commercial or subsistence-oriented) or at larger distances (10-100 km). Thus several types of urban agriculture have been established, which are: *Dacha*, *Sadovodstvo* and *Ogorod*, (which are more collective organisations) as well as individual land plots.

City gardeners hardly obtain credit or loans

NON-COMMERCIAL FINANCIAL SUPPORT

City gardeners hardly obtain credit or loans. They rather borrow small sums of money from friends or relatives for construction or repair of houses and sheds. The gardeners usually spend their own money on seeds, fertilisers, pesticides, agricultural tools and equipment. Urban farmers and gardeners are reluctant to take loans and resort to it only for financing improvements to their houses. The small-scale suburban (periurban) farmers have a stronger interest in obtaining

credit in order to finance agricultural activities.

Associations

Associations of owners of land plots are under cooperative or partnership arrangement. The form of financing of such associations is classified as “non-commercial”. They can undertake economic projects at the expense of member payments only. At annual meetings, the associations decide on financing certain common needs such as water pipe lines, drainage, wells, official or private night watchman services or garbage collection services, etc. Every member pays a fee of US\$20 to 200. Associations may establish funds for mutual credit.

City subsidies and in-kind support

In the summer period (mid May to mid October), travel by train is free for pensioners, who form an important group of subsistence farmers. This subsidy costs the city of St Petersburg a sum of 70 million roubles (about US\$2,300,000) per year. The Leningrad Oblast Governor has, upon request by the gardeners, financed 16 million roubles (about US\$533,000) for the construction of roads. The government is interested in assisting self-employment and in social and political stability. It considers gardening as a socially useful activity. The municipality has therefore shown its readiness to provide some indirect support (low tariffs on transportation, certain municipal services free of charge, ambulance service for *dachas/sadovodstvo*, etc.).

In 2002, a programme entitled “Support of gardening and kitchen gardening 2003-2010” was authorised by the St Petersburg government, which foresees

provision of 100 million roubles (US\$3 million) per year, with the aim of changing the large non-commercial gardening communities into comfortable settlements. The programme is financed out of the budget of St Petersburg.

SUPPORT TO (MICRO)ENTREPRISES

At the moment there is no favourable investment policy for small business, especially agricultural business, in Russia. The interest rates for credit is very high, while credit and investments are hard-to-reach. On the other hand the farmer and/or agro-business is often not well prepared to deal with such investment projects (collateral, credit history or experience in business). Micro-credit is developing slowly in cities like Moscow and St Petersburg,

As mentioned before, only 5% of the *dacha* owners have obtained a loan, mainly from relatives or friends. Most of them (84%) would not take a loan if offered. Those who would take a loan would use it mainly for construction or improvement of a house rather than in agriculture. Only just over 10% of *ogorod* gardeners have used a loan, which they have got mainly from their relatives or friends, to purchase seeds and seedlings. Some 40% would take a loan, if offered to them, mainly to buy land or animals (70%) or to build a house (20%).

Informal credit

According to estimates of various research groups, up to 70% of the businessmen in Russia use the services of so-called informal creditors, or the “black” market, with monthly rates of credit of up to 15%. Most banks do not work with credit less than US\$3,000 or ask for too high collateral.

There is still a need for government subsidies in urban agriculture

European Support

The programme "Fund of support of small business in Russia" of the European Bank of Reconstruction and Development, covers about US\$150 million credit to small farming business in Russia. Credit is given as seed funds, and for already existing business. The programme was designed up to 2005, and is now extended to 2010. The European Bank provides long-term credit to Russian commercial banks, who are obliged to utilise these funds for credit programmes for small firms. The programme cooperates with five banks, Sberbank of the Russian Federation, AB NBD (Nizhni Novgorod), the Far East bank (Vladivostok), Petrovsky bank (St.Petersburg) and KMB-BANK. KMB-Bank is the only foreign bank in Russia created specifically to serve and promote micro-, small, and medium-sized businesses. Their basic task is the provision of loans. These banks have branches in 24 cities of Russia. Credit is given out in roubles. The interest rate in 1999 was about 42% but has decreased to 25%. *Micro-credit* is given to companies having up to 20 workers. The volume of credit is from US\$100 to 30,000 for 24-36 months. *Small credits* are given out in volumes up to US\$75,000 (in exclusive cases - up to US\$150,000) for a term of 36 months to farms or other producing or processing companies employing up to 80 workers.

Other micro-credit sources

Some international organisations such as the Fund Eurasia and the Centre of the Civil Initiatives, realised programmes of micro-credit for periurban farmers during 1994-2000. Credit of US\$1,000 or 2,000 was provided for the purchase of a small tractor, cattle or seeds. About 10 periurban farmers per year obtained credit for each programme. In order to get a loan, the applicant had to show property (usually a car) as a guarantee for loan recovery. The loan was given for a term of 2 - 6 months, at an interest rate of 18% per year. The periurban farmers were usually middle-income level people, with farms of 0.2 to 20 hectares, and the programme consultants visited them to discuss and review the business plans before a final decision on the loan was taken.

Leasing possibilities for urban and periurban farmers in St Petersburg

If urban or periurban farmers are able to pay in instalments for vehicles, agricultur-

al inventory, tools, bakery equipment, processing equipment etc. for a period of 1 - 2 years, the Lease Centre "St Petersburg Farmer", the city administration's credit institute, is ready to help them. The Centre's budget reaches up to 500,000 roubles (about US\$20,000) per year. The Centre examines the farmers' profile and decides on purchasing the agricultural tools to be subsequently passed on to the farmer as a lease. Eventually the farmer will own the equipment, but overpaying 20-40% (as by credit).

St Petersburg Farmer Credit Cooperative

This cooperative was created by 50 farmers from periurban areas in cooperation with processing companies. The cooperative provides credit to these farmers to purchase seeds, fertilisers, animals etc. There are more than 50 farmers and processors/ processing companies of agricultural production in this organisation today. The total area of their lands is nearly 2,000 hectares, and the total sum of their assets is more than 60 million roubles (US\$2 million).

EVALUATION

Small urban and periurban farmers who very often mix their business activities (producing and processing, or more often trading and producing) have a more favourable profile for obtaining credit, as opposed to rural farmers with their simple, raw and cheap products. However, due to climate and soil fertility conditions, subsistence and recreation are still the more important contributions of small plot gardening in comparison to commercial plots. There are many challenges associated with subsistence agriculture - low returns, high labour input and low profitability.

The suburban farmers take micro-credits for purchasing agricultural inputs, while urban farmers - gardeners and kitchen gardeners - do not obtain credit. These people have no experience of dealing with credit organisations, and are afraid of losing property they have to put up as collateral according to credit agreements. They are usually not sure about repayment of credit, have no clear business plans, and do not want to be involved in bureaucratic procedures. Subsidies by the

city government are important, but gradually reducing, and more substantial support is necessary.

The success of the financial investment often does not depend on the location of a farm, but on the level of management, soil fertility, infrastructure, modern inventory, professionalism of workers etc. It should be mentioned here that urban agriculture has more restrictions or even prohibitions on types of activity, particularly on large agricultural animal keeping, and therefore less investment opportunities. The commercial farms use credit widely.

There is still a need for government subsidies in urban agriculture. Urban gardening is a socio-economic factor of political stability in society, and assists in the survival of urban inhabitants. It is a tool for alleviation of urban poverty through improvement of food security for the urban poor and pensioners (often the same persons), provision of some job opportunities in the summer period, healthy food and recreational areas for youth. The government therefore should invest in the facilities and infrastructure of community gardens such as water services, roadways, garbage collection, and offer tax abatement in exchange for private action. Urban and periurban farmers' credit cooperatives could offer an alternative model of credit and financing services and would need some limited budget support. The Land Use Committee's could play a role in providing land records and adequate zoning of urban open spaces, vacant public and private lands. A special department or Inter-governmental Committee is needed to develop and coordinate urban agriculture.



Oleg Moldakov

Spraying of vegetables on the roof

Temperate vegetable farming was introduced into former French colonies by missionaries, schools, the military and prisons. As a result, men in West Africa produce mainly temperate vegetables even though vegetable farming is typically a women's activity. Women cultivate traditional vegetables such as local spinach, local eggplant (*solanum macrocarpum*), hot peppers, okra and local tomatoes.



Angelika Kessler

Waste collection

Economic Strategies of Different Cropping Systems

in Urban and Periurban Agriculture in West Africa

The following cropping systems predominate:

Mixed vegetable farming, irrigated with watering cans and/or pumps: short- and long-cycle vegetables like lettuce, cabbage, carrots, onions, amaranth, eggplant, beetroot, and so on are cultivated. These farmers apply a lot of pesticides (especially for crops such as cotton and cocoa) which are sold on the black market. Pesticides that are legal for vegetable farming are used less frequently. All of the vegetable farmers use chicken or cattle manure and/or chemical fertilisers, which are sometimes subsidised (e.g. in Dakar). Only in a few cases do they use waste or burned waste for improving the soil. Low-quality imported seeds are sold and used as are good imported and locally produced seeds.

Women's traditional vegetable farming: comprising short-cycle vegetables such as amaranth, beans and sweet potatoes for their leaves, as well as hibiscus, lettuce, okra, local eggplants, etc. Women farmers use fewer inputs than the mixed vegetable farmers. They rarely apply pesticides, use only low dosages of chemical fertilisers and manure, and always use local seeds.

Ornamental plant cultivation: 20 to 100 different flowers, bushes and trees are planted for gardens and reforestation. Pesticides are applied. The cultivators grow imported and locally collected seeds and cuttings. In addition to cattle and poultry manure and chemical fertilisers, they use night soil. For those who also produce flowerpots, sand and cement are employed.

Rainfed staple-food farming: always includes maize production, and depending on the climate: cassava, sorghum, millet, groundnuts, etc. These farmers do not use pesticides, but do use sewage and waste for soil improvement, as well as local seeds.

Mixed and traditional vegetables are always grown close to rivers, streams, tanks or the sea where the groundwater table is high. These farming systems are located in open spaces close to the centre to be able to provide fresh produce close to the markets (as there are usually no cooling facilities) at reduced transport costs. Traditional vegetables are sold in the residential quarters, and are not always transported to the bigger markets where temperate vegetables are sold. The ornamental plant growers strategically place themselves where "rich" people pass by, such as in the administrative quarter, close to embassies, and where water is available. Staple foods are grown during the rainy season and therefore do not need the water sources of rivers, streams, tanks or the sea. Cereals and tubers can be transported and stored a lot easier than vegetables. This is the reason we find them more in the periurban area.

Table 1 gives a schematic representation of the relative location of the different West African urban cropping systems, in relation to the city centre. If the town is close to the sea, the scheme would be cut along the diagonal limit.

ECONOMIC STRATEGIES

The differences in crops and inputs of the various farming systems result in diverging economic strategies. Farmers cultivating mixed vegetables irrigated with pumps and/or watering cans grow short-cycle crops like amaranth and lettuce to assure cash for inputs and salaries. Long-cycle (i.e. three months) crops like carrots, cabbage and onions are used to maximise their profits and to invest in infrastructure or private needs (e.g. school fees in September). Annual income varies depending on the management capacities and farm size, from 120,000 to 5,000,000 FCFA¹. Vegetables can be grown as a full-time or part-time occupation.

