# FINAL REPORT – USAID-RED

## RURAL ECONOMIC DIVERSIFICATION PROJECT

**USAID-RED STAFF, FEBRUARY 2007**

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**USAID-RED**

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# ACKNOWLEDGEMENTS

The accomplishments of the USAID-RED Project would clearly not have been possible without the hard work of many partners, collaborators, clients and beneficiaries.

First, Fintrac Inc. greatly appreciates the continued support and encouragement that it received from USAID/ Honduras since the project began in July 2005. Clearly, the extraordinary successes achieved in the last 41 months would not have been possible without the vision, technical guidance, and financial commitment that the USAID mission provided. We would particularly like to extend our gratitude to USAID technical officers Leyla Gaytán, Craig Anderson and Todd Hamner, each of whom worked tirelessly to ensure rapid delivery of project products and services, and find solutions to challenges that arose.

While technically a development project, the RED project was run more like a business, with its success tied to the sales and income increases of client farmers and other micro, small, and medium-sized businesses. It is a testimony to the Honduran entrepreneurial spirit therefore that so many thousands were willing to take on the new technologies introduced – and we acknowledge and salute their efforts and enthusiasm. Our clients and end-beneficiaries were the cornerstone of the USAID-RED project, and represent the future of the sector in the country.

We would also like to thank a very long list of partner agencies and organizations, inclusive of the Ministry of Agriculture, Escuela Agricola Panamericana-El Zamorano, agricultural schools, and local rural development non-governmental organizations. These in combination with the larger private agribusiness companies that believed in our market-led approach and demonstrated their commitment with investments, are absolutely essential to the sustainability of a dynamic value-chain.

Fintrac additionally extends our sincere appreciation to the staff and management of the Fundación Hondureña de Investigación Agrícola (FHIA), our primary local partner that not only implemented several vital project activities but also made space within its facilities in La Lima Nueva, Cortés, to accommodate the main project office and supported the USAID-RED staff in countless ways.

Finally, a resounding “thank you” to the members of the USAID-RED team itself. Their dedication to clients, commitment to results, and incredibly hard work did not waver once over the last three and a half years. Andy Medlicott, the original Project Director, set high standards, and trained team members to meet them. Antonio Coello, the Project Director during the last year and a half of the project, took the reins at a critical time, managed the transition in a seamless manner, and kept the focus on achieving results. Over fifty outstanding Honduran professionals joined them over the life-of-project, and dedicated their hearts and souls to improving thousands of rural lives.

It has been a pleasure to work with all of you. If proof is ever needed that creating opportunities through agriculture contributes to poverty eradication, one need look no further.

Claire Starkey, President, Fintrac Inc.

# SECTION 1: EXECUTIVE SUMMARY

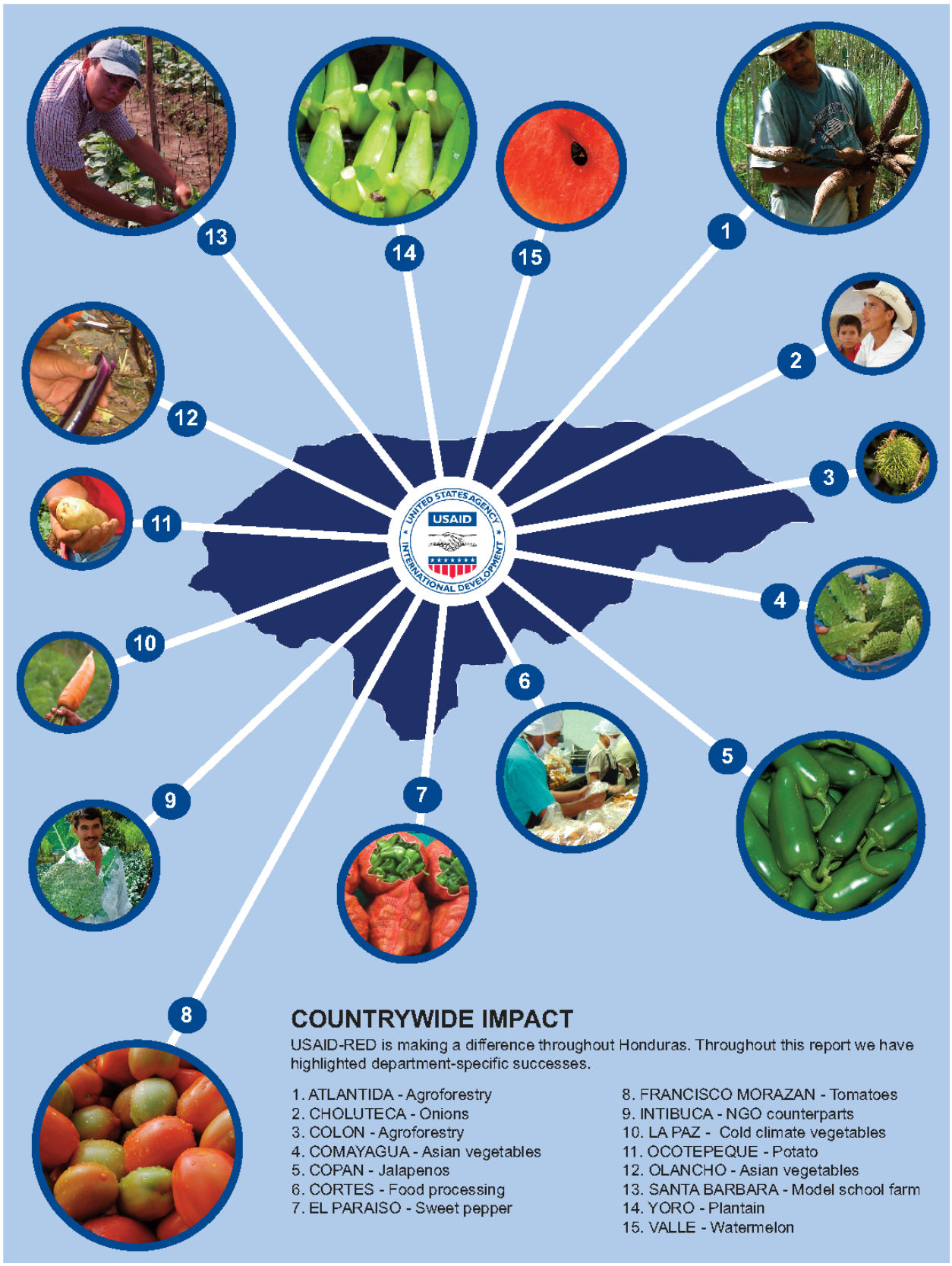
The Rural Economic Diversification (RED) Project, funded by USAID/ Honduras and implemented by Fintrac Inc., was initiated in July 2005. In its 41 months of operation, over $43 million in new sales were generated by project clients, over $19 million in new investments was realized, over 4,500 full-time equivalent jobs were created, and there were over 35,000 participants in training events in modern production, postharvest and processing technologies.

