Association for International Agriculture and Rural Development (AIARD)
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Latin America’s contribution to global food security

- Contributes 11% of the value of world food production
- Has 28% of the world’s medium to high potential farmland
- Has 1/3 of the world’s fresh water resources
- GDP growth generated by agriculture is up to 4 times more effective in reducing poverty than growth generated by other sectors
Agricultural Productivity in LAC: enormous potential

The region has increased its share of global agricultural output over the last 50 years:

- 70% of bananas
- 45% of coffee and sugar
- 44% of beef
- 42% of poultry
- 33% of maize
- 13% of cocoa
- 12% of citrus

Global exports from 2006 to 2009
Challenges

- **Poor infrastructure**: roads, ports, and storage facilities.
- The region has **lost 40% of its original forest**.
- LAC contributed **32.6%** of additional farmland from 1960 to 2000, while global food production only increased **14.3%**.
- In the region, for **every $100 in goods produced** by the agricultural sector there is **only $1.10 invested in agricultural research**.
- Internal food insecurity remains critical in Central America and Caribbean, with **food imports of over 75% of the caloric food supply**.
Small and medium sized farmers

Small and medium sized farms are **the largest investors in developing country agriculture** and must be **central to any strategy for increasing investment in the sector**

**More than half** of the food produced in LAC comes from the region’s 14 million smallholders

- They account for **80% of the farms**
- They generate **64% of agricultural employment**
- They occupy **35% of farmland**

From a smallholder perspective the agriculture sector in the region is underinvested.
Innovation technology/mobile phones:

Where Information and Communications Technology can Enable Progress in Food Production:

1. Make recommendations for maximizing yield, minimizing inputs for specific crops in specific locations

2. To make available location-specific, precision weather forecasting as an input to planting and irrigation decisions.

3. As a platform for state-of-the-art supply chain management tools that speed the process of food through the supply chain.

4. To track and trace to allow the provenance and growing standards of crops, meat and fish to be validated.

5. To facilitate real-time market offer and discovery mechanisms that allow growers to find markets and buyers to find sources.

6. To monitor run-off and thereby indicate where reduced use of fertilizer may be possible for the purpose of protecting natural water resources.
Adoption of technologies/Mechanization

QUINOA FARMING

Before:
Grains processed manually:
- **6 hours of labor/12kg of grain**
- Painstaking and debilitating task
- Traditionally performed by women

After:
A small machine that:
- Processes the same amount of grain in about **7 minutes**
- Can preserve **more of the nutritional value** of the quinoa.
- Incorporates **women** into the **value chain**

Quinoa farm families in the Altiplano region of Southern Bolivia
Environmental sustainability

Almost 70% of the planet’s extracted freshwater is used for agriculture.

About 1/3 of the total human induced warming effect due to GHGs comes from agriculture and land-use change.

Without adopting climate smart agriculture, Latin America may suffer impact and mitigation costs of up to 137% of its current GDP by the end of the century.

A key goal is to invest in farmers’ capacity to increase production while preserving the land, water and other aspects of the natural environment.
The Nature Conservancy (TNC) and the government of Brazil have created Rural Environmental Registry (CAR — Cadastro Ambiental Rural)

- Maps generated through CAR show topography, soil composition and other information that is used to monitor property-owner compliance with the Forest Code
- The CAR has become a cost effective tool for integrating food production and conservation objectives.
- TNC helped over 650 landowners register their properties, the Paragominas municipality went from 23 to 83% registration in a little under a year.

Paragominas now benefits from preferential credit programs for low-carbon agriculture, and has become the model for the state of Para’s Green Municipalities program.
The report recommendations represent a multi-stakeholder approach to sustainable solutions:
Report recommendations:

- Increasing public investments in agricultural research and development.
- Reinvigorating agricultural extension services.
- Modernizing rural infrastructure.
- Increasing efficiency in irrigation and water management and promoting greater adoption of mechanized agriculture.
- Eliminating import and export barriers to agricultural trade and productivity.
- Advancing agricultural financing and investment opportunities for smallholder farmers.
- Strengthening producer associations and cooperatives.
- Preventing post-harvest losses.