Traditional women vegetable farmers produce short-cycle crops for home consumption and for selling. They prefer short-cycle crops that require regular trimming (i.e. twice a month) to assure regular income and high cash flow. They cannot afford to

Table 1 Credit Condition per Farming System

Farming System	Purpose	Kind of term	Amount
Mixed vegetable farming	Start of the season	Medium term (min. 3 months)	Middle
Traditional vegetable women farming	Start of the season	Short term	Low
Ornamental plant growing	Seeding in the dry season	Medium term (about 5 months)	Middle
Vegetable and ornamental plant farming	Irrigation infrastructure	Long term	High
Rainfed staple-food farming	None	None	None
Cash crop farming in rural areas	Starting the cash crop season	Seasonal	Middle

grow long-cycle crops like carrots, as this would tie up their investment for several months. But, with short-cycle crops, only a low input is needed and they are assured a monthly income, which may add up to an annual profit of 100,000 to 120,000 FCFA per season. All the women interviewed were part-time farmers.

Ornamental plant growers have to sow a lot of plants in the dry season to be sold in the rainy season. This is quite difficult, as there is no income to pay for additional labour during the dry season. Therefore, they try to find gardening clients who can assure a permanent income throughout the year. They sell directly (no intermediaries) and therefore usually speak French well. With this strategy, the growers achieve an annual profit of 250,000 to 3,000,000 FCFA¹. Most of them work full-time on their farm. The most well-known ornamental plant growers have a professional background of forestry extension training.

Rainfed staple-food farmers predominantly produce for their own consumption and for gifts, to reduce expenditures. Only in exceptional cases do they sell the harvest. For example, cassava is processed by the women into "gari" and used for bartering. Urban rainfed farmers are always working part-time and need another main activity to meet income needs.

Vegetable farmers can therefore be divided into three groups of actors:

Mixed Vegetable Farmers irrigating with pumps: are the richer farmers with large plots. They are presidents, secretaries and other influential persons in farmers' organisations. They have contacts in extension services, receive credit, have a certain political influence and have often achieved a secondary level education.

Mixed Vegetable Farmers irrigating with watering cans: represent the middle-class farmers. They may have contact with extension officer and may be organised in groups. In Lomé, Cotonou, Ouagadougou and Bamako, some of them are connected to research projects. They are illiterate or have attended primary school (Kessler, 2001)

Traditional Women Vegetable Farmers: are the poor farmers. They are not organised in cooperatives, associations, or groups, and

are generally not in contact with extension services (although in Ouagadougou research has been carried out with them on the use of industrial wastewater). They are illiterate (Kessler, 2001) and use marginal land for their growing needs.

FUNDING

Generally, little funding is required for *rainfed staple-food* farms, usually coming from other activities such as employment, trading, handicrafts, or vegetable farming. Informal credit institutions provide the majority of funds for vegetable farming. In those cities where vegetable production is interrupted due to water shortages (e.g. low groundwater table at the end of the dry season), the farmers need other sources of funding. Several solutions have been observed at the farm level:

- ❖ *rainfed staple-food farming* (as an additional activity for mixed vegetable farmers in Bamako and Ouagadougou);
- ❖ *trading and occasional jobs* (as an alternative in Ouagadougou);



Angelika Kessler

Waste separation

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- ❖ in Lomé, women traders give *credit* to vegetable farmers for seeds, fertilisers and pesticides, and then oblige them to sell the vegetables to them at harvest time. This system sometimes ends up with the women traders becoming the owner of the farm and the vegetable farmer ending up working for the trader;

- ❖ in Lomé, employment as an irrigator on the farm of another farmer who has managed to produce even in the dry season when a lot of manpower is needed for irrigation is common (Kouvonou, 1998).

RECOMMENDATIONS

When credit is extended to urban farmers by local credit organisations, the conditions should differ per farming system to avoid debts:

- ❖ Credit should be available for ornamental plant cultivators during the dry season, to be repaid in the middle of the rainy season at which time the growers sell their plants.
- ❖ For subsistence farmers like staple-food farmers, credit extension is quite risky as they usually do not sell their produce and therefore have to repay through non-agricultural income.
- ❖ Low and short-term credits would help traditional vegetable farming women at the beginning of the vegetable production season, to be repaid one or two months later.
- ❖ Credits for mixed vegetable farmers at the beginning of the season can be repaid after a minimum of three months, when the long-cycle crops are harvested and sold.
- ❖ Credits for irrigation infrastructure should be extended on a longer term. An irrigation infrastructure is quite expensive and the farmer needs some time to optimise the improved production system and therefore cannot start paying back loans early on. If for some reason the farmer does not manage to repay the credit, the irrigation infrastructure can be sold to another farmer. In Lomé for example, when a vegetable farmer abandons his fields, the irrigation infrastructure is sold to the following farmer, whereas the land is not.

- ❖ Rural credits are mainly provided to cash crop farmers such as cotton farmers, and follow the seasonal terms of the specific crop. To access these credits, farmers must be members of the cash crop production cooperative; therefore, vegetable farmers do not get them.

- ❖ As most middle-scale and small farmers are illiterate or have had little education, the provision of credits should preferably be accompanied by training on credit management and bookkeeping.

Notes

- (1) 650 FCFA is equivalent to €1 due to the fixed exchange rate to the former French Francs.

Micro-credit for Urban Agricultural Activities in Bulgaria

Traditionally, agriculture plays a significant role in the Bulgarian economy.

Agricultural employment in Bulgaria is high by European standards (in 1999 it was close to 26%) and has been growing in the last twelve years.

Since 1997, the government has made rapid progress in implementing wide-ranging reforms in the agricultural and financial sectors, and in the economy in general. Some agricultural lending programmes have been introduced, but the funding levels are insufficient to compensate for modest bank credit. The banks persist in their conservative approach to lending in general, and to agriculture in particular.

Small urban farmers form a substantial and increasing part of the agricultural sector.

Most urban agriculture in Bulgaria is for subsistence, providing additional food and a means of survival for socially weak groups, and employment for elderly people or unemployed family members. The social effects of urban agriculture are numerous and without question; yet, small-scale, non-commercial agriculture is not considered important in the national economic restructuring process. Therefore there are no special programmes to support urban agriculture, and the small urban farmers are not eligible for credit. In fact, due to the low profitability and the risks involved, only a small percentage of these gardeners seek loans. As the State does not recognise urban agriculture as an economically viable activity, the banks in turn consider farming activities to be risky. A survey by SWF under the SWAPUA Programme (1) showed that 55% of the urban farmers lacked capital for inputs, but that only 9% had taken loans, while another 20% said that they would like to take loans. Most of these loans however are from relatives and friends and not from the banks. The commercial farmers (rural and periurban) have access to bank loans, but the non-commercial urban farmers have to rely

on their own means or on informal credit.

Apart from relatives and commercial bank credit, rural and urban agriculture in Bulgaria currently relies on several international lending programmes, discussed briefly in the following sections.

SWISS CREDIT

The Swiss Agency for Development and Co-operation (SDC) and the United Bulgarian Bank (UBB) have developed several projects related to the agriculture sector, two of which are: *FAEL*, providing credit for small and medium enterprises, and *FibL*, giving credit to private farmers (micro-investment credit), which fill a gap in the existing credit system. This assistance is meant to convince the Bulgarian banks that such guarantees can be useful and successful for those farmers who are capable of managing their loans and repaying them in time. The Swiss Foundation *FibL* is a small-scale venture, and aims at improving the capacity of farmers to apply for loans and the capacity of bank staff to review and appraise loan applications from the agricultural sector. Mechanisms for encouraging and promoting the involvement of commercial banks in providing loans to private farmers on a much broader scale are being tested. The credit is oriented to farming in general, but not specifically to urban agriculture. It concerns family farming, mainly with family labour and additional labour hired seasonally. *FibL* sub-



Feldbau Malerei
SWAPUA

sidises the preparation of business plans and applications for loans. The maximum value of the loans for farmers is up to US\$12,500 for a period of 3 years. The interest rate is relatively low: equal to the basic annual interest rate of the Bulgarian National Bank plus 7%. The requirement for collateral by the banks is usually a minimum of

Most urban agriculture in Bulgaria is subsistence

120 -130% of the loan value, but may increase up to 200% in practice. The farmers use their own means (real estate - buildings, machines, technical equipment) as their part of the collateral (up to the equivalent of 100%, or US\$12,500), while *FibL* provides the balance of 80 - 100%, and more if necessary. During the last three years *FibL* has provided 25 loans to local farmers, which have all been paid back.

The Swiss foundation *FAEL* started in 1995 and supports the development of independent, private, small (up to 10 employees) and medium (up to 50 employees) enterprises in the sphere of processing and services. The structure of the *FAEL* foundation's activities are divided into three departments: "Credit support", Management

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Consulting” and “Technological Support”. The first loans to farmers were extended in 1999. The volume of the credit was US\$800,000 for the first three years from the start of the project. During that period, many individual consultations and training courses were provided to the firms. Of the activities for which credit has been allocated under this programme, 16 are related to urban agriculture. Together with the support provided to private farmers (25 loans) – a total of 41 loans have been in support of agricultural activities in the urban environment during the last three years.

USAID SUPPORTED MICRO-CREDIT

The US Government also supports the development of micro-financing organisations in Bulgaria. USTOI and Nachala are two of the USAID-supported NGO programmes. USTOI extends credit through cooperative structures, and supports three main activities – trade (91%), services (6%), and production of food (3%). In order to obtain loans under USTOI, entrepreneurs have to set up a guarantee group with no less than 7 members. Group members mutually guarantee loans that they receive from USTOI. The members of each guarantee group also become members of the USTOI cooperative that is registered in the respective region. A first-time client of USTOI can apply for a loan of US\$300 – 450 for a 4-month period. Creditworthy clients can submit successive applications with the maximum loan size increasing with each additional submission. All loans have a flat monthly interest of 2%. No material guarantees or collateral is required. If a member fails to provide his or her instalment upon the agreed day of payment, all other members are held responsible to settle the payment. USTOI especially stimulates women entrepreneurs with small family businesses.

The Nachala Foundation, which is a global coalition of micro-financing institutions, was established in 1993 with support from

Opportunity International (OI). Nachala provides individual loans in the range of US\$500 to 1,500 for first-time borrowers. The maximum loan size for third-cycle borrowers is US\$8,000. In special cases, Nachala can approve a loan for up to US\$20,000. The average size of loans as of December 31, 2001 was US\$1,990.

SCOPE FOR FINANCING URBAN AGRICULTURE

The results of the international programmes described above are positive and encouraging – new jobs have been created, ecological food production has increased, and small businesses have developed. Though urban farming is not a specific target for support, the activities for which loans were provided are in fact performed in the cities and deal with production and processing of agricultural products. The total number of loans found under this survey amounts to 341.

The role of intermediate financing organisations is very important. More institutions to assist in setting up the methodology to work with credit are needed. Regional organisations of farmers that can provide guarantees for its members should be supported, just as exchange of experience with other EU member countries.