USAID-RED activities focused on three primary areas: (1) increasing the competitiveness of Honduran micro-, small- and medium-size rural enterprises (MSMEs); (2) expanding local and export market sales for growers, processors and packers; and (3) promoting increased private-sector production and investment in higher-value and value-added horticultural products.

The implementation approach combined:

- Direct firm-level technical assistance to “lead client” MSMEs throughout the value-chain – e.g. farmers, processors, packers, distributors, exporters
- Training to related rural beneficiaries through farm-based demonstration plots and field days, and through in-plant sessions on GLOBALGAP, SPS compliance, food safety and product traceability
- Expansion of outreach, and sustainability, through alliances (and capacity-building) with Business Development Service (BDS) providers (e.g. agricultural schools, input suppliers, NGOs)
- Publication and distribution of market and technical information

A graphic on the next page visually reflects crop focus in the fifteen departments of RED operation, and highlights from each department are then incorporated into the text of this final report, complemented by select client profiles, and quantifiable data on targets, indicators, and achievements. All objectives were exceeded.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USAID
UNITED STATES AGENCY INTERNATIONAL DEVELOPMENT
COUNTRYWIDE IMPACT
USAID-RED is making a difference throughout Honduras. Throughout this report we have highlighted department-specific successes.
1. ATLANTIDA - Agroforestry
2. CHOLUTECA - Onions
3. COLON - Agroforestry
4. COMAYAGUA - Asian vegetables
5. COPAN - Jalapenos
6. CORTES - Food processing
7. EL PARAISO - Sweet pepper
8. FRANCISCO MORAZAN - Tomatoes
9. INTIBUCA - NGO counterparts
10. LA PAZ - Cold climate vegetables
11. OCOTEPEQUE - Potato
12. OLANCHO - Asian vegetables
13. SANTA BARBARA - Model school farm
14. YORO - Plantain
15. VALLE - Watermelon

# SECTION 2: OVERVIEW

## 2.1 PROJECT OBJECTIVES

The primary goal of this 41-month initiative by USAID/Honduras was to increase incomes and employment opportunities in Honduras' rural communities, focusing specifically on the horticulture sector. USAID-RED achieved this goal by focusing on three objectives:

1. **Increasing the competitiveness of Honduran micro-, small- and medium-size rural enterprises**
2. **Expanding local and export market sales for growers and packers**
3. **Promoting increased private-sector production and investment in higher-value and value-added products.**

## 2.2 PROJECT BACKGROUND

As part of the implementation of the regional strategy for Central America and Mexico for FY 2003-2008, USAID/Honduras' Country Plan called for concentrating resources on three main strategic objectives. Strategic Objective 2 – Economic Freedom: Open, Diversified, Expanding Economies – included three Intermediate Results, and USAID-RED was formulated to support Intermediate Result 2.2: More Competitive, Market-Oriented Private Enterprises.

At the time Honduras was suffering from a long-term economic crisis caused by cyclical low commodity prices and periodic droughts and floods. High transaction costs, high interest rates and a low skilled work force were preventing Honduras from attracting significant, new private investment.

USAID-RED was conceived as a mechanism for helping rural businesses take advantage of new market opportunities afforded by the Central American Free Trade Agreement (CAFTA-DR). In addition to supporting the expansion and diversification of non-traditional, value-added agricultural products for rural producers, the project also assisted clients in meeting increasingly stringent sanitary and phytosanitary (SPS) and environmental regulations to ensure competitive access to world markets.

