Urban Harvest

Urbanization, urban food security and the international agricultural research agenda
• Urban Harvest
• Importance of agricultural research for development (AR4D)
• Researcher perceptions of global trends transforming agriculture
• Agriculture and urbanization
• Rural-urban linkages and metropolitan regions
• Future research needs
Urban Harvest

• A system-wide program of the CGIAR involving cross-cutting research drawing on expertise of several IARCs
• Established in 2000 in response to a recommendation of an external review of the CG System
• Three objectives:
  – Improve the contribution of urban and peri-urban agriculture to food and income security of vulnerable urban households
  – Enhance the positive environmental and health impacts of UPA and mitigate the negative effects
  – Promote UPA as positive, productive and essential component of sustainable cities
Three key contexts of the metropolitan region

- The livelihoods context
  - Agriculture, livelihoods and markets
- The environmental context
  - Health of urban and peri-urban ecosystems
- The political-institutional context
  - Policy and institutional dialogue and change
Healthy city harvests: Generating evidence to guide policy on urban agriculture

EDITORS: DONALD CULI, DIANA LEE-SMITH AND GEORGE NAKAMUNA

In an area of global urban food crises and rapid unplanned urban growth, how can urban agriculture be transformed from a low priority to a potential source of health risks and a vehicle for healthy and sustainable urban environments?

Anecdotal evidence to integrating agriculture and public health into urban policy

"Policy dialogue to engage researchers and policy makers in support of a nutrition-based livelihoods of low-income urban families.

Essential reading for professionals and academics involved in agriculture and the environment, public health, urban planning and environment.

Increasing numbers of low-income families in urban settlements with limited employment opportunities have placed great emphasis on a growing household food security through engagement in local agricultural activities. This has led to urban agriculture production providing multiple pathways for addressing urban nutrition and health challenges. Increasing urban agricultural activities are creating opportunities for improving food security and public health while reducing urban environmental degradation.

The publication presents recent studies on urban livelihoods and their impacts on urban agriculture activities in urban centers around the world, including India, China, Brazil, and the United States. It highlights the potential for urban agriculture to contribute to improved health and nutrition outcomes in urban settings. The publication emphasizes the need for policy dialogue to engage researchers and policy makers in support of a nutrition-based livelihoods of low-income urban families. It provides essential reading for professionals and academics involved in agriculture and the environment, public health, urban planning and environment.

Women Feeding Cities: Making a difference in urban agriculture and food security

Edited by J. Wrathall, M. de Beuckelaer, and F. A. Niyongere

Women feeding cities: making a difference in urban agriculture and food security

The publication highlights the critical role of women in urban agriculture and food security. It presents case studies from various cities and regions, showcasing the contributions of women in urban agriculture and their impact on food security and nutrition. The publication provides insights into the strategies and challenges faced by women in urban agriculture, highlighting the importance of gender equality and empowering women to lead in the sector.

African Urban Harvest: Agriculture in and around African cities, 2002-2006

GORDON PARK, KUNJOY KANZEARI, AND DIANA LEE-SMITH

African Urban Harvest: Agriculture in and around African cities, 2002-2006

Amidst the multiple changes affecting sub-Saharan Africa in the last couple of decades, there has been a growing importance of urban agriculture in African cities. How far is popular involvement in urban agricultural activities contributing to increased household food security and improved health and nutrition, and what is the future role of urban agriculture in providing food security and nutrition?

A major contribution to understanding the role of agriculture in urban livelihoods in African cities

- Shaping the growing role of official government for creating jobs and sustainable food production in cities
- Understanding the role of women in urban agriculture
- Understanding the primary role of women in urban food production

The publication provides insights into the role of agriculture in urban livelihoods in African cities, highlighting the importance of urban agriculture in contributing to food security and nutrition. It emphasizes the role of women in urban agriculture and advocates for policy dialogue to engage researchers and policy makers in support of a nutrition-based livelihoods of low-income urban families. It also highlights the need for understanding the role of women in urban agriculture and the future role of urban agriculture in providing food security and nutrition.

Championing urban farmers in Kampala: Influences on local policy change in Uganda

While the multiple changes affecting sub-Saharan Africa in the last couple of decades, there has been a growing importance of urban agriculture in African cities. How far is popular involvement in urban agricultural activities contributing to increased household food security and improved health and nutrition, and what is the future role of urban agriculture in providing food security and nutrition?
Importance of AR4D

- “Investment in agricultural research in developing countries...generates rates of return amply high and sufficiently above the opportunity cost of capital in most countries to justify strong and more intensified investment”
- “The undiscounted sum of estimated research benefits is typically on the order of twenty times the research costs...”
  

- Growth of food production faster than population: from 1980 to 2006, 2.2% per annum versus 1.7%
- Impact of agricultural research on poverty
- Decline in ODA funding to agriculture, from 8% in 1996 to less than 2.9% in 2006. Research especially hit
- Increased attention to agriculture by policy makers and growth in funding
Some key global trends transforming agriculture:
Agricultural research community perceptions

<table>
<thead>
<tr>
<th></th>
<th>CIP Strategic Plan 2008</th>
<th>CGIAR Mission, pre-change process</th>
<th>Independent CGIAR Review Panel (IRP)</th>
<th>CGIAR Change Management</th>
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<tbody>
<tr>
<td>Climate change</td>
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<td>Energy crisis/biofuels</td>
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<td>Food price crisis</td>
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<td>✓</td>
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<tr>
<td>Globalization (markets, private sector action)</td>
<td>✓</td>
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<tr>
<td>Agriculture/health linkages (including pandemics)</td>
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<tr>
<td>Population growth/urbanization, Migration dynamics</td>
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</table>
• Three worlds of agriculture according to WDR2008 affected differently by major trends:
  – Mainly agricultural world – Africa and Asia
  – Transitional world – Latin America
  – Urbanized world – the North