Though these donor programmes are very good examples of how international support can work with local institutions to allocate small loans, the poor are still excluded, as they do not have access to the formal banking system. Farmers are reluctant to mortgage their houses, which is the only form of collateral acceptable to banks. Land is not accepted as collateral, because a proper land market has not yet developed. In addition to the pledged security, borrowers are usually required to obtain guarantors.

There is no policy support for urban agriculture, as it does not have official recog-

nition by the State and is not considered in the sectoral (macro)-economic reports and strategies. Urban farmers are non-commercial by nature as they do farming for subsistence and self-employment. They do not sell their products and it is difficult for them to pay back loans, as they do not gain stable revenues. This is also the reason why it is difficult for them to obtain commercial loans. On the other hand, these urban farmers are eligible for small-scale “consumer credit” provided by many banks, which is the easiest and the simplest credit to obtain. One can apply for it without collateral, only with a recommendation from guarantors. However, this form of credit is not popular as the interest rate of 16% is too high.

Emerging commercial urban farming needs political support

RECOMMENDATIONS

A policy is needed for improvement of the financial sector. Since the provision of grants is not sustainable, the allocation of (small-scale) credit would be better. The role of intermediate financing organisations, which can provide guarantees, is very important. Enhancement and strengthening of local structures, like the mutual *kasas* (see Box), would also be effective.

Emerging commercial urban farming needs political support in the form of credit, a framework of rural cooperatives in the country, a well-functioning land market, and efficient market and non-market transactions. Additional measures in the banking system targetted at urban farmers are also needed, like flexible collateral, legal procedures, longer repayment time, and lower interest rates are among these measures.

Furthermore, a less bureaucratic approach of banks towards their clients is required. Training of both bank officers as well as small-scale urban farmers is essential in developing procedures for smooth handling of applications and management of loans.

Notes

1) The survey was done under the EC/INCO funded project “Soil and Water Management in Agricultural Production in Urban Areas OF CEE-/NIS countries” SWAPUA

Mutual Kasas

Mutual support among farmers is one of the ways to improve access to credit. Employee Mutual *Kasas* existed in most companies and industries during the communist era and served as a means for employees to take small and relatively inexpensive loans. In this system, members are responsible for the rules. Members make a contribution directly from their salary (US\$2.50 – 1 per month) to the co-operative on which they are paid a market rate of interest on their share balance. Mutual *Kasas* provide loans to members range from US\$157 to a maximum of US\$1,000, if they have accumulated a balance corresponding to a share to loan ratio of 1:3 to 1:5. The main benefit of membership is to have access to a small loan. These *kasas* would be appropriate for urban farmers.

The last 20 years have seen the population of Marilao increase at an average rate of 9.4% per year - 4.5 times the national average. Farm to city migration accounts for 85% of this population increase in the city.



Leonora Angeles

Compost ready for distribution

Investment to in The Philippines

Reduce Urban Poverty

In 1995, the 1996-2000 local plan document set the tone for moderation. The local agricultural policy, as part of this plan, emphasised productivity improvement combined with access to financing. At the time of the plan's formulation, 58% of the municipal agricultural land had been converted to human settlements, industry, services, commerce and trade, resulting in degraded soil, a deterioration in surface water quality and smog, while yields for traditional land-based crop production have consistently declined. In addition, the urban sprawl changed the value of the agricultural land market. Landowners opted to sell their property, given these benefits, and the farm tillers were only too willing to realise immediate financial gains that would have required 63 more years of hard work in agriculture.

COMPOSTING PROGRAMME

These technical and economic realities did not favour the implementation of the 1995 local policy on agriculture. The opportunity to reform the policy presented itself when the municipality started, in 1997, to produce compost with the biodegradable waste generation from 22,363 households, two pub-

lic markets and approximately 353 small-scale enterprises. Compost application studies were carried out with the community stakeholders; i.e. traditional farmers, middle-class housewives and the landless urban poor, the latter having the strongest need for urban agriculture.

A survey (sample size 881 households) revealed that nearly half of the landless urban poor households are earning less than US\$3 per day with no fixed or permanent employment status. The income level of the urban poor is not far from that of the traditional farmer in Marilao, at US\$2.10 per day. Of the total income of the landless urban poor, 67% is spent on food. Reducing food expenditures for the urban poor is the primary goal of the compost-based production programme.

THE INVESTMENT SCHEME

From 1998-2001, the municipality invested human resources, time and logistics into the collection of raw materials (biodegradable waste), and the processing and use of the compost for agricultural production. The municipal investment of the compost production includes land, building, machinery, education campaigns, and a collection vehicle.

The vegetables are grown in soft plastic pots. These pots are cheap and easy to move. They can even

be stacked up like terraces, in layers or in circles to optimise the use of space. Green leafy vegetables can be grown 6-8 times year-round. Other vegetables, like tomato and green pepper have nutritional value, while the vegetables with vines have a longer fruiting cycle and space limitations to consider, and are therefore planted on the rooftop to reduce heat emissions. Advice and training is further given on crop choice, technology for compost-based agriculture, and the savings programme. Each poor household has the capacity to produce home-grown food. The

The Flight of Poverty from Rural To Urban Areas

Mrs Adelfa Co is a landless urban poor woman earning an average of US\$2 per day (P100) as a garment worker and dressmaker. She has no permanent employment and her short-term work hours have been in decline for the last five years. She settled informally by an abandoned railroad track 15 years ago, together with her brother, mother and two children in a 30 m² area. She learned about the urban agriculture programme of Marilao as a participant of the workshop on urban poverty reduction. There she saw the model on compost-based vegetable production and immediately recognised the potential to address the chronic food shortage on her table. She joined the local urban poor association's savings and loan programme. Each day, Adelfa set aside one peso (US\$ 2 cents), and after four weeks received the composted soil, seeds and plastic pots. Two months later, she started harvesting vegetables for the family. Now, she is planning to expand her rooftop vegetable pot production not only to augment the family food supply but also to sell the surplus in the local market.

cost/benefit of home-grown vegetable production is presented in Table 1.

The cost of labour is not included as this is all based on family labour. For the vegetable production to be financially sustainable, the monthly cost of operations must be recovered. An individual mandatory savings scheme of US\$0.02 per day (two cents) or US\$0.30/month was implemented. This amount of mandatory daily savings is equivalent to 9.26% of the US\$3.24 average daily income of the landless urban poor. This level of mandatory savings was seen to be possible based on survey results.

To start the implementation of both the compost-based, home-grown potted vegetable production and the mandatory savings scheme, the municipality allocated funding for the initial purchases of plastic pots and seeds, and for the organisation and management systems. Both the constraints of limited access to land and the cost of inputs have been appropriately addressed.

RESULTS AND PERFORMANCE

The compost-based, home-grown production using potted vegetables not only reduced the expenses of the landless urban poor but also ensured a supply of safe, fresh and nutritious food. In addition, the savings scheme among the urban poor community was launched to ensure against a handout mindset. The investment in compost production provided the stable supply of the soil media for use in urban agriculture. The diversion of the biodegradable waste stream resulted in the recycling of materials and the reduction of methane emissions, as well as the reduction in land required for final disposal of municipal waste.

The on-site management system of the savings programme installed included individual account ownership (personal passbooks), on-site safe keeping, clear and straightforward recording and accounting, and spot auditing among peers (among local organisations and those from urban poor associations from other cities). One month of training followed by two months of operations resulted in nearly 10% of the landless urban poor having savings passbooks.

Table 1 Cost/Benefit Analysis of compost-based, home-grown potted vegetable production

Particulars	Calculation Base	Amount (US\$)
Benefits		
Monetary value of vegetable production(560 pots @ 0.15kg/pot @ US\$0.2/kg/45 days)	US\$0.237/day @ 30 days	11.20/month
Cost of Production		
Seeds		0.02/month
Water fee, for the maintenance of the artesian well		0.05/month
Depreciation charge for plastic pots		0.17/month
Total Cost of Production		0.24/month
Beneficiary Daily or Weekly Savings Scheme to sustain production		
Daily or Weekly Savings	US\$0.02/day or 0.14/wk	0.30/month

Source: Municipal Urban Poor Affairs Office

REPLICABILITY

Considering that there are 2,500 landless urban poor households, the potential number of pots for urban agriculture total 2.8 million pots, for which approximately 5,600 tonnes of compost will be required. This amount of compost can be supplied in four years given the existing production capacity. After that, the excess compost production will be used for replenishment. Based on compost application studies, the potential production volume is more than enough to supply the estimated consumption of the Marilao population, while surplus can serve markets in Metro Manila (only 5 km from the border).

Noteworthy is the fact that the average 30 grams per capita consumption of green leafy vegetables in the Philippines has reached its lowest level in recent years. The urban agriculture programme of Marilao must continue the promotion of the utilisation of rooftops among the landless urban poor. Investment in promotional activities has been included in the formulation of the next five-year (2003-2008) development plan for municipal investment.

LESSONS LEARNED AND RECOMMENDATIONS

Investment in urban agriculture in Marilao is one of the strategies for increasing household income and improving food security of the landless urban poor. As with any economic activity, the investment of Marilao considered individual and organisational cost/benefit factors. The stakeholders included the cultivators, the homeowners from the

middle-class sector, and the landless urban poor.

The investment in technology has evolved from local initiatives, in response to local challenges – addressing the burgeoning solid waste problem with optimal material recovery and minimal investment in final disposal methods. The process included the participation of the middle-class households with their segregation of waste generated. The investment in educating these households on proper solid waste management included the technology of social marketing types of activities and logistics. As a parallel support measure, municipal investment in collection was put in place. The municipal collection was implemented with no additional fees to the households involved. Cost recovery did not involve selling the compost but rather using it to address food security among the landless urban poor. Eventually, there will be a potential for exporting the vegetables produced within urban Metro Manila.

Restructuring the municipal organisation has required institutionalising the urban poor affairs office. This included the survey and eventual development of a database, an orientation on the workings of associations, and support services related to health, education and employment.

Perhaps the most unique feature of this programme has been the combination of urban agriculture with the formation of a capital fund among the growers. This will ensure the sustainability of this innovative venture into the supply of safe, fresh, nutritious and healthy food.

From the Dirtiest to the Cleanest Municipality of the Province

The municipality of Moncada is located 153 km north of Manila, and has a population of 49,607. Of its total 8,875 hectare land area, 64% or 5,544 hectares is used for agriculture. Rice farming accounts for 76% of the total agricultural land.

In the last quarter of 1997, the municipality was rated as the second dirtiest in a province-wide competition. The municipality took this as a challenge and embarked on a solid waste management programme the day after the rating was issued. From 1999 to 2002, the municipality won first place as the cleanest municipality of the province.

THE MONCADA WOMEN'S CREDIT COOPERATIVE

The Moncada Women's Credit Cooperative was founded in 1991 by 43 women cooperators, with the goal of providing an alternative source of financing as well as a savings programme for the households. Starting with a capital of approximately US\$800, the next ten years saw the cooperative grow to its current asset base of US\$900,000, with a membership of 1,150 housewives, women entrepreneurs, teachers, market vendors, employees and even overseas Filipina workers. The all-women membership policy is grounded on the belief that Filipina women are given the task of managing the economics of the home specifically in ensuring that there is enough budget to cover the basic expenditures of the family as well as saving into the local capital formation to address poverty reduction.