In July 2005 Fintrac signed a performance-based contract with USAID/Honduras in the amount of $27,566,525 to implement a 50-month multi-sector rural diversification program. However, during the

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**ATLANTIDA – AGROFORESTRY**

USAID-RED provided support to more than 50 farmers in hillsides located in or near protected areas to promote natural resource management, while producing on a commercial scale. The agroforestry systems included short cycle crops like yuca and plantain, in combination with fruit trees like Persian lime, coconut and rambutan. Grower farms were bordered with new timber plantations that will provide a source of income in the long run. In its last year, participating agroforestry farmers increased their sales from $127,000 to $230,000 – an 81 percent increase in sales. "I can pay for my annual family needs of corn by harvesting only 200 bunches of plantain. Previously I had to plant 2 hectares of corn."
*— Isabel Guardado, Agroforestry farmer in Atlantida.*

first year of implementation the agency changed priorities and a USAID/Honduras budget shortfall led to an amendment, issued on May 31, 2006, that reduced the length of the contract by 14 months (from September 2009 to July 2008), reduced the total contract amount to $11,975,728 (a 57 percent reduction) and significantly reshaped the scope of the project. Activities were then focused on fresh and processed high-value horticulture. Assistance to the dairy sector was minimized and assistance to the forestry and low-value horticulture sectors was eliminated, along with the Crisis Modifier/Rapid Response Mechanism. The amended contract performance results were 10 with 33 minimum standards. (See Performance Monitoring Plan in Annex)

In June, 2008 a no-cost modification extended the life of the contract to December 31, 2008.

## 2.3 HIGH-LEVEL INDICATORS, TARGETS AND ACHIEVED RESULTS

All of the activities carried out under USAID-RED were directed towards the achievement of the high level indicators which included new client sales, the generation of new employment opportunities, capital investments made in the sector and at least 1,000 project assisted businesses reaching a minimum increase in sales of at least 40%. Targets and achieved results are presented in the following table.

| Indicator | Target | Achieved |
|---|---|---|
| Increase in Client Sales | $30 million | $43.49 million |
| New Full-Time Equivalent Employment Positions | 4,500 | 4,541 |
| 40 percent average increase in net income of MSME clients | 1,000 | 1,218 |
| Capital investments by clients | $7.5 million | $19.3 million |

## 2.4 APPROACH AND METHODOLOGY

To achieve the primary goal of increasing incomes and employment opportunities in Honduras' rural communities while meeting the high level indicators as well as the 33 minimum standards required by the contract, Fintrac devised a multi-front approach. Using market-led production as the centerpiece of its farmer-level direct technical assistance methodology, the selected approach was implemented at different stages of the value chain, whenever a need was identified at the particular user or service provider level. The strategy includes multiple and coordinated interventions through a "technical tool kit" of marketing, production, postharvest, processing, logistics and information technology to benefit lead clients and their beneficiaries. Technology and Partner funds (grants) and Alliances were utilized to introduce low-cost technologies, to build the human resources base in support of the agriculture sector as well as provide

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**CHOLUTECA – ONIONS**

Onions from Choluteca? This question might have been asked three years ago, when onion production in San Marcos de Colon was so small that it could only reach local markets. The potential to grow high quality onions in the region and the market potential were identified by USAID-RED technicians, who immediately started promoting onion production and new production systems. Forty farmers in the higher altitudes of Choluteca participated in onion production. San Marcos de Colon is now known for high quality onions and is frequently visited by Salvadoran, Nicaraguan and Honduran buyers. More than 4.5 million pounds of onions were produced in Choluteca during project assistance. "The technical assistance from the project has been very valuable to us and it has opened our eyes in regard to production techniques and knowledge about the crop. The technician has taught us about the different onion varieties, the reason to grow them and how to battle problems on the farm, especially in the winter season."
*— Marvin Ríos, Choluteca grower.*

capacity building of local nongovernmental organizations (NGOs) operating in rural areas. Three underlining themes were incorporated at all levels of the multi-front approach: sustainability, gender mainstreaming, and environmental concerns.

The Business Development Services (BDS) component further expanded the project's outreach all along the value chain. The activities of this component primarily supported allied agribusiness enterprises offering goods or services to producers and processors, but also included those enterprises able to provide loans at any level of the value chain. The BDS strategy focused on sectors that have "downstream" or "upstream" linkages to the primary producer, these being the farmer or the processor of food products. Upstream linkages include a wide-range of input suppliers including rural input stores, seed distributors, seedling nurseries, chemical/fertilizer companies, irrigation equipment manufacturers and installers, basic farm tool manufacturers, wood product manufacturers, tractor and other farm equipment leasing companies and mechanics. Downstream linkages include transportation providers, marketing agents (from coyotes to exporters), and processors of value-added products (from micro- to large-scale).

Many of the project wide-range of producers (lead farmers and beneficiaries) originally had little opportunity to benefit from price premiums, such as those given by supermarkets, wholesalers, exporters/ packers and processing plant suppliers; therefore, they were targeted to receive assistance in diversifying their crops and implementing updated production practices to include higher-value crops and to improve the quality and consistency of their product. The approach to implement the USAID-RED project also included a fruit-tree intercropping activity implemented by the Fundación Hondureña de Investigación Agrícola (FHIA), for hillside, primarily subsistence farmers. The assistance was envisioned to not only increase these farmers' incomes but also to improve their environmental stewardship of the land through the planting of fast-growing crops.

3

**COLON – AGROFORESTRY**

More than 50 growers in Colon participated in the agroforestry program with significant success. Their plantings, where short cycle crops were wrapped in with medium-term yielding fruit trees and longer term timber were successfully implemented. Many farmers were taught how to plant watermelon, pineapple, passion fruit and yuca, wrapped into rambutan, coconut, and Persian lime production. Most of the growers that participated in this department were previously only subsistence growers and were starting commercial production for the first time. For this reason, their increases in sales were substantial. In 2008, participating growers increased their annual sales by 364 percent from $36,000 in 2007 to $167,000 in 2008.

