

Cuba's Organic Agriculture

Presented By: Emma Bassein and
Nathan Douglass

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Source: <http://rapidfire.sci.gsfc.nasa.gov/gallery/2003021-0121/Cuba.A2003021.1600.500m.jpg>



Presentation Overview

- Cuban Revolution and U.S. Embargo
- Economic Collapse 1989-91
- Transition to Alternative Agriculture
- Highlights of Cuba's Organic Agriculture
- Future of Cuban
- Potential for World Use

Brief History

- Typical Latin American Monocrop Production
- Economic Dependence
- Cuban Revolution shifted dependence
- 85% of trade with socialist bloc (70% of total with Soviet Union)

Pre-Soviet Collapse Characteristics

- Favorable trade led to rapid modernization and mechanization
- Heavy import dependence on agricultural supplies (fertilizer, pesticide, hybrid seeds, machines, petroleum) and foodstuffs
- Export of raw commodities and minerals

Economic Contradictions

- Relative Modernizations
- Function as supplier of raw agricultural commodities and minerals

Agricultural Characteristics: 1980s

- State control of most cultivated land
- High-input (agrochemicals, irrigation, mechanization)
- More tractors per hectare than California
- Peasant workers produced 40% of domestic food with only 20% of land

Soviet Collapse and Crisis

- 53% reduction in oil imports
- Imports of wheat/grain dropped >50%
- Drop >80% in availability of fertilizers/pesticides
- Almost 50% decrease in sugar exports from 3.8 million tons to 2 million tons
 - Soviet price in 1991 = \$0.36/pound
 - Price in 1992 = \$0.09/pound

Social Implications

- Caloric intake per capita dropped from 3,000 to 1,900
- Wide spread disease due to vitamin deficiencies
- Sugar production decreased by half, 73% decrease in sugar revenues from the Soviet Union between 1991 and 1992
- Global Social Product (GSP) declined by 6.3% from 1986-1989 (as compared to a 41.6% increase from 1980-1985)

Expected Outcome:

Collapse of the Regime!!

Actual Outcome:

- Transition to subsistence farming
 - Organic Agriculture
 - Peasant Collectives
 - Urban Gardens
 - De-mechanization

Image of farmer plowing field removed for copyright reasons.

Source:

<http://www.pfi.iastate.edu/Cuba/Cuba%20Ag%20Independence.htm>

The Recovery

- Agricultural change began as early as 1992
- Domestic food production tripled between 1995 and 1998
- In 2004 300,000 tons of food was produced in Havana alone –enough to supply vegetables to the entire city, as well as some meat and grains

Techniques

- Crop Rotation, nitrogen fixation
- Reduce Monoculture
- Helpful Bacteria and Fungi
- Natural predators for insects

Image of crops removed for copyright reasons.

Source: www.cityfarmer.org/

Social Changes Related to Food

- Reorganization of workers and migration to the country side (re-peasantization)
- Education geared towards sustainable farming and Oxen Care

The Right Livelihood Award

"The Alternative Nobel Prize"

Awarded to El Grupo de Agricultura
Organica de Cuba

"...For showing that organic agriculture is a
key to both environmental sustainability
and food security"

Image of "The Right Livelihood
Award" removed for copyright
reasons.

The Future and Applications

- Not competitive with commercial agriculture by today's standards
- Applicable to rural agricultural communities in developing regions

Sources

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