WASTE MANAGEMENT

To address the challenge of managing solid waste, the wife of the municipal mayor who is the founder and chairperson of the Moncada Women's Credit Cooperative, together with several officers of the cooperative, went through a

series of learning visits and seminars on good management practices in solid waste management.

The conclusion drawn by the municipality was that solid waste management has the potential for revenue generation. At the same time, the chairperson of the cooperative had been elected as mayor of Moncada in 1998, and as an immediate action step, a Memorandum of Agreement (MOA) was executed between the Municipality of Moncada and the Moncada Women's Credit Cooperative for a Zero-Waste Management and Recycling Project. The MOA has set the following tasks:

- ❖ solid waste reduction in the public market and its contiguous area;
- ❖ waste diversion through recycling of plastics, aluminium, paper, cardboard and bottles;
- ❖ provision of business opportunities, specifically the buying and selling of recyclables; and
- ❖ conversion of biodegradable waste into organic fertiliser in combination with animal manure and other useful waste materials.

Both the municipality and the women's credit cooperative, had a relatively stable financial performance and invested 57% and 43%, respectively, a total of US\$119,152 during the last four years of operation.



Joseph Batac

Potted vegetables on the roof

The municipality further undertook an education campaign for the proper management of solid waste in the public market and the urban areas. This campaign was supported by a collection system given four additional vehicles of investment by the municipality.

COMPOSTING PROGRAMME

The vendors from the public market were the first to respond with the segregation of recyclable materials from biodegradable waste. This necessitated the establishment of a composting facility in the early part of 1999.

The production of compost started in mid-1999, the compost being sold to the members of the cooperative and to other taxpayers based on an incentive scheme of a local ordinance (one bag of compost, US\$2.70 per bag, for every US\$30 of real property tax). The users of the compost have experienced an average 16% per annum increase in yield and an 8% reduction in expenditures given the savings from reduced use of chemical fertilisers.

The municipality and the women's credit cooperative have also looked into the possibility of getting the whole of Moncada into organic farming in the coming years. The municipality will cover the cost of additional investment for collection of bio-waste while the women's credit cooperative will continue to undertake the marketing and operation of the facility.

To date, the Moncada Women's Credit Cooperative has been the only cooperative to survive for more than ten years in the province. Both the chairperson and the general manager of the Moncada Women's Credit Cooperative have attributed their success to the basic goodness of the Moncada women in ensuring a non-nonsense, strict discipline in the management of finances, given the work ethics of patience, thrift and commitment. The engagement of the cooperative into solid waste management is rooted in the natural role of women in maintaining cleanliness in the households as well as general member attitudes towards health and sanitation. As such, the women members are the most potent "salespeople" and marketers of compost from their farmer husbands.

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- Personal Interviews. December 2002. with Mrs Remedios M. De Guzman, Chairperson, Ms Brenda E. Gison, General Manager, and Ms Florida A. Cajulao, Chief Accountant of the Moncada Women's Credit Cooperative; Agricultural Farmers Mr Romeo Arlantico and Mr Romulo Galzote; Municipal Agriculturist Ms Mageline Bautista, and Municipal Budget Officer Ms Emilia Quilet.

Composting of city wastes is a legal requirement for all urban local bodies in India, but central and state governments have yet to perceive it as a social good that requires official support.

Almitra Patel



Mysore compost plant

Using City Compost for Urban Farming in India

India's Green Revolution rescued the nation from famines, but left over 11.6 million hectares of low-productivity nutrient-depleted soils ruined by unbalanced and excessive use of synthetic fertilisers and lack of organic manure or micronutrients¹. City compost can fill this need and solve both the problems of barren land and organic nutrient shortages, estimated at 6 million tons a year. India's 35 largest cities alone can provide 5.7 million tonnes a year of organic manure if their biodegradable waste is composted and returned to the soil.

It is hard to imagine a more beneficial win-win solution

Integrated Plant Nutrient Management (IPNM), using city compost along with synthetic fertilisers, can generate enormous national savings as well as cleaning urban India. There is scarcely any other national programme, which can bring such huge benefits to both urban and rural sectors.

Long-term studies on dryland agriculture (20 years, 1983-1997², show that plots using farmyard manure (FYM) along with synthetic fertiliser give yields increasing 2.5 times over control plots and holding or improving that yield to 2.55 times in the long term. City composts contain all 17 required micronutrients, derived from the biodegradable food wastes and can counter the depletion

of micronutrients in Indian soils. The application of compost together with synthetic fertilisers makes crops more pest-resistant by strengthening their root systems and also controls nutrient wastage and groundwater nitrate pollution. Organic manure plays a vital role in maintaining a favourable soil biology and optimum physical environment³. City compost can also restore saline and alkaline soils to fertility.

MUNICIPAL SUPPORT IS LACKING

The Municipal Solid Waste Rules of 2000 (MSW Rules⁴, require that "biodegradable wastes shall be processed by composting, vermi-composting, anaerobic digestion or any other appropriate biological processing for the stabilisation of wastes". The specified deadline for setting up of waste processing and disposal facilities is 31 December, 2003 or earlier.

The production and sale of city compost is not the primary function of city administrations, but will need to be privatised for optimum efficiency and care. Several entrepreneurs have already entered the field and many compost plants are in place, almost all on public land made available at a nominal cost. These companies are willing to wait for the 5-7 year payback on their investment, but are facing tremendous problems of producing compost from unsegregated wastes and of marketing and distributing their product. The government is indifferent to the problems of these compost producers (i.e., a working capital crunch because of highly seasonal demand) and to farmers' needs (i.e., timely, easily accessible availability of affordable compost).

FARMERS' DEMAND IS HIGH

Farmers in India have used domestic waste on their fields for centuries. Today, there is such a shortage that urban waste transporters can be bribed to dump reasonably biodegradable raw garbage (esp. market waste) onto farmers' fields. Uncovered and uncomposted, these rotting waste heaps breed rats and insects which carry diseases, and stray dogs which not only carry rabies and *rickettsia* but form hunting-packs that kill nearby livestock at night and cause dog-bites and traffic accidents by day. Unfortunately, farmers expect good city compost almost for free, as with raw garbage, enjoying its benefits of low levels of N, P and K.

TOWARDS EFFICIENT USE OF CITY COMPOST

If city waste would instead be composted before applying it to the soil, cities would be cleaned up and the fields around cities would be spared the declining levels of fertility induced by today's accumulating plastic-film waste, while health and hygiene in periurban areas would visibly improve. It is hard to imagine a more beneficial win-win solution. However, there is first a need for agricultural researchers to include specified standards of city compost in their Package of Practices for all types of crops. Standards for composts are being finalised at a national workshop in April 2003. Secondly, there is a need to make compost available to the farmers, allowing for decentralised stockpiles near their point of use during peak demand periods, for instance. Fertiliser producers and distributors are best placed to understand the needs of farmers and to evolve solutions, including IPNM.

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FINANCING COMPOST PRODUCTION

The Fertiliser Association of India (FAI), the leading lobbying group for synthetic fertilisers, is very much focused on protecting the fertiliser producers' massive subsidies (Rs 142,500 million = US\$ 3 billion annually) for their chemical fertilisers - subsidies from which the farmers do not benefit. This situation is increasingly coming under national debate. Just 12% of this annual subsidy would meet the one-time capital cost of city compost plants in India's 400 largest cities (which include cities with populations of over 100,000 people) and would be able to produce 5.7 million tonnes a year of organic soil conditioners. IPNM would also reduce the foreign exchange burden on the Indian exchequer because bulk supplies of P and K must be imported. In addition, the government of India spends Rs 43.19 million on P and K concessions alone.

Emphasising IPNM using city compost which can be produced all over the country, can be a successful strategy if a focused inter-ministerial effort were to be made. However, in spite of the fact that the Ministry of Agriculture renamed its Department of Fertilisers as the "Department of Integrated Nutrient Management" a year ago, no policy changes have taken place whatsoever. A proposed Task Force including the Agriculture and Fertiliser Ministries may soon formulate an Action Plan for IPNM.

IGNORING THE BENEFITS

The real economic benefits of compost use, like improved soil quality, water retention, biological activity, micronutrient content and improved pest resistance of crops, are equally ignored by policy-makers and fertiliser producers. Fertiliser producers do not yet realise that preventing soil depletion and reclaiming degraded soils would in fact increase the size of the market and therefore also their market share, which is currently threatened by globalisation and world prices that undercut their own. Since most large fertiliser plants are government owned, another threat is the government's intended policy of closing down loss-making public-sector enterprises and disinvesting from profitable ones.

PRODUCING AND CO-MARKETING CITY COMPOST

In-house ownership of compost plants by fertiliser companies is a better option for

the fertiliser industry. This would also be administratively far easier for the government to manage than a reorientation of its current subsidy policy.

Existing fertiliser plants that would set up a composting division themselves, contracting out operations if need be, would be far more profitable than stand-alone entrepreneurial composting plants because fertiliser factories have vast human resources and in-house technical expertise to rapidly set up such composting plants. They could also use these plants as tax shelters, by claiming 100% depreciation on the plants' cost for city pollution abatement, as well as 100% tax-free profits on compost sales. Additionally, they could claim various state subsidies now available for soil reclamation.

Co-marketing of compost with urea could be a long-term investment with negligible additional costs as all fertiliser companies already have an excellent countrywide sales and distribution network, with access to government storage facilities that are denied to composting entrepreneurs.

PROPOSED POLICY INITIATIVES

What is immediately required is a wide-spread programme of field trials both by institutes like the Indian Council of Agricultural Research and by all fertiliser companies to establish the best practices and proportions for using combinations of city compost and chemical fertilisers for all crops and soil types.

The National Biofertiliser Development Centres are to be converted into National Institutes of Organic Agriculture, which should be used to promote IPNM and the combined use of mineral and organic inputs.

There is also a great need to develop accepted standards for city compost. Not just the heavy-metal limits specified in the MSW Rules, but aspects such as the absence of weed seeds and pathogens, germination success, water-holding, capacity etc. Such certification is also necessary to counter rumours by the anti-composting lobby effort.

Both central and state governments must also have a pro-active purchasing policy. All cities whose waste is composted should be required by state policy to buy

back at least 30% of the compost produced for use in their city parks and gardens or for land reclamation, land development, embankments, plantations and nurseries.

Compost plants requiring working capital financing from banks due to the highly seasonal demand pattern and high cost of holding stocks, are not given loans against stocks held. Instead, they are asked to mortgage their homes or other properties worth 10-20 times more than the loans sought, as security. This policy must change.

Farm financing should be facilitated by Government by buying compost in bulk to be issued back to the farmers at the start of the season; then, its cost should be deducted when buying produce from the farmers, such as tobacco, cotton, pulses, sericulture, plantation crops and many more. Compost use should be supported with the same transport subsidies and storage facilities available for urea and synthetic fertilisers, if IPNM is to become viable.

There also needs to be a level playing field for different waste-processing options. Today, Waste-to-Energy (WTE) is being aggressively promoted as an alternative to composting by the Ministry of Non-Conventional Energy Sources, despite a long string of failed plants and promises, and several scams engendered by its massive subsidies. The pressure, from both foreign firms and international aid agencies, to promote embark on WTE technologies that are being phased out abroad, is tremendous and a serious impediment to rapid decision-making by cities in favour of the statutory and far more viable composting option.