# SECTION 3: KEY ACTIVITIES

USAID-RED projects' key activities were developed under an integrated approach to achieving increased incomes and higher competitive levels in different sectors. The project's ability to offer support in multiple areas like fresh horticulture production, agroforestry, value-added processing, non-agriculture activities, the educational sector and NGO's enabled the project to have alternatives for each of the regions assisted. Gender mainstreaming and environmental issues were crosscutting activities applied nationwide. The following chapter provides a brief explanation of each.

## 3.1 AGRIBUSINESS COMPONENT

USAID-RED focused its assistance in the agribusiness sector given its high multiplier effects in the rural economy and ability to quickly increase incomes and employment. The project targeted specific subsectors: **fresh horticulture** (a wide-range of temperate and tropical fruits and vegetables), **agro-forestry** (intercropping of horticulture products for short term returns, fruit trees for mid term, and wood trees for the long term), **processed products** (horticulture: frozen, canned, dehydrated, fresh-cut, ready-to-eat, in brine and microprocessor products and selected processed dairy products).

Within each targeted subsector, USAID-RED provided technical assistance and training – directly and in conjunction with private-sector counterparts and organizations – along the entire value chain, including assistance in marketing, research and product development, production, postharvest handling, processing and food safety and sanitary/phytosanitary (SPS) systems.

Through its lead clients — farmers, farmer groups, exporters, processors and other rural businesses — USAID-RED promoted new technologies to increase productivity, quality and income. USAID-RED also emphasized crop and market diversification and value-added production to increase clients' income, ensure a competitive foothold in local and global markets and helped them take advantage of CAFTA.

**Fresh Horticulture:** High value and added value horticulture activities constitute the core of USAID-RED. Production activities had a major impact on the non-traditional agriculture sector, and were widely recognized by both the private and public sectors. Throughout the life of the project, USAID-RED assisted over 1,800 lead clients who increased their sales by more than $20 million and generated over 3,000 new full time equivalent employment positions. The introduction of low-cost drip irrigation technology had such a major impact on productivity and quality of the products that other institutions supporting the agriculture sector followed-on with significant irrigation programs. Project assisted farmers installed over 2,700 hectares of drip irrigation systems in their farms.

USAID-RED followed a market-led strategy in terms of crop selection together with high quality and consistent technical assistance in updated production systems to participating growers. This combination provided farmers with the know how to compete and generate substantial increases in their incomes. Project technicians made over 43,000 technical assistance visits, averaging over 1,000 visits per month. In each visit, the technical staff would scout the fields along with the farmers to determine the current status of the crops and teach and instruct them on activities that would improve their yields. The production systems always promoted following Good Agricultural Practices and environmentally sound practices.

Regular, high quality visits by highly trained and knowledgeable staff enabled growers to learn-by-doing and in their own farms.

To complement the on-farm visits, USAID-RED carried out farmer field days in client and model farms. This proved to be a very effective method to transfer the updated technology systems to farmers and field workers. Over 700 field days were carried out with 35,000 participants in these training events.

> The importance of postharvest handling cannot be overemphasized: "A year's work in production can be destroyed in minutes if the postharvest handling practices are not adequate"
> — USAID-RED Postharvest Specialist Geovanny Gutierrez

Recognizing the importance of implementing proper postharvest practices, technical staff was able to generate important changes on all levels in terms of produce handling. As a result post harvest losses were reduced by 30%. Of paramount importance were the investments made in postharvest facilities, infrastructure and equipment. Project lead clients invested over $400,000 on basic pack houses, plastic crates for transport, grading and selection tables, washing stations, among others. Over 12 exporters were assisted with layout designs and cold-chain storage establishment, extending the product's shelf life and reducing the amount of damages. Better practices were introduced at all stages of the post harvest process, from the use of baskets or buckets to collect the produce at the time of harvest, disinfection of the transport buckets and harvesting tools to avoid contamination of the produce, to the establishment of basic pack-houses at the farms for grading, selection and packing and the use of plastic crates to transport the product.

USAID-RED assisted in the design of 21 new packing facilities that provide employment for over 500 rural poor. All of these facilities were constructed and are operational. In addition, project post harvest specialists developed 20 manuals and training materials which were widely distributed to project clients to improve their knowledge of best postharvest handling practices. 221 post harvest and handling training events were conducted with 3,959 participants in these events (2,669 men and 1,290 women).

**Agro-forestry** FHIA, as a subcontractor, implemented the agro-forestry activities to generate income and employment for growers, mainly those established on hillsides, while simultaneously managing the protection and conservation of natural resources. A total of 308 lead clients were trained in production, post harvest and commercialization. 725 training events with 3,819 attendees were conducted in order to transmit the "learn by doing" approach. In addition to training, these project clients received planting materials, logistics for drip irrigation and commercialization assistance and planted a total of 368 hectares of crops. Most of the plantings were done in an intercropping arrangement – that is – associating short term crops with mid terms yielding fruit trees and with longer term timber yielding trees of which 86.57 linear kilometers were planted around these crops. These activities were concentrated on 36 communities in 9 municipalities on the Atlantic coast, and 32 communities in 10 municipalities on the Intibucá plateau.

Agro-forestry clients increased their incomes by $817,370 compared to their annual sales before receiving assistance. 227 of the 308 agro-forestry clients (74%) achieved greater than 40% increase in sales with respect to the baseline figures provided during enrollment to the project, contributing with 22.7% of the total USAID RED goal for this indicator.

