Urban agriculture in times of crisis: evaluating the impact

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Eastern Arc Conference 2023: Food in a Time of Crisis – September 20, 2023

Session: Urban agriculture, food and global crises
Introduction

Urban Agriculture helped increase social resilience during COVID-19

- Urban gardener were able to improve their mental wellbeing using their allotments and private gardens

- Urban farmers produced more to meet a higher demand of vegetable boxes

- Community gardens provided fresh food to food banks and soup kitchens

There was a mild policy recognition and support to farmers and gardeners. Will this support disappear as the emergency subsides?
Introduction

There are many advantages in assessing the benefits of urban agriculture:

• Realising that these benefits exist

• Demonstrating that urban agriculture is multifunctional

• Producing evidence that will help retain the support that is sometimes given to UA in times of crisis (which in turn enables a fast response when sudden crises arise)
the FEWmeter

measuring the environmental efficiency and the benefits of urban agriculture in Europe
In total ca. 145 tons

2019 – ca. 69 tons
2020 – ca. 76 tons

Food harvested (kg/m²)

France 2019: 4.6 kg/m², 2020: 5.1 kg/m²
USA 2019: 2.8 kg/m², 2020: 2.1 kg/m²
Great Britain 2019: 1.6 kg/m², 2020: 2.0 kg/m²
Germany 2019: 1.4 kg/m², 2020: 1.6 kg/m²
Poland 2019: 1.1 kg/m², 2020: 1.7 kg/m²

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Motivations for gardening/farming

- Very important
- Fairly important
- Neutral
- Not so important
- Not important at all
- Not important at all
- No response

Number of responses

- Being able to be outdoors
- Improving the environment
- Access to fresh vegetables, fruits, or herbs
- Relaxing or releasing stress
- Changing the way food is produced
- Learning new things
- Getting some physical exercise
- Contributing to my community
- Engaging in a fun activity
- A chance to interact with others
- Sharing what I know with others
- Gaining employment skills
- Saving money

FR, DE, PL, UK

FR

US

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the FEWmeter Bogota’

Using the same methodology in the Latin America context
Urban agriculture in Bogotá

- **Population** 7,412,566 people in 2018 (approximately 16% of the total inhabitants of Colombia)
- **Food insecurity** affects 24% of the households
- At present time, there are more than **2500 gardens** on the city’s territory.

- **These gardens produce both food and social benefits**
Measuring impacts

- Physical and digital questionnaires
- Adaptation to local specificities
- Diary: energy and water consumption
- Diary: food production
- Questionnaire for garden managers: organization of the garden, economic revenue, physical infrastructure
- Volunteer questionnaire: social impacts of UA on urban farmers

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## Case studies

<table>
<thead>
<tr>
<th>Garden</th>
<th>days</th>
<th>months</th>
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</thead>
<tbody>
<tr>
<td>1 Hidropónico de la plaza, siembra social</td>
<td>72</td>
<td>2.4</td>
</tr>
<tr>
<td>2 Mundo verde corazón verde</td>
<td>135</td>
<td>4.5</td>
</tr>
<tr>
<td>3 Junta de Acción Comunal San Eusebio</td>
<td>150</td>
<td>5</td>
</tr>
<tr>
<td>4 Enverdesiendo, huerta casera</td>
<td>150</td>
<td>5</td>
</tr>
<tr>
<td>5 La Huerta de mi barrio</td>
<td>62</td>
<td>2.066667</td>
</tr>
<tr>
<td>6 Parque ecológico la libelula</td>
<td>148</td>
<td>4.933333</td>
</tr>
<tr>
<td>7 Huerta Hojas de esperanza</td>
<td>75</td>
<td>2.5</td>
</tr>
<tr>
<td>8 Huerta comunitaria Santa Matilde</td>
<td>135</td>
<td>4.5</td>
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<tr>
<td>9 PIWAM, alimentos para la vida</td>
<td>112</td>
<td>3.733333</td>
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<tr>
<td>10 Huertopia</td>
<td>61</td>
<td>2.033333</td>
</tr>
<tr>
<td>11 Huerta Doña Mariela</td>
<td>112</td>
<td>3.733333</td>
</tr>
<tr>
<td>12 Huerta comunitaria Villa Ines</td>
<td>145</td>
<td>4.833333</td>
</tr>
<tr>
<td>13 Huerta orgánica Micaela</td>
<td>74</td>
<td>2.466667</td>
</tr>
<tr>
<td>14 Cobá, el hogar de las abejas</td>
<td>97</td>
<td>3.233333</td>
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<tr>
<td>15 Asociacion comunitaria por el desarrollo integral dos circales</td>
<td>69</td>
<td>2.3</td>
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Gardener demographics

MONTHLY EARNINGS IN COP

<table>
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<tr>
<th>Monthly Earnings in COP</th>
<th>Percentage</th>
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<tbody>
<tr>
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<td></td>
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<tr>
<td>&gt; 4000,000 $</td>
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<tr>
<td>2000,000-4000,000 $</td>
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<td>1000,000-2000,000 $</td>
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<tr>
<td>600,000-1000,000 $</td>
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<tr>
<td>&lt; 600,000 $</td>
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</tbody>
</table>

GENDER

- Male: 33%
- Female: 66%
- Prefer not to say: 1%

ETHNIC BACKGROUND

- Mestizo: 69%
- White: 4%
- Afro-descendant: 3%
- Does not know: 1%
- Prefer not to say: 23%

EDUCATION

- Primary school: 8%
- Undergraduate University: 22%
- Vocational training: 27%
- Undergraduate University: 23%
- Postgraduate University: 19%
- Secondary School: 19%
- I do not want to answer: 1%

AGE

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Percentage</th>
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<td>&lt; 20</td>
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<td>20-45</td>
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<td>45-60</td>
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<tr>
<td>&gt; 60</td>
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Quantitative impacts of UA (3 months)

Yield (kg/m²)

Water usage (L/m²)

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Quantitative impacts of UA (3 months)

Compost consumption (kg/m²)

Compost production (kg)

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Quantitative impacts of UA (3 months)

Social activities (n)

Calories per sqm (cal/m2)

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Dietary impacts of UA

Since I started participating in the garden/farm, the following activities have been impacted:

- Amount of vegetables I eat each week
- Amount of aromatic herbs I eat each week
- Amount of fruit I eat each week
- Number of meals I prepare at home

- Decreased a lot
- Decreased a little
- Remained more or less the same
- Increased a little
- Increased a lot
- I can't answer this question, because I have been in the garden for a long time.
- I do not know
Social impacts of UA

Gardening and farming can have different effects on people. What were the most important effects, if any, that urban agriculture has had on you?
Spatial impacts of UA

Urban agriculture projects can also have an impact on the physical spaces where they are located. How has urban agriculture influenced your neighbourhood?
thank you

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