Finally, composting needs to be seen by all decision-makers as not just one of many options for processing and disposal of city waste, but as an absolute imperative for nutrient recycling and soil improvement in a largely agricultural economy.

NOTES

1) TERI = Tata Energy Research Institute. Looking Back to Think Ahead: Green India 2047, p. 285.

2) UAS = University of Agricultural Sciences, Bangalore : All-India Co-ordinated Research Project on Dryland Agriculture, quoted in Down To Earth Magazine November 15, 2001.

3) FAI's Fertiliser News, April 1997, p. 66.

4) Municipal Solid Waste (Management & Handling) Rules 2000 issued by the Ministry of Environment & Forests (MOEF) of the Government of India on 25.9.2000.

Formal and Informal Financial Services

The growth and development of urban agriculture as a response to urban poverty and increasing food prices is evident in Nigeria. Urbanisation and increasing urban agricultural production constitute an indispensable economic basis for local urban services (health, education, extension).

Agricultural financing can be classified as formal or informal. Formal financial institutions are subject to banking laws and other specific regulations governing the financial sector, which includes the Central Bank, public and private sector banks and capital markets. The informal financial institutions operate outside legal frameworks and are dominated by social control mechanisms and norms. This sector is made up of moneylenders, friends and relatives, informal savings groups called *Esusu* and *Ajo*.

National Government

The Central Bank of Nigeria (CBN) has been supporting agricultural programmes since its inception some forty-two years ago. It is the apex of the Nigerian banking system. In order to induce the Commercial, Development and Merchant Banks to further improve their credit

federal government especially for credit delivery to the agricultural sector of the economy. The NACB has put tremendous efforts into the development and promotion of urban agricultural production. The bank gives out loans at a subsidised interest rates. In addition, the bank provides financing of direct investment in the equity capital of major urban agricultural and agro-allied industrial ventures. The NACB is the leading agricultural financial institution in the country. The Nigeria Agricultural Cooperative and Rural Development Bank (NACRDB), is an amalgamation of the People's Bank of Nigeria, Nigeria Agriculture and Cooperative Bank, and Nigeria Agriculture Corporation. NACRDB is supportive to farmers and other small traders.

The Commercial Banks have a long history of lending to the agricultural sector of the economy, and have a wide network of branches nationwide.

Farmers' Organisations

Various farmer organisations like the State Farmers' Congress, Farmers' Friends, Women's groups, etc., support urban agriculture. The contribution of various farmers' cooperative societies in the country is high. They consist of a variety of types: for example, cooperative thrift and credit societies, cooperative marketing societies, cooperative produce marketing societies, multipurpose societies, etc. Cooperatives are just like a business organisation in which members come together voluntarily on the basis of equality, for the promotion of their own economic welfare.

NGOs

Non-governmental organisations are making an important contribution to developing innovative technologies. Their strengths lie primarily in their flexible procedures and their close proximity to target groups. At the same time, they concentrate on urban and periurban cen-

tres. However, the outreach and institutional efficiency of most NGOs are limited as they usually cannot mobilise savings of any kind and are mainly refinanced through donor funds.

Informal savings groups: Esusu and Ajo

Informal savings groups exist all over the world, their local names perhaps being their only difference. The *Esusu* is a fund to which a group of individuals sharing common characteristics make a contribution of a fixed amount of money, handed to one person acting as treasurer. Each member is able to make use of the money in turn, making an allowance for a member in urgent need of a loan or advance. These are granted without interest payment.

An *Ajo* on the other hand does not extend credit to its members. Individuals contribute fixed amounts of money on a daily basis. The *Ajo* collector's duty is to remind contributors of their daily obligation, and safe keep the contributed sum. At the end of each month, the contributors receive their total savings less one day's contribution.

Friends and Relatives

This is part of a cultural heritage whereby the prosperous help their less fortunate relatives and friends through loans. In some cases, the loans are not repaid.

Urban farmers' financing needs differ from their rural counterparts for a number of reasons, the main ones being: urban areas have a more abundant labour force; less access to land; a municipal infrastructure; greater access to markets (low transportation and transaction costs); an abundant availability of urban waste, but unsustainable commercial agriculture (e.g. pesticide pollution, and often unsustainable agro-allied industrial ventures).

RECOMMENDATIONS

In order to enhance the role of financial institutions to support urban agriculture, farmers should be educated in the use of credit and credit facilities. Integration of urban agriculture into city planning is necessary and could be facilitated through policy seminars. Stakeholder organisations should endeavour to create avenues for mutual assistance. Investments and public-private partnerships should be mobilised for the establishment of farmers' markets, the (decentralisation of) collection and recycling of solid waste and waste water.

Farmers should be educated in the use of credit facilities

facilities to all sub-sectors of agriculture and to minimise the risks inherent in agricultural lending, the Nigerian federal government, in cooperation with the CBN, established the Agricultural Credit Guarantee Scheme Fund (ACGSF) through *Decree No.20* in 1977. The ACGSF capital base has increased and was upgraded in 1999 to improve credit and support to urban agriculture (increases in non-collateral loan and loans for corporate bodies and cooperative societies).

Cooperative and Commercial Banks

The Nigeria Agriculture and Cooperative Bank, Ltd (NACB) was established by the

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A New Approach in Xiaotangshan, Beijing¹

As a country with a very large population and relatively small amount of arable land, agriculture has always occupied a very important position in China's economy



Cai Gaojian

Agricultural workers are preparing the organic fertiliser

Periurban Agriculture Development in China

Throughout history, the food supply in China has been very fragile. This situation did not change when the Communist Party came into power in 1949. After 1949, China began its serious development programme for industrialisation in order to catch up to other country levels. Much more investment was put into the industrial economy and as a result, food shortages in China became so bad that many people died of hunger in the early 1960s. The Chinese central government realised that a balance between industry and agriculture was necessary: “walking on two legs” became a popular guideline for regional development of industry and agriculture in China in the 1960s.

In order to promote this mutual support of industry and agriculture, and at the same time the integration of the urban and rural economies, China reorganised its spatial arrangement for the first time, by enlarging the administrative boundaries of most of its cities. For example, the total administrative area of Beijing was

enlarged from 4,822 km² in 1956 to 16,808 km² in 1958, which included ten urban and periurban districts as well as eight counties. As a comparison: in 1949, the total area of the city was just about 63 km², including only four traditional urban districts.

This sparked the development of periurban agriculture in China. Thus, “suburban agriculture” (a term often used by Chinese scholars), is located mainly in the periurban areas and is fully oriented to urban demand: the production of vegetables, fruit, milk, fish, livestock and poultry, as well as some high value-added grain products such as various beans. Suburban agriculture is labour-, and relatively capital-intensive with a high level of productivity. It has absorbed many rural labourers and provided a stable and diversified food supply to the urban residents in terms of quantity. More than 70% of non-staple food in the city, mainly consisting of vegetables and milk, was produced by the city itself in that time in the 1960s and 1970s. Periurban agriculture played a big role in this practice

Nevertheless, the food supply in China remained insufficient, until the “People’s Commune”² was dissolved and a privatised agricul-

tural production system had been restored in the 1980s. Stimulated by this new system, which allowed farmers to make their own decisions regarding agricultural production, the food supply situation in China improved a lot. Many rural surplus labourers began to migrate to cities due to the high productivity of agriculture there and the small amount of farmland per capita. By around 1990, the food shortage in China, in terms of quantity, came to an end. However, in terms of quality, problems remained.

These changes up to the in the 1980s and the end of food shortages provided a powerful engine for urbanisation in China in the 1990s. Many new cities were born and many existing cities, particularly the big cities, further grew, both in population and area. Subsequently, more rural people migrated to cities for a better life. This process promoted the further development of periurban agriculture, due to: 1) urban growth creating a larger demand for diversified agricultural products; 2) rural migrants replacing the cheaper labour force in periurban agriculture as many of these farmers started to work in the industrial economy; and 3) competition for the scarce land between different economic activities making the periurban agricultural production more capital-intensive.

In the late 1990s, a turning point took place, bringing a new development in periurban agriculture in China. Instead of paying attention to the *quantity* of food supply, people started to prioritise according to the *quality* of food supply. China began to apply the concept of food security into its planning agenda and regarded it as a new strategy. Food security in China means a sufficient, sustainable, accessible, diversified and nourishing supply. Periurban agriculture is important for food security in China.

Different municipal governments carried out programmes aimed at modernisation of the periurban agriculture sector. For example, in Beijing, as well as in Shanghai, agriculture-oriented science and technology development and demonstration parks were established. Xiaotangshan modern agricultural demonstration park in Beijing is one of these.

Agro-tourism became the most dynamic component of periurban agriculture

Agro-tourism became the most dynamic component of periurban agriculture in China in the last five years, thanks to China's rapid economic development (growth of household income, increase of private car ownership and longer public holidays). In fact, agro-tourism has become more important than agriculture itself in terms of employment and income in some parks in Beijing³.

XIAOTANGSHAN MODERN AGRICULTURE DEMONSTRATION PARK IN BEIJING

Xiaotangshan town (see map) used to be a royal resort during the Qing dynasty, with its abundant hot springs and beautiful landscape⁴; it has long been famous for its agro-tourism. In 1998, the municipal government of Beijing decided to develop a large modern periurban agriculture demonstration park around Xiaotangshan. According to the master plan, the park will include Xiaotangshan town, another three towns nearby, as well as 45 villages, covering an area of 112 km² with a population of more than 40,000.

Starting in 1998, a series of infrastructure projects were put into place. By 2001, the

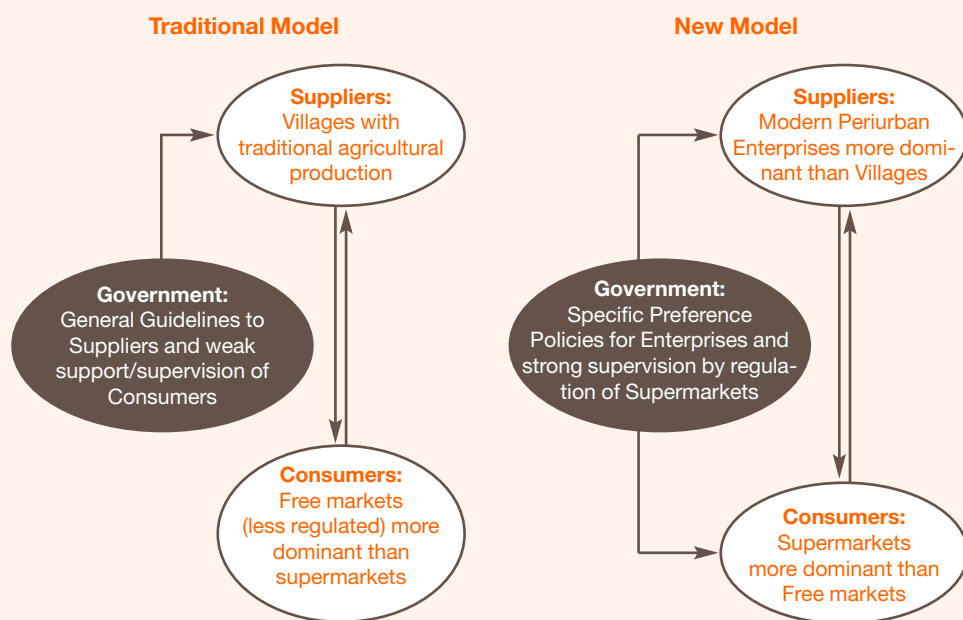


Figure 1: Comparison of Two Approaches to Periurban Agriculture

initial phase of the construction was completed and the park was opened to the public. In order to provide better service to the urban market, the park was further divided into eight sub-zones with each having its own focus. The eight sub-zones are classified as follows:

Precision agriculture zone: In this demonstration zone, all production processes like irrigation, fertilisation, etc. are monitored and managed by a nerve centre equipped with (GPS, GIS and RS) technologies, where it is demonstrated that yields per ha may increase by 18-30 percent at a lower cost.