In addition, estimations of future income from permanent crops such as rambután and coconut for instance, will surpass $5,000 per hectare per year for 2009 – 2010. Also, in the north coast, long term

incomes (18-25 years) are estimated above $80,000 per km on hillsides and $150,000 per hectare in pure timber yielding lots. Furthermore, 475 new permanent employments were generated by this subsector, contributing to more than 10% of the total USAID RED goal for this indicator.

**Processed Products** USAID-RED worked with over 200 agribusinesses (micro, small and medium) in different sectors, like, fruits and vegetables, dairy and meat, which in turn benefit over 10,000 growers in the field. These companies were dedicated to processes such as dehydrated fruits, juices and concentrates, purees, sauces, snacks, cheeses, ice cream, fried foods, bakery, fresh cut vegetables, jellies, brined vegetables, among others. New sales in this sector exceeded $20.7 million. Investments done by project clients in the value added business surpassed $5.7 million. This money was destined to the purchase of new equipment, expansion and construction of new plants, implementation of new technologies and overall process improvements. Employment growth was 473 permanent positions.

> "We've accomplished this with the help of USAID-RED, which is priceless. To certify ourselves in the processes we need to export."
> — Alfredo Lardizabal, Owner INALMA.

The Processing team offer training in food safety issues to over 4,000 participants and in food processing activities to more than 2,700 attendees. They also developed 30 manuals and training materials which were distributed to project clients. This intensive training enabled the implementation of formal good manufacturing programs and HACCP programs in 27 companies.

This high-end technical assistance enabled the establishment of new technologies in the country, specifically for the vegetables in brine, snacks, and fresh cut sectors. Over 50 new products were developed with project support. New plant layouts were developed for more than a 20 companies, improving overall plant throughput, and sanitary designs were implemented in the majority of assisted companies. To accompany the improvements in product quality, USAID-RED hired short term experts to improve these companies' labels and logos and to establish more market links. This complementary activity had immediate returns in terms of new sales.

## 3.2 NON-AGRICULTURE COMPONENT

Support to companies outside the agriculture sector is based on technical assistance and training in areas and systems that apply not only to the horticulture sector, but to other sectors, including support for good manufacturing practices (GMPs), food safety prerequisite programs and HACCP, as well as implementation and certification of dairy and meat processors, bakeries, buyers and distributors. Through its BDS component, USAID-RED worked to strengthen the domestic capacity of local private sector organizations – input suppliers, processors, exporters, transportation providers, and educational institutions –to increase the quality and quantity of their technical services to rural entrepreneurs.

4

**COMAYAGUA – ASIAN VEGETABLES**

Production of oriental vegetables for US export has been an important economic sector in the Comayagua Valley and USAID-RED worked with more than 40 farmers to dramatically increase yields and improve quality. USAID-RED focused its assistance to these growers with the goal to increase their competitiveness. Productivity in eggplant production increased from 50,000 pounds per hectare to 120,000 pounds per hectare; yields in long squash and in bitter melon increased from 30,000 pounds per hectare to 80,000 pounds per hectare.

*— See Success stories of Don Julian and Exposual in Annex in CD ROM.*

Commercial suppliers interested in expanding sales of goods and services to rural businesses were encouraged to apply to become formal BDS partners and after being accepted they received individually tailored technical support.

USAID-RED also provided support to project clients in obtaining loans to carry out their operations and expansion plans as well as to the financial sector in designing tailor made loan schemes for rural businesses. Collaboration with SAG/SENASA for the development of the national pesticide database and with FHIA's marketing department (development of weekly marketing bulletins for selected crops).

## 3.3 ALLIANCES WITH AGRICULTURAL SCHOOL AND THE PRIVATE SECTOR

From the on-set of the USAID-RED project there was a strong focus on the creation of an alliance program with the rural education sector. Support agreements with 12 agricultural institutions and 17 agriculture sector-related private firms (including suppliers of seeds, irrigation systems, inputs, and pest and disease control equipment). All of the educational institutions that enter into the USAID-RED alliance program are located in rural areas all over the Honduran territory, in municipalities that have a combined population of about 685,560, where more than 10 percent are dedicated to agricultural activities.

**Comments from school teachers about the alliance program**

§ "Before the program nobody was growing at high density nor using drip irrigation. This stimulated them a lot."
§ "It also serves as a model farm which various growers have visited for practical purposes, and to learn, as well as the mechanization services our school provides for them."
§ "It has influenced the area positively by proving that we can produce using these techniques."
§ "Many neighboring growers have decided to cultivate the crops we produce in our institution."
§ "All the growers have improved their projects and their yields by applying basic practices learned."
§ "Many growers come to our farm for questions and to learn about the crops they want to grow."
§ "We support some communities by transferring technology."

The alliance program's total investment was US$297,000, of which USAID-RED contributed 26 percent, private Honduran firms contributed 20 percent, and beneficiary institutions contributed 54 percent. This high contribution of counterpart investment shows the commitment and motivation generated by the program. Most of the demonstration farms established in the schools are now self sufficient and are continuing to expand their operations and their investments in this project.