• Oversimplification reflecting a “rural bias” in agricultural research and development
Urbanization: not just the growth of cities and exit from farming

- Growth of urban poverty and food insecurity
- Temporary and seasonal migration
- Daily “commuting” – doubling the daytime size of cities
- “Urbanization” of rural areas
Rural income portfolios from large-scale surveys in Tanzania

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<tbody>
<tr>
<td>No. of rural hh</td>
<td>n.a.</td>
<td>3247</td>
<td>600</td>
<td>498</td>
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**Percentage composition of household incomes**

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<tr>
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<tbody>
<tr>
<td>Subsistence</td>
<td>43.9</td>
<td>49.2</td>
<td>49</td>
<td>44.9</td>
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<tr>
<td>Farm cash</td>
<td>24.3</td>
<td>18.8</td>
<td>27.5</td>
<td>17.6</td>
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<tr>
<td>Non-farm cash</td>
<td>31.8</td>
<td>32</td>
<td>23.5</td>
<td>37.5</td>
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### Composition of rural incomes in Kenya, by province, 1994

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<tr>
<th>Province</th>
<th>Central</th>
<th>Coast</th>
<th>Eastern</th>
<th>North-Eastern</th>
<th>Nyanza</th>
<th>Rift Valley</th>
<th>Western</th>
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<tr>
<td>Agricultural income</td>
<td>30</td>
<td>38.6</td>
<td>37.7</td>
<td>59.9</td>
<td>35.1</td>
<td>51.6</td>
<td>43.8</td>
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### Composition of rural incomes in Shinyanga, Tanzania, by consumption terciles, 1990

<table>
<thead>
<tr>
<th>Source</th>
<th>Poor</th>
<th>Middle</th>
<th>Non-poor</th>
<th>All</th>
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<tbody>
<tr>
<td>Crops</td>
<td>43.7</td>
<td>32.9</td>
<td>20.2</td>
<td>25.9</td>
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<tr>
<td>Livestock</td>
<td>16.1</td>
<td>39.8</td>
<td>64.3</td>
<td>53.2</td>
</tr>
<tr>
<td>Off-farm wage income</td>
<td>3.4</td>
<td>0.9</td>
<td>0.1</td>
<td>0.7</td>
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</tbody>
</table>
Urbanization: not just the growth of cities

• Growth of urban poverty and food insecurity
• Temporary and seasonal migration
• Daily “commuting” – doubling the daytime size of cities
• “Urbanization” of rural areas
• Multi-locational households involving rural agriculture, urban agriculture, trading, temporary employment etc
– Agricultural worlds
– Transitional worlds
– Urbanized worlds

They exist within single regions
Peri-urban interface

Urban areas with highly diversified livelihoods, including agriculture

Diversifying rural livelihoods

Peri-urban interface
Ecological and socio-economic exchanges between rural, peri-urban and urban areas: **rural-urban linkages**
Household-based pig-raising agro-enterprises in Hanoi: rural-urban market chains and enterprise clusters

- Piglet raiser
- Got pig raiser
- Manure collector
- Vegetable and flower growers
- Vet services
- Commercial feeds
- Meat pig raiser
- Organic waste
- Meat market

"Peri-urban zone"

Rural areas

Urban zone
The metropolitan region

• First recognized in Asia, LAC, but increasingly visible in Africa
• Different shapes and dynamics
• The interdependence of city core with its hinterland
• Existence of an interconnected regional food system
• The urban center drives development in surrounding area, but is also dependent on it
• Cultural, political and administrative thinking divisive (the urban-rural divide)
An example of a metropolitan region

Manila National Capital Region

Garlands

Jasmin flower buds

Vegetable marketing
“There is nothing surprising about this interest [in the geographical aspects of development] – perhaps the surprise is that it took so long for this interest to become a main stream concern” Paul Krugman, Nobel Laureate, Economics 2008

• Interest not yet evident in international agricultural research
• Where there is interest (WB WDR 2009), agriculture is almost absent

Diversity of livelihoods and agricultural linkages within cities and their regions a critical way forward in AR4D
Some areas for future UPA research, under conditions of climate change

**Livelihoods**

- Regional food security: connecting production, marketing and processing systems in metropolitan regions, diversifying markets for producers and food choices/micro-nutrient access for consumers
- Food security and food safety: smallholder organic production enterprises and marketing groups in urban and peri-urban areas
- Food safety: closer linkages and trust between urban consumers and food producers along the urban to rural transect
Urban-ecosystem health

• Multi-functional city greening
  – Productive, for local food supply
  – Environmental, to reduce flooding, heat island effects
  – Healthy, to reduce dust and exposure to contaminants, increase mental health

• Regional solid and liquid waste recycling through agriculture and alternative energy production
  – Massive regional composting
  – Systematic reuse of food wastes for animal feed
  – Waste-based briquette use for cooking fuel and heating
  – Systematic linkages of animal wastes with agriculture and biogas production
Policy and institutional dialogue and change

• Getting regional thinking into urban planning
• Integration of agriculture and food security into city and regional thinking and planning
• Involvement of producer organizations in food safety monitoring and regulation