Flower producing zone: Many popular and high value flowers, such as the lily, rose and chrysanthemum, are planted according to market demand, in this

zone. Currently, the producing capacity of the zone is 6 million plants, excluding the largest flower nursery in Asia.

Tree nursery zone: This area of 156 ha is one of the largest tree nurseries in China and in Asia; the zone can provide 2 million young trees each year to the urban market, with a variety of species.

Aquaculture zone: Technologically supported by the national engineering centre for freshwater fishery, this zone is famous for its development of new aquatic products with green feed. Sturgeon is currently the main product.

Lamb raising zone: In this zone of about 67 ha, 30 million RMB (Equivalent about to 3.6 million US Dollars) has been invested into infrastructure to raise 800,000 lambs per year. As an important component for local economic restructuring, all lines of service, from lamb breeding to mutton processing, can be offered within this zone.

Seed zone: To speed up the economic restructuring of the surrounding rural areas and to enhance the value of their agricultural products, the seed zone was designed to provide rural farmers with high quality seeds of selected flowers and crops. Currently, orchids and strawberries are dominant specialisations.

Agricultural product-processing zone: Guided by urban market demand, agricultural products are carefully processed in this zone, and sent to various supermarkets in wholesale packaging. These



Cai Gaojian

Israel Tomato: small in size but high in juice density

products are usually put in special counters with a higher price than usual in the supermarkets.

Agro-tourism zone and programme:

Centred around the historical royal resort and the beautiful hot springs, various zones are included in the agro-tourism programme. It also offers hotels and venues for meetings, training and leisure activities.

The modern agriculture park in Xiaotangshan region is proving to be very successful. In the past three years, it has already attracted 51 enterprises to operate their business in the various zones, with a total investment of 3 billion RMB Yuan. Up to 100,000 people have visited the park. It is expected that in the coming five years, more than 500 million RMB Yuan will be further invested in the infrastructure. In 2008, when the Olympic games take place in Beijing, the park will be one of the most important green food production areas in Beijing and in China.

The success of the park demonstrates that periurban agriculture can play a large role in urban economic development, not only in terms of employment

and economic return but also regarding ecological capacity-building. Greening the city provides high quality, fresh air and prevents further urban sprawl, which in many cases cannot be effectively carried out in Chinese cities, due to the high pressure of rural migration. In fact, no adequate urban growth can be realised in China, unless the periurban land is properly developed. The modern agriculture park in Xiaotangshan has been designated as a national model by the central government in China.

The Xiaotangshan model has advantages over the traditional practice of periurban agriculture in China. Instead of being passively integrated into the urban regime, this new approach is actively merging both rural and urban systems, with governments and enterprises playing a key role. It thus enhances its function and productivity, and improves urban-rural relations. The success of the park lies in the following components.

Firstly, a strong push and promotion from all levels of government is a precondition and necessity, particularly in the initial stage when kick-off investment and preferential policies are needed. For example, in the park, all hi-tech enterprises enjoy a tax-free status during the initial operating period, and a tax reduction for some years afterwards (similar to other industrial enterprises in hi-tech development zones in China).

Secondly, the active involvement of enterprises determines the success of the practice. As key players, enterprises act as a platform between suppliers and consumers, providing services to both villagers and urban residents. With the advantage of comprehensive and intensive utilisation of the land resources, and effective quality controls in its production systems, the economic return of the modern periurban agriculture can be 30-50 times higher than before.

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- He Dongsheng, Liu Junping. 2001. Theories and Practices of Agro-tourism (in Chinese). China Agriculture Science and Technology Press, Beijing.
- Xiaotangshan Modern Agriculture Science Park Commission, www.xiaotangshan.org

Thirdly, the participation and support of local farmers are basic requirements for smooth development. The local farmers not only provide labour but also the permission of land leasing as they collectively own the land.

CONCLUSIONS

Agriculture will continue to require attention in China where the large population and relative scarcity of farmland remain a potentially big threat to national security. The growing concern for food security in recent years has promoted the development of modern periurban agriculture.

Enlarging the city administrative boundaries strengthens the integration of urban and rural economies, and gives periurban agriculture room for development. Eventually, periurban agriculture will become part of the urban economy as the city grows and expands further.

Periurban agriculture has multiple functions. The fast increase in demand for "green" products makes modern periurban agriculture highly profitable. Agro-tourism becomes increasingly important in urban society as urban households get richer, have more leisure time, and concern for the environment.

The development of the modern agriculture park in Xiaotangshan demonstrates that support by the government, the leading involvement of enterprises, and the active participation of local farmers comprise a new and successful approach to periurban agricultural development. It is a successful way to address the two big issues of urban-rural economic integration and sustainable city region development at once.



Cai Gaojian

Greenhouse flower production

Notes

- 1) The author would like to give his special thanks to the Chinese Academy of Sciences for its research grant on Periurban Development in China (Grant No. KZCX2-SW-318-02) and the RUAF programme for its activities in China.
- 2) The "People's Commune" was the basic government organisation in rural China from 1958 to 1984. It normally consisted of many villages and had the responsibility to operate the collectively-owned assets, including land and other capital assets. The basic idea of the people's commune was to create an equal society, where assets were owned by people, and the benefit was more or less equally distributed among these people. However, this practice proved to be less efficient in terms of productivity. "To eat from one big pot" discouraged people's own initiative.
- 3) Historically, we have experienced the agriculture-based economy, industry-based economy and service/information-based economy. Now we are entering into the experience economy, in which people would like to participate in or experience many activities for amusement rather than for just making a living. To participate in periurban agriculture will be one good option or could be a future trend as people's affinity with nature grows.
- 4) In traditional Chinese culture, the Royal Palace, home of the emperor, the son of heaven, (such as the Forbidden City in Beijing) was usually regarded as dragon's head, while its northward direction was regarded as a blessed place since they were in line with the dragon's backbone. Xiaotangshan is located precisely to the north of the Forbidden City with a distance of less than 30 km away.

FURTHER READING

GROUP-BASED FINANCIAL INSTITUTIONS FOR THE RURAL POOR IN BANGLADESH: AN INSTITUTIONAL- AND HOUSEHOLD-LEVEL ANALYSIS

Zeller M, M Sharma, AU Ahmed, S Rashid. 2001. Research Report 120. International Food Policy Research Institute, Washington, D.C. Download from: www.ifpri.org/pubs/abstract/abstr120.htm#download

Faced with inadequate responses from both the private and the government sectors, to the need for financial support to the poor and micro-entrepreneurs in Bangladesh, NGOs have spearheaded a worldwide movement to provide affordable financial services to the poor. IFPRI is making lessons from the Bangladeshi experience available to a global audience. In 1988, IFPRI published a research report that examined the Grameen Bank's approach to providing credit services and the manner in which it affected the livelihood of its clients. Other successful models of credit and savings delivery have emerged since then. This research report looks at three institutions that represent three distinct approaches to providing services to households organised in small groups. The authors report on three major issues. By the same author, the theme paper *Models of Rural Finance Institutions* is expected to be released soon via: www.basis.wisc.edu/rfc/themes/models.html

URBAN POLICY IMPLICATIONS FOR FOOD SECURITY IN AFRICAN CITIES

UN-Habitat. 2002. Report of the workshop (under the same title) held in Nairobi, Kenya, on 27-31 May, 2002, organised by UN-Habitat in partnership with FAO, IDRC and SIUPA.

This report presents an overview of the discussions on urban food security and the various strategies and mechanisms towards achieving this. Major themes of the workshops were Food Security and Poverty Reduction; Rural-Urban Food Flows; Land Tenure and Land Use, and Credit and Investment for Urban Agriculture.

URBAN FRINGE AGRICULTURE

Asian Productivity Organization. 2002. Report of the APO Seminar on Urban Fringe Agriculture held in Tokyo, Japan, from 17-24 May, 2000 (246 pages).

Order: Asian Productivity Organization, Tokyo, 102-0093, Japan, Tel: (81-3) 52226-3920; e-mail: apo@apo-tokyo.org; URL: www.apo-tokyo.org

This report contains four resource papers on urban and periurban agriculture in the Asia-Pacific Region, and prospective issues and challenges of urban fringe agriculture; with an additional 19 country reports on Bangladesh, China, Fiji, India, Indonesia, Malaysia, Mongolia, Nepal, Pakistan, Philippines, Singapore, Sri Lanka, Thailand and Vietnam.

LEARNING FROM CLIENTS: ASSESSMENT TOOLS FOR MICROFINANCE PRACTITIONERS

Nelson, C and Garber, C (eds, with contributions from B MKNelly, E Edgcomb, G Gaile, K Lippold, N Horn and B Beard). 2001.

The SEEP Network (The Small Enterprise Education and Promotion Network). Management Systems International, Washington, D.C. 341 pp.

(available in English, French and Spanish). Download or Order via:

www.microfinancegateway.org/static/1646.htm

An in-depth process of consultation and field testing, reflection, and improvement has gone into this manual. The process was led by a core team of SEEP Network private voluntary organisation (PVO) practitioners. It was supplemented by the guidance of AIMS researchers and USAID, and it engaged NGO practitioners of microfinance (in six sites around the world) as testers, trainees, and early users. Out of this pooling of diverse experience and skills, has emerged a document that offers several critical advances in the practice of mid-range impact assessment: Detailed guidance - written by and for practitioners - for planning and implementing impact assessments and for analysing all data generated; A coherent set of quantitative and qualitative tools that address the most common hypotheses that undergird microfinance programmes; Clear explanations of indicators and measures used, along with supplementary discussions of additional sets of potential interest to individual users; and Methods that provide information on impact and client satisfaction and that result in specific feedback for programme improvement.

DISTRIBUTION, GROWTH AND PERFORMANCE OF MICROFINANCE INSTITUTIONS IN AFRICA, ASIA AND LATIN AMERICA

Lapenu, C and Zeller M. 2001. International Food Policy Research Institute (IFPRI), Washington, D.C., 34 pp. Download via:

www.ifpri.org/divs/fcnd/dp.htm

How many microfinance institutions (MFIs) exist in the developing world? What are their current performances? In 1999, an IFPRI team on microfinance conducted a survey on MFIs in Asia, Africa and Latin America in order to offer a new in-depth analysis on the distribution and performance of MFIs at the international level. The database of MFIs from 85 developing countries shows 1,500 institutions (790 institutions worldwide plus 688 in Indonesia) supported by international organisations. The IFPRI database underlines the presence of a multitude of MFIs that, except in unstable countries, are widespread with no forgotten regions. MFIs are very diverse in terms of lending technologies and legal status, which allows room for innovation but they remain highly concentrated. The data are analysed by type of MFIs and by geographic regions. The results presented give an overview of the current development of MFIs and offer a benchmark for comparisons.