The main successes of the alliance program are:

- Increased availability of capable agricultural technicians for micro, small and medium agricultural firms through improved practical skills of rural area students. A total of 4,100

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**COPAN — JALAPEÑOS**

With project support, jalapeño growers in Copan increased their market share in Honduran, Guatemalan and Salvadoran markets. In 2005, about 3 million pounds per year were produced in this department and average yields were 100,000 pound per hectare. In 2008, more than 5 million pounds were produced and yields increased to 150,000 per hectare. "Rene Vidal decided to start planting jalapeños in October 2006. After following all USAID-RED recommendations, Vidal harvested 491,844 pounds of jalapeños on two hectares, which he sold at $0.22 per pound. After subtracting production costs, his profit was $63,406. Vidal became the region's top producer of jalapeños by harvesting an average of 245,942 pounds per hectare." – Marlin Hernandez, USAID-RED Technician.

*— See Success story Rene Vidal in Annex in CD ROM*

students were trained in the different agricultural schools. There was a noticeable increase in enrollment at these institutions compared to the year before the USAID-RED alliance program started. This increase in enrollment has been continuous during the last three academic years.

- Training and continuous education in new agricultural technology for neighboring growers. 150 formal field days were conducted at the schools to demonstrate new technologies and practices with over 3,300 attendees (32 percent women, 68 percent men).
- Improved the limited economic resources of the institutions through the ability to grow and sell products that are demanded by the market. Annual sales of over US$300,000 (288 percent increase compared to US$ 77,221 before USAID-RED) by all the schools helped these institutions become more self-sufficient in maintaining the demonstration lots, expanding production area and supporting the financial needs of the institutions. Sales projections for 2008 are even higher because the model farms are properly established and many of them have continued to expand in activities and crops. Four of the 12 schools in the program did not sell crops before the USAID-RED Alliance.
- Trained school alumni through 10-months long internships supervised by USAID-RED technicians. A total of 30 newly graduated interns were trained during this program. Seven of these interns went on to continue their education in agriculture related careers. Over half of them (17) have been hired by private firms in various sectors (inputs, production, others) and the remainder have return to their families farms to start their own business.

## 3.4 PARTNERSHIPS WITH NONGOVERNMENTAL ORGANIZATIONS

At the beginning of 2007, with the primary objective of strengthening the technical capabilities of three local institutions as well as to increase the number of producers benefitting from the technical assistance being provided in agricultural production and commercialization, USAID-RED established strategic partnerships with FUNDER, World Vision and CARITAS. These partnerships sought to maximize the resources provided by the participants as well as to take advantage of the strengths and opportunities presented by each institution. Immediately thereafter the following assistance took place:

> "The USAID-RED agronomists have shown us new techniques and we are now transferring the knowledge to our clients and we can see that they are rapidly obtaining very good results."
> — Edwin Discua, a FUNDER Technician based in Marcala.

- Training provided to NGO extension staffs to strengthen technical capabilities (train the trainers).

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**CORTES — FOOD PROCESSING**

This department has experienced substantial growth in the food processing industry. USAID-RED-assisted plants in Cortés, increased sales by more than $8.5 million during the 41-month period. Processed foods that have been developed in this department include juice concentrates, pineapple crush, banana purée, fried plantains and yuca, refried beans, bread, and meat production. — "Our firm is dedicated to producing fresh juices …. our sales have increased five times. This has been due to the support provided by USAID-RED. If it wasn't for this support, the situation of our company would be different. There isn't an equal support in Honduras for this type of company."
*— Robert Rowe. Wild Rose*

This was achieved through regular technical assistance and training events.

- Established demonstration production lots in farms assisted by participating NGO technicians. These had a two-fold purpose: provide a visual example of modern agricultural production technologies and their benefits, thus stimulating their reproduction; and, use these farms to host field days to train neighbouring growers.
- Market contacts were established and dissemination of market prices to producers, farmers and field technicians begun on a weekly basis. This allowed producers to understand the conditions in which they would be selling their products and to know first-hand the specifications of quality demanded by buyers.
- Provided NGO extension staffs with "agronomy kits" (drills, magnifying glasses, pH meters and electrical conductivity meters, lamps and fluorescent ink, among other items) to conduct technical diagnostics on-site. The intention behind the "agronomy kits" was to provide technicians with better tools to detect problems in the assisted farms, improving the technicians' recommendations and diagnoses to the producers.

> "We are very happy because we are reaching the goals we set for ourselves for the third year in the second year thanks to the partnership [with the USAID-RED project]. The achievements have been so great that the organization is giving us more funds as they know that they will be excellently invested."
> — Marco Domínguez, who leads the Agricultural Diversification component for World Vision in Yamaranguila.

The activities conducted in 2007 under the partnerships with the three NGOs were very successful and a group of lead producers in each of the areas targeted embraced the modern production technologies introduced through the demonstration plots. Data collected from the 409 producers participating in the program during 2007 indicated that these producers had average income increases of 37 percent. The baseline data for 2006 showed that the producers' sales were US$506,481 in 2006, while in 2007 the same producers registered sales of more than US$693,301, generating additional incomes of more than US$186,820. The increased incomes of participating NGO growers for 2008 in comparison to those of 2007 totalled US$773,003 which represents a 111% in additional income for the participating producers.

Due to the successful experience in the various regions and the continued support from FUNDER, World Vision, CARITAS and USAID-RED, over 550 growers in rural areas adopted new production technologies, significantly increasing their productivity and quality of their products and ability to enter the more formal channels of commercialization. These growers are located in ten of the poorest municipalities of Honduras.

