



Centro de  
Desarrollo de  
Agronegocios



CDA - Fintrac Inc.

# Introduction of Calendarized Vegetable Production Systems

**“Real Results for  
Real People”**



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**CALENDARIZED VEGETABLES:** These production systems are being implemented by more than 85 growers (31 lead partners) covering more than 100 hectares.

**Background:** The lack of organized and calendarized planting, plus the absence of appropriate production technologies in Honduras, have made it possible for regional companies in Central American (mainly Guatemala) to become the principal suppliers of fruits and vegetables to the main market and supermarket chains in the largest cities. Honduras however, does have the domestic capacity to satisfy the entire demand for these markets if buyer needs are met. The main requirements for the local market and

supermarkets are similar to those of export markets: suppliers have to provide a **wide variety** of vegetables on a **constant (year round)** basis with certain specifications regarding **price and quality** of the products. In most cases in Honduras, local vegetable growers are not integrated nor coordinated: they are specialized in growing one or maybe two crops, and harvest relatively large areas of land at once, sometimes having 2 or 3 production cycles in a year. This situation generates an irregular supply of product, which in most cases is not acceptable for wholesale buyers. In order to compete in these markets, CDA has developed and implemented a **Production System for Calendarized Vegetables** in several "Departamentos" of the country.

**CDA Partners:** Growers in Choluteca, Intibucá, Copán and Ocotepeque.

**Product/Market:** A wide variety of vegetables for markets and supermarkets in Tegucigalpa, San Pedro Sula, El Progreso and Choluteca.

**CDA Growers/Area:** More than 85 growers (31 lead partners), covering more than 100 hectares.

**CDA Rationale:** The implementation of calendarized planting and the use of improved production technologies, including low cost greenhouses, hybrid seeds, crop diversification, integrated pest management and appropriate irrigation systems, enables small growers to have access to markets and supermarkets in the main cities of Honduras. This has already generated considerable growth in sales and economic stability due to more constant cash flows. The "technological update" in production and meeting market requirements will assure sustainability of the business over the long term.

**CDA Support:** Production, Marketing and Technology Fund Components.

**Production:** Technical assistance provided through the implementation of a complete calendarized vegetable production system which includes land

preparation, contoured beds, seedling tray technology, use of hybrid seeds, low cost greenhouses, pest and disease control, fertilizations, introduction of new crops, crop rotation, weed management, efficient irrigation systems, harvesting, individual crop programs, etc.

**Technology Fund:** In selected activities, the technology fund was used to cover part of the initial cost in order to stimulate investments in infrastructure and technology and to reduce the risk. A total of \$117,791 has been invested between the growers and CDA on activities related with the calendarized vegetable program. CDA's contribution totals \$59,315 (50.4%) while lead partners have invested \$58,476 (49.6 %) of their own money. Investments include construction of a consolidation center, low cost greenhouses, a cold room, seedling trays, hybrid vegetable seeds, backpack sprayers, drip irrigation systems, and tunnels for winter production.

**Market Results:** The calendarized system in La Esperanza has enabled a growth in the number of buyers (wholesalers) and in sales volumes to



Construction of low cost greenhouses in La Esperanza



Calendarized Vegetables in La Esperanza



Weekly delivery of vegetables from small growers to a distributor in Tegucigalpa



Cold climate vegetable consolidation center in La Esperanza, Intibucá

**CALENDARIZED VEGETABLES:** Vegetable sales for Covefru (vegetable supplier in La Esperanza) have risen from \$72,000 in 1999 to \$113,800 in 2000 and to \$170,000 in 2001, a 136% increase in sales in just 20 months of assistance.

**CALENDARIZED VEGETABLES: Crop diversification - all of the growers involved in this program have been introduced to at least one new crop. Each producer now handles at least 4 or 5 different types of vegetables.**

supermarkets in San Pedro Sula and Tegucigalpa. Vegetable sales for Covefru (Vegetable Supplier from La Esperanza) have risen from \$72,000 in 1999 to \$113,800 in 2000 and to \$170,000 in 2001, a 136% increase in sales in just 20 months of technical assistance. The existing project in San Marcos de Colón, Choluteca already has several interested buyers for their vegetables. Currently the project is in its initial phase.

**Results & Impact:** Results and impact in this activity are major in significance. They include:

- All of the growers involved in the calendarization program have adopted the greenhouse technology for sowing. This has represented an increase in germination percentages of an average of 40%. Before CDA assistance most of the growers practiced direct sowing or seed beds. The fact that they are now planting stronger healthier seedlings and using starter solutions has had an enormous impact on increased yields.
  - **Improved cash flows:** Before CDA assistance, the growers planted large areas 2 or 3 times per year, obtaining cash flows every 4 to 5 months. With the calendarized program, the grower sells a minimum of once every 15 days and receive cash incomes at least 2 or 3 times a month, resulting in a better economic stability for the grower and generating a cash flow that provides for working capital at all times. In addition, the risk of low prices and financial loss during a single harvest is spread when harvests are continuous. Plus, initial cash flow requirements are less as planting is continuous and individual areas are small and can be financed from cash flows as opposed to bank loans.
  - **Crop diversification:** All of the growers involved in this program have been introduced to at least one new crop. Each producer now handles at least 4 or 5 different types of vegetables. This also helps reduce the technical and financial risk when only one crop is produced.
  - **Increased Sales:** The increase in sales of the main vegetable distributor with the calendarized program has allowed the independent producers to grow. All of the growers participating in the program have had increases in their sales ranging from 25% up to 300% compared to 1999 sales levels.
  - **Adoption of new production techniques:** Growers have adopted modern production techniques that include activities such as fertilization programs, sampling for pest and diseases, use of hybrid seeds, seedling trays and media preparation, higher beds, reduced soil erosion, contour beds, irrigation systems, reduced water usage, improved pesticide application and reduced pesticide usage, etc.
  - **Increased Investments:** Although this program is directed to low income growers, the quick and evident results obtained with the new technologies being promoted have motivated new investments in infrastructure for low cost greenhouses, irrigation systems, purchase of seedling trays, and better equipment for pest control applications including back pack sprayers. In total, these growers have invested more than \$58,000.
  - **Permanence in the market:** The constant deliveries (3 times per week to different supermarkets and distributors) of a wide variety of vegetables have allowed permanence and growth of these grower groups in the markets.
  - **Reduction of post-harvest losses:** With calendarization in place and regular harvests, plus improved handling, cold storage and transport, post harvest losses have been reduced from 20% in 1999 to 12% in 2001.
- Sustainability:** Excellent. The results to date and the good buyer relationships will allow the continuation of the program.  
**Replication Potential:** Excellent. The calendarized vegetable program has been completely functional for more than 20 months; results obtained have been evident and the system is being adapted to other regions of the country.



Greenhouse constructed by one of the growers in San Marcos de Colón, Choluteca



Calendarized vegetable system in La Florida, Copán



Calendarized vegetable system in Ocotepeque

**CALENDARIZED VEGETABLES: Technical assistance is provided in the implementation of a complete calendarized vegetable production system which includes land preparation, seedling tray technology, low cost greenhouses, use of hybrid seeds, pest and disease control, fertilizations, introduction of new crops, efficient irrigation systems, harvesting, individual crop programs and other areas.**