STRENGTHENING THE KNOWLEDGE AND INFORMATION SYSTEMS OF THE URBAN POOR

Theo Schilderman. 2002. Intermediate Technology Development Group (ITDG), London, 54 pp. To view the document, visit:

www.itdg.org/html/shelter/docs/kis_urban_poor_report_march2002.doc

THE GOOD FOOD BOX GUIDE: HOW TO START A PROGRAM IN YOUR COMMUNITY

Scharf, Kathryn and Morgan, Mary Lou. FoodShare, Toronto. Cost: CA\$25.

Order via: www.foodshare.net/learn.htm#pub3

This manual was published for people who are thinking about starting a programme in their own community. The Good Food Box Guide is designed to provide direction to people and organisations who are interested in developing a non-profit fresh fruit and vegetable distribution system in a way that also encourages community development. Examples are provided of newsletters, promotional pamphlets, sample box contents, work rhythms and growth mechanisms. A summary of a professional evaluation that was carried out on the Good Food Box is also included for use with potential supporters and funders.

www.uncdf.org/english/microfinance/index.html

is the site of the United Nations Capital Development Fund. UNCDF, through its micro-finance programmes, supports a variety of initiatives that facilitate the provision of financial services to the poor, such as investments in micro-finance institutions (MFIs) and the MicroStart Programme with UNDP country offices; technical advisory services; a supportive learning agenda; best practice dissemination and capacity building. A joint unit between UNDP and UNCDF, established in 1997 called the Special Unit for Microfinance (SUM), is integrated fully into UNCDF, and is now considered the lead technical unit on all matters pertaining to micro-finance in the UNDP Group.

www.basis.wisc.edu/rfc/lit/longbib.html

On this site of the CRSP (Collaborative Research Support Program), an annotated version of a review of rural finance is available (with abstracts). The BASIS CRSP seeks to improve rural prosperity by making markets work for all. Supported by the US Agency for International Development, BASIS CRSP targets global constraints by undertaking and disseminating collaborative, policy-oriented research.

www.microfinancegateway.org

The Microfinance Gateway is a public forum for the micro-finance industry at large that offers a wealth of tailored services for micro-finance professionals, including resource centres on specific related topics, a searchable library of electronic documents, a consultant database, a job listing service, and specialised discussion groups. The Gateway's resources constitute the most comprehensive source of information on micro-finance on the Web, featuring 2,500 online documents, over 500 listings of micro-finance institutions (MFIs) and nearly 200 consultant *curricula vitae*.

www.fao.org/ag/ags/agsm/biblio.htm

At this FAO site, you will find the Bibliography on Agricultural Credit and Rural Savings, Second Series No. 10, which has been prepared by the FAO Rural Finance Group in AGSM, in collaboration with the Department of Agricultural Economics at Ohio State University (OSU), USA.

www.gdrc.org/icm/icm-bibliography.html

This is another library on micro-credit, this time containing 810 entries, from the Global Development Research Centre. Giving you categories such as Newsletters on Micro Finance, Islamic Banking and the Urban Informal Sector. Also of interest is the page www.gdrc.org/uem/index.html on Urban Environmental Management.

www.ipes.org/aguila/Novedades/agenciasfinanciadoras.pdf

www.ipes.org/ProgramaGA.htm

At this site, you will find an overview of the major donor agencies and their programmes related to environmental action. The site is in Spanish but it contains a wealth of information, providing names, addresses, webpages and financing areas.

www.bath.ac.uk/cds/microhome.htm and

www.bath.ac.uk/cds/microbibl.htm

The University of Bath (UK) presents here over 200 references on micro-finance and micro-enterprises.

www.puvep.com/asiaurbs.htm

This is the site of the project of the GIS-based Urban Environmental Resources Management and Food Security Project. This EuropeAid-funded project assists the city government of Cagayan de Oro (Philippines) to set up a community-based GIS databank, which will enable it to run an integrated plan for the environment and sustainable development. It is to promote agricultural activities in the city through the establishment of allotment gardens. Aside from addressing food security issues, particularly for the urban poor, the aim is to solve a number of the city's waste management problems by converting biodegradable waste into organic fertilisers for allotment gardeners.

www.bagelhole.org

Bagelhole is a not-for-profit project that came out of the Y2K scare and the advent of the internet. By collecting and sharing low-tech, alternative, sustainable information, the site organisers hope to assist in building a low-tech, alternative, sustainable infrastructure globally. Everyone is free to participate. Under various categories (Food, Water, Housing, etc.), one can read about many different technologies.

www.earthlypursuits.com

Earthly pursuits was first envisioned as an e-book reference library on all aspects of gardening. They have been collecting old books and magazines to be digitised and offered online and as reprints through print-on-demand technology. A series of eight pamphlets published by the U.K. Ministry of Agriculture at its wartime base at the Berri Court Hotel in Lytham St. Annes, Lancashire, England is also available.

www.sites.si.edu/education/search_pubs.asp?main=1&sub=3

This book explores the history of vegetable gardens, from Aztec *chinampas* to the backyards of Americans today. Illustrated with over 100 historical and contemporary images, the book provides a fascinating and humorous discussion on how vegetables and vegetable gardens have been perceived across time and across cultures.

www.gardenvisit.com/got/

This site gives a rich overview of gardening throughout the ages, from ancient Egypt to modern society, but also links to garden societies, references, etc.

www.microcreditsummit.org/

The Microcredit Summit +5 (held in November 2002 in New York, USA) was attended by over 2,000 delegates. Six papers were presented in the plenary sessions covering the following topics: Ensuring impact; Building better lives; Innovations from the field; Policies, regulations and systems that promote sustainable financial services to the poor; Empowering women through micro-finance; Financing micro-finance for poverty reduction; Executive summaries of these papers can be found on the Summit website.

EVENTS

CONGRESS ON AGROFORESTRY, ORLANDO, USA.

27 June – 2 July 2004

Agroforestry professionals worldwide, from academic and government to private and voluntary, will gather for this 1st World Congress of Agroforestry in Orlando, Florida, USA. Overall objectives are to share knowledge and ideas, and to develop strategies for research, education and training in agroforestry. Significant outputs will include a state-of-the-art compendium. Visit the congress website for further details:

www.conference.ifas.ufl.edu/wca

INTERNATIONAL CONFERENCE ON URBAN AGRICULTURE, BRISBANE, AUSTRALIA

mid-2004

This Conference, "Urbanag 2004" will focus on Brisbane as a city that could become a globally-important example for urban agriculture.

The conference will better outline the future of urban agriculture in the Western Pacific region.

More information: Geoff Wilson.

Phone +61 7 3349 1422; fax 61 7 3343 8287;

e-mail: fawmpl@powerup.com.au.

2003 ICAST CONFERENCE

12 – 15 October 2003

This conference will provide opportunities for the dissemination of scientific knowledge and diffusion of technology throughout the world.

Re-visit the fundamentals of sustainable development in light of unprecedented recent advances in science and technology. Promote the holistic co-development of economies, environments, resources, communities and cultures through science and technology to improve the quality of life for all.

Please visit <http://www.2003icast.org> for more detailed information.

PROJECT MANAGEMENT ON URBAN SANITATION

15 September – 14 December 2003

Aide au Développement (Development Aid)

Gembloux (ADG) is an NGO linked to the University Faculty of Gembloux in Belgium.

There are still openings for a course (in French) on Urban Sanitation. Please check www.ong-adg.be

Or contact Ir. Alain LE ROI, Coordinateur des stages internationaux ONG AIDE AU DEVELOPPEMENT GEMBOUX (asbl) 2, Passage des déportés, B-5030 Gembloux Belgium, Tel: +32-81-62 25 74; Fax: +32-81-60 00 22.

THE PERI URBAN INTERFACE IN DEVELOPING AREAS: APPROACHES TO SUSTAINABLE NATURAL AND HUMAN RESOURCE USE. ANNUAL CONFERENCE, LONDON, UK

3 - 5 September 2003

A call for papers reached us from the Developing Areas Research Group. The periurban interface in developing areas is characterised by intense pressure on natural resources in the context of increasing human activity. Short papers are welcome, that address the impacts of rapid urbanisation on livelihoods and poverty in the PUI, and will examine the pressures on livelihoods or on the natural resources base of land and water.

Presentations should focus on the implementation of sustainable solutions, the problem of reconciling human needs and pressure on resources. An abstract of not more than 200 words should be forwarded to Duncan McGregor by 10 March 2003 (d.mcgregor@rhul.ac.uk). Duncan McGregor, David Simon, Donald Thompson. CEDAR, Department of Geography, Royal Holloway, University of London, Egham, Surrey TW20 0EX, U.K.

10TH REGIONAL TRAINING COURSE ON VEGETABLE CROPS PRODUCTION AVRDC REGIONAL CENTRE FOR AFRICA, MADIIRA RESEARCH AND TRAINING CENTRE (ARUSHA, TANZANIA)

7 July - 7 November 2003

The Asian Vegetable Research and Development Centre (AVRDC) is an international not-for-profit organisation for vegetable research and development that is committed to the world's food security. It has its headquarters in Taiwan. The AVRDC-Africa Regional Programme (AVRDC-ARP) was established in 1992 to help improve nutrition, health, employment, and income of the poor in Africa. This intensive training course on vegetable crop production is offered to African professionals and offers a blend of lectures and practically oriented laboratory and field exercises. Emphasis is placed on vegetable crop species identified by African NARES as deserving high priority. The training course emphasis will be on aspects related to the vegetable crop species identified to receive high priority in the sub-Saharan Africa Region. It is designed for research and extension personnel from national research and extension institutions, including universities, NGOs and private sector personnel involved in the vegetable industry in sub-Saharan Africa.

Applications should be received by May 20, 2003 at the latest. For more information, and a course curriculum, contact: The Director, AVRDC Regional Centre for Africa, P.O. Box 10, Duluti, Arusha, Tanzania, Tel: +255-27-2553093/2553102; Fax: +255-27-2553125; e-mail: avrdc-arp@cybernet.co.tz

INTERNATIONAL SYMPOSIUM "METHODOLOGIES FOR RISK ASSESSMENT OF WASTEWATER REUSE ON GROUNDWATER QUALITY (SAPPORO, JAPAN)

30 June - 11 July 2003

This symposium is part of the 33rd General Assembly of the International Union of Geodesy and Geophysics. Subjects include: threshold value of soil degradation under wastewater application, processes in the soil, crop production and quality, and human health risks.