In conjunction with the NGOs, USAID-RED held a total of 296 training events in agricultural production techniques with more than 4,500 participants. USAID-RED technicians provided 550 technical assistance

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**EL PARAISO — SWEET PEPPER**

This department has rapidly gained a substantial market share in the main sweet pepper markets in El Salvador. With project intervention, sweet pepper farmers have implemented new practices such as plastic mulch, virus protection nets and fertilization calendars. This has helped increase yields from 120,000 pounds per hectare to 155,000 pounds per hectare in three years. Salvadoran buyers are increasingly looking to this department of Honduras as growers from El Paraíso continue to establish themselves as reliable, high quality sweet peppers suppliers.

visits alongside 18 extension staff members from the three participating NGOs

## 3.5 ENVIRONMENTAL ACTIVITIES AND ASSESSMENTS

USAID-RED's technical approach to sustainable and effective production is based on the protection of the environment. All of the project technicians recommended the use of Good Agricultural Practices (GAPs) and monitored its correct implementation. A PERSUAP (Pesticide Evaluation Report and Safer Use Action Plan) report was done during the first quarter of the project and technicians were made aware of the results. Restricted Use Pesticides (RUP's) were eliminated from the lists of options for pest and disease control and alternative controls were enforced by the project's technicians. Producers were taught about the importance of identifying pests and diseases and how to determine critical levels. This drastically reduced the usage for chemical controls in the fields. In addition, the project enforced the use of biological controls for plant protection of a number of pests and diseases.

USAID-RED had three visits from environmental officers from USAID Washington and from the USAID Mission in Honduras (2/2006, 12/2006 and 5/2008). The results from these audits indicated that the approach being implemented was complying with the environmental requirements, and the recommendations provided by the environmental officers in specific farms were corrected where needed.

## 3.6 GENDER MAINSTREAMING

Despite the fact that most of the land in Honduras (and businesses) is owned by males, USAID-RED made a conscious effort to include many female growers and processing business owners into the program. Their businesses experienced equal growth as those of the male clients.

With the growth of production and processing activities came new businesses and employment opportunities. The expansion of production operations per se provided new employment opportunities, predominantly for males, given the nature of the work carried out in the fields. However, as farmers and processors reached better quality, they were able to look at more demanding, but higher priced markets. Most producers (male and female) initiated selling to informal buyers with minimal quality requirements, and by the end of the project had switched to selling to supermarkets, wholesalers, exporters and processors. This transition meant the introduction of new activities such as better care in picking of produce in the field, grading, selection and packing. These new activities were found to be best done by women. New employment opportunities generated in these areas were taken predominantly by women (70%). The employment growth in the processing sector also provided new opportunities for women,

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**FRANCISCO MORAZAN — TOMATOES**

Tomato farmers in this department mostly supplied informal, local markets in Tegucigalpa. Despite being close to the country's capital, they could not get a foothold with supermarkets or large wholesalers because quality and supply consistency just wasn't there. This has changed after project support. Now 79 growers in this department sell to supermarket chains and to Wal-Mart. Their yields have substantially changed. Before USAID-RED, average yields were 70,000 pounds per hectare. Today, project assisted farmers are averaging more than 122,000 pounds per hectare. "We used to produce tomatoes but we didn't know what we were doing. Now we obtain better quality and size of tomatoes due to the drip irrigation and other production systems that USAID-RED has taught us. We have increased our sales and have much better markets to sell our tomatoes. We are never going back to produce like we did it before."
— *One of the Amador Brothers in Río Hondo.*

60% of new hires were females. Also, close to 9,000 women participated in project training events. This represents 20% of the total participants.

# SECTION 4: ACHIEVEMENTS

The USAID-RED project three overall goals in order to help USAID/Honduras achieve its Intermediate Result 2.2 - More Competitive, Market-Oriented Private Enterprises were:

1 Increasing the competitiveness of Honduran micro, small and medium rural enterprises

2 Expanding local and export market sales for growers and packers

3 Promoting increased private-sector production and investment in higher-value and value-added products.

In order to achieve the overall goals, ten specific results, each with individual requirements and standards, were agreed upon to quantify and describe the results expected to be achieved. The USAID-RED project had a well trained team of monitoring and evaluation specialists that dedicated their efforts to data gathering, analysis and reporting in order to accurately track the results accomplished. Data was reported on a monthly basis on the Performance Monitoring Plan and used by the project management regularly to allocate resources accordingly. This section covers the specific results achieved vis-à-vis the contract specific performance requirement and standards.

## RESULT 1: EXPORTS AND LOCAL SALES OF RURAL GOODS AND SERVICES INCREASED

Total cumulative new sales reached $43.49 million over the 41 month period from August 2005 to December 2008. The life-of-project target of $30 million in cumulative new sales was achieved in December of 2007, seven months ahead of schedule.

Lead clients achieved sales increases consistently throughout the life of the project. The quick startup, along with the high confidence level of previous USAID-funded agriculture project, Centro de Desarrollo de Agronegocios (CDA), led to very quick results in terms of increased productivity, increased investments and ultimately, increased sales. Total sales increases achieved were $10.54 million in 2006,



**INTIBUCA — NGO COUNTERPARTS**

Through partnerships with FUNDER and World Vision, USAID-RED increased income for more than 300 farmers working with cold climate vegetables like lettuce, broccoli, cauliflower, beets, carrots and potatoes. Activities included a train-the-trainers program, though which USAID-RED improved the technical capacities of NGO extensionists, taught the demonstration farm approach and initiated more than 250 field days attended by more than 4,500.

$21.64 million in 2007 and $11.31 million in 2008. Annual increases in total client sales were 10 percent, 36 percent and 27 percent for 2006, 2007 and 2008, respectively.

All of the activities carried out within the project individually contributed to the sales goal. The agroforestry activity resulted in increased sales of over $817,000 from its 308 micro and small hillside farmers, the production activity (which includes the NGO alliances) contributed with sales increases of over 21.43 million and the processing activity (including off farm businesses) contributed with an additional 21.243 million in increased sales.

## RESULT 2: RURAL HOUSEHOLD INCOMES INCREASE

1,218 MSMEs assisted by the project staff increased their average income by at least 40 percent exceeding the established standard for this result by 22%.

Although the project exceeded overall sales increases targets during year one, the number of MSMEs achieving a minimum of 40% increase in their income fell short (230 achieved out of a target of 350 for year 1). USAID-RED was able to quickly adapt its client selection and incorporate new activities to meet this high level target by extending its outreach to a larger number of producers. These activities included the expansion of the agroforestry activity; the establishment of alliances with NGO's to assist over 550 micro and small farmers in achieving higher productivity and improved market conditions, and having school interns provide technical assistance to micro and small farmers in their neighboring communities.

With these activities in place, and with new client selection process for years two and three, USAID-RED exceeded the life of project target of 1,000 MSMEs increasing their average income by at least 40 percent. Table 2 shows the number of project clients reaching a minimum increase of 40 percent in their sales, by year and by activity.

**Table 2. MSME's increasing annual income by at least 40 percent**

| *ACTIVITY AREA* | *# Clients 2006* | *# Clients 2007* | *# Clients 2008* | *Total by Activity Area* | *Percent from Total Achieved* |
|---|---|---|---|---|---|
| Agroforestry | 70 | 88 | 69 | ***227*** | ***19%*** |
| Fruit / Vegetables | 150 | 147 | 138 | ***435*** | ***36%*** |
| Processing / Off farm | 10 | 22 | 9 | ***41*** | ***3%*** |
| NGO Group Clients | 0 | 156 | 287 | ***443*** | ***36%*** |
| School Interns TA | 0 | 66 | 6 | ***72*** | ***6%*** |
| ***Total / Year*** | ***230*** | ***479*** | ***509*** | | ***100*** |
| ***Cumulative Total*** | ***230*** | ***709*** | ***1,218*** | | |

The area where more project assisted clients reached annual income increases by more than 40 percent was the NGO clients' activity with 36.4 percent of the total, followed by fruit and vegetable production with 35.7% and agroforestry (19%), with all activity areas making important contributions to this goal.



**LA PAZ — COLD CLIMATE VEGETABLES**

More than 100 farmers in the mountain region of La Paz, many of them strictly coffee farmers, participated in a calendarized vegetable program, which helped improve their families' livelihoods by generating steady cash flows and new market outlets. The initiative showed these small farmers how to sow and harvest small parcels of land on a bi-monthly basis. The program introduced these farmers to beets, broccoli, cabbage, carrots, cauliflower, lettuce and radishes. "Look what I have harvested. I have had good profits, the results are good, the training and frequent visits from the project technicians have helped me. I hope to continue expanding production with these good practices."
*— Felipe de Jesús Hernández, Tutule, La Paz.*

## RESULT 3: RURAL EMPLOYMENT INCREASED

4,541 full-time equivalent new job positions were created among program-assisted MSMEs.

USAID-RED supported agribusinesses experienced significant growth in the majority of cases, and with this, generated 4,541 new full time equivalent positions, meeting 100.9% of the project's goal of 4,500 positions. New positions created by project assisted clients were 1,525 in 2006, 1,262 in 2007 and 1,754 for 2008 respectively. 4,058 of the new jobs created were in grower farms in the rural sector while the additional 483 jobs were created in processing plants. Table 3 summarizes the employment increases by year and compares with the project's targets.

**Table 3. Lead client employment results**

| YEAR | FTE 2005 | FTE 2006 | FTE 2007 | FTE 2008 | Change | Cumulative | Percent Change | Target Chg / Cumulative | |
|---|---|---|---|---|---|---|---|---|---|
| 2006 | 7,959 | 9,484 | | | 1,525 | | 19% | 1,500 | |
| 2007 | | 6,615 | 7,877 | | 1,262 | 2,787 | 19% | 1,500 | 3,000 |
| 2008 | | | 3,255 | 5,009 | 1,754 | 4,541 | 54% | 1,500 | 4,500 |

The employment generation goal was, without a doubt the most difficult of targets. USAID-RED faced both internal and external challenges for meeting this goal. Please see Section 4 for additional info.

## RESULT 4: PROGRAM-ASSISTED MSME INVESTMENTS REACH US$7.5 MILLION

Investments made by program assisted MSMEs, and partners exceeded US$19.29 million with over 2,700 individual investments tracked in the project's monitoring and evaluation system. The high level of investments from project clients was a key factor for the sector's economic development.

The two main areas of investments were in the production (58% of the total) and in the processing (32%) activities, where over $ 17 million were invested. Clients MSMEs in other activities (such as BDS and alliances) also made either capital investments or cash contributions in their business and were the beneficiaries of private sector investments. Investments were made in all of the departments where USAID-RED provided assistance, with the most significant investments (over 20% of the total) made in the departments of Comayagua and Cortes.

USAID-RED also tracked client investments by category type. The major investment categories were irrigation infrastructure and equipment