More information can be found at www.jamstec.go.jp/jamstec-e/iugg/index.html or with Mr Steenvoorden of ALTERRA, The Netherlands; e-mail:

j.h.a.m.steenvoorden@alterra.wag-ur.nl

FIFTH MEETING ON ORGANIC AGRICULTURE (HAVANA, CUBA)

27 - 30 May 2003

Organised by the ACTAF (Cuban Association of Agricultural and Forestry Engineers), this conference will discuss new experiences related to integrated systems of natural resources management, appropriate technologies, social and economic aspects, environmental aspects, and the contribution of (organic) urban agriculture to sustainable urban development. The conference language will be Spanish. More information: e-mail Nilda Pérez Consuegra: nilda@isch.edu.cu

CONFERENCE AND POSTER EXHIBITION AT GFAR 2003 CONFERENCE (DAKAR, SENEGAL)

22 - 24 May 2003

The Global Forum on Agricultural Research (GFAR) will hold its 2003 conference on 22-24 May in Dakar, Senegal. The ultimate goal of GFAR 2003 is to review achievements over the last three years, identify new and emerging global issues of relevance to ARD, develop a framework of action that will consolidate ongoing and promising partnerships, and identify future partnerships to tackle priority emerging issues for ARD. The Draft Agenda as well as the registration form can be found at: www.egfar.org/gfar2003/default.shtml. The GFAR is calling for proposals on successful cases of agricultural research and sustainable development partnerships. GFAR will be organising a poster session as part of the GFAR 2003 Conference in Dakar, Senegal. The organisers are interested in presenting successful stakeholder partnership experiences in ARD to reflect the mandate of GFAR. Guidelines can be requested at the GFAR secretariat at GFAR-Secretariat@fao.org. Initial submissions should reach the GFAR Secretariat by March 31, 2003. All stakeholders are encouraged to submit successful ARD experiences, especially farmers' organisations, women's groups, agribusiness and NGOs. Contact: Olanrewaju Babatunde Smith, Executive Secretary, GFAR Secretariat by e-mail: GFAR-Secretariat@fao.org; website: www.egfar.org

PAVING THE WAY FORWARD: AN INTERNATIONAL CONFERENCE ON BEST PRACTICES IN RURAL FINANCE (WASHINGTON DC, USA)

2 - 5 June 2003

Sponsored by USAID and hosted by BASIS/CRSP and WOCCU, this conference will be organised at the International Trade Centre, Ronald Reagan Building in Washington, and will capture the lessons and best practices in rural finance - the successes and failures in agricultural finance, financial liberalisation, risk management and micro-finance. Results will feed into new thinking on sustainable financial markets and services, tailored to the specific challenges of rural economies. Examination of current institutions, programmes and ways to improve rural finance policies will lead to recommendations for policy and programmes for donors and practitioners involved in rural finance development. Please visit: www.basis.wisc.edu/rfc

CITIES, INEQUALITY AND SUBJECTIVITY IN THE AMERICAS, GUADALAJARA, MEXICO

14 - 16 May 2003

This event which will take place at the *Instituto Tecnológico y de Estudios Superiores del Occidente (ITESO)* in Guadalajara is organised with support

from the Rockefeller Foundation. The research programme "Translocal Flows: Migrations and Contested Urban Spaces in the Americas" is an initiative of the Programme on Latin America and the Caribbean at the Social Science Research Council (SSRC) designed to promote research and to strengthen mechanisms for transactional intellectual dialogue about contemporary social processes and cultural practices in the Americas. Please check: www.translocal-flows.ssrc.org/english/conferences/

URBAN VILLAGES, INTERNATIONAL CONFERENCE, MURDOCH, AUSTRALIA

5 - 6 May 2003

The Environmental Technology Centre of the Murdoch University in Australia is organising this conference. It will showcase international and national examples of urban villages today. It will also discuss the current different strands of thought on how to move forward and into future directions. Factors affecting sustainability in urban villages will also be a major stream. Such topics will include liveability, employment, education, construction, transport, planning, energy, water, waste and food production. For further information, contact: Dr Kuruvilla Mathew, Deputy Director, Environmental Technology Centre, Murdoch University, Murdoch 6050 Western Australia, Tel: +61 8 9360 2896, Fax: +61 8 9310 4997; e-mail: mathew@essun1.murdoch.edu.au

FOODAFRICA IMPROVING FOOD SYSTEMS IN SUB-SAHARAN AFRICA: RESPONDING TO A CHANGING ENVIRONMENT - INTERNET-BASED FORUM & INTERNATIONAL WORKING MEETING, YAOUNDE, CAMEROON

31 March - 11 April 2003

5 - 9 May 2003

The FOODAFRICA initiative will: (a) review the current research and development activities that affect food systems in sub-Saharan Africa; (b) identify gaps in current food and health research strategies; (c) recommend future research strategies; and (d) improve the links between researchers, in particular young scientists, in Africa and Europe. This will take place **firstly** through an Internet-based Forum www.foodafrica.nri.org/conference/forum.html from 31 March-11 April 2003, and **secondly** in an International Working Meeting, www.foodafrica.nri.org/conference/workshop.html from 5-9 May 2003 in Yaoundé, Cameroon. Or go to the FoodAfrica website www.foodafrica.nri.org/index.html for further details.

ELECTRONIC CONFERENCE ON URBAN AGRICULTURE

21 - 30 April 2003

IMAGEN Educativa, A member of the Network on Urban Agriculture, AGUILA, is organising a virtual conference (in Spanish) with the theme: "Urban Agriculture and Human Development" (*Agricultura Intra Urbana y Desarrollo Humano*). Specific Topics are Food Security; Hydroponics; Niches. More information can be obtained from: www.imageneducativa.org

HENRY A. WALLACE CONFERENCE, CIAT, TURRIALBA, COSTA RICA

19 - 21 March 2003

As part of the celebration of the thirtieth anniversary of CATIE, a second conference will be organised in the Inter American series of Scientific Conferences of "Henry A. Wallace", which will deal with the theme: Financing Sustainable Rural Development in Tropical America: Innovations for Food Security, Competition and Conservation. More information can be obtained from: www.catie.ac.cr/events/conferences/Wallace_2/principal_ing.htm

WORLD WATER FORUM (KYOTO, JAPAN)

16 - 23 March 2003

The Third World Water Forum has just ended in Japan, a paper by RUAF and IWMI on Urban Agriculture was presented there, and *UA Magazine* no. 8 was

distributed. The outcome of the sessions can be accessed at the World Water Forum website www.world.water-forum3.com or www.worldwaterforum.org

INTERNET CONFERENCE ON ECOCITY DEVELOPMENT

February – June 2003

This Conference is a post-conference activity providing participants of the 5th Ecocity Conference with a virtual platform to further the dialogue initiated in Shenzhen, China. It enables people who were unable to travel to Shenzhen to join in the discussion of papers over the Internet, and provides them with an opportunity to present their work. An objective of the conference is to promote future networking and cooperation on ecocity development with the organisers. All abstracts and papers presented during the 5th Ecocity conference (Shenzhen, August 2002) are available on the web. Other materials for e-discussion during the Internet Conference include a new submission of papers on the same topics covered in the 5th Ecocity conference. See: www.ias.unu.edu/proceedings/icibs/ecocity03/index.html

URBAN DEVELOPMENT FOR POVERTY REDUCTION: TOWARDS A RESEARCH AGENDA WASHINGTON, USA

9 – 11 December 2002

The World Bank organised this event, in which RUAF's partner TUAN participated. Unfortunately, very little attention was given to Urban Food Security and Urban Agriculture. Read about the results at: www.worldbank.org/urban/symposium2002/index.html

NEWS

PARTNER SEARCH

A European Union project is being developed on regional cooperation in the North Sea Region concerning the impact of urban agriculture, city farming and allotment gardening. Project partners are looked for: planning authorities, municipalities, public welfare and public agriculture and horticulture organisations around the North Sea. The focus of this programme is going to be better awareness with spatial planning authorities and municipalities of the impact on sustainability by urban agriculture especially in social handicapped areas, with a focus on poverty and immigration. Some of the planned activities are evaluating different approaches on their strengths and weaknesses, developing a network to transfer know-how of best practices concerning spatial planning and developing strategies of sustainability and innovation for existing activities. Contact for details, at the Chamber of Agriculture in Lower Saxony, Oldenburg, Germany: Michael Kuegler, phone +49-441-801-336; e-mail: m.kuegler@lwk-we.de; Michael Janisch, phone +49-4403-9796-37; e-mail: m.janisch@lwk-we.de

SOUTH AND EAST ASIAN RURAL URBAN SYNERGY

The overall objective of this SEARUSYN project, starting in 2003, is to contribute to the synergy between urban growth and agricultural development in the urban fringe of Hanoi (Vietnam) and Nanjing (China) in order to improve the welfare of rural and urban communities. Systems research is undertaken on the design of solutions to problems arising from the interactions between urban growth and changing horticultural production systems on the city outskirts. Stakeholder platforms will be set up as a basis for scenario development for periurban land-use planning and resource management. The project partners are Hanoi Agricultural University, and the Institute of Sociology of Hanoi, Vietnam; Nanjing Agricultural University, China; New University of Lisbon (NUL), Portugal; and LEI, ALTERN Green World Research. For more information: www.searusyn.org

VICTORY GARDEN NETWORK

The International Victory Garden Network is currently providing grants of up to US\$10,000 to food security organisations or activists who want to initiate innovative pilot projects around issues of urban agriculture and urban food insecurity in the spirit of the World War 2 Victory Gardeners. Furthermore, grants of up to US\$500 are provided for activists who want to attend conferences, symposiums or training workshops focusing on issues of food security and/or urban agriculture. More info at www.victorygardens.net/news.html Or contact: Max Wallace, Co-ordinator, International Victory Garden Network, at: zeropoverty@email.com

FACULTY POSITION ON URBAN HORTICULTURE

The Humboldt University in Berlin has recognised the importance of urban agriculture/horticulture and created a new faculty position for urban horticulture. Prof. Ulrichs has accepted this call and has started working as professor for urban horticulture. One of the main research interests will be on urban vegetable production systems in the tropics.

Contact: Prof. Dr Christian Ulrichs, Humboldt-Universität zu Berlin, Institute for Horticultural Science, Urban Horticulture, Berlin.

SALT LAKE CITY-BASED TREELINK

Urban and Community Forestry continues to grow as a national movement and a discipline taught in universities from coast to coast, despite budget constraints. Since 1996, the USDA has supported Salt Lake City-based TreeLink as the national Urban Forestry communications hub. Utilities are partnering with non-profit Urban Forestry organisations in programmes to support Urban Forestry. In Chicago and Los Angeles, school districts are tearing out blacktop and planting trees to reduce energy costs, lower ozone-damage from air-conditioning, and reduce irrigation expenses beneath shade trees. For a full report on the Benefits of Trees in Urban and Community Environments, visit TreeLink at: www.treelink.org or call us at 801-359-1933; e-mail: pepper@treelink.org

HARVARD FOREST RESEARCH FELLOWSHIPS

Harvard forest research fellowships, of up to US\$30,000 in forest biology, ecology, management, and public policy are available. Information on your qualifications and personal datasheet, the proposal, purpose/intent of the activity can be sent to: Harvard Forest, Harvard University, PO BOX 68, Petersham MA 01366-0068, USA; e-mail: drecos@fas.harvard.edu. Please check: www.harvardforest.fas.harvard.edu/education/bullard/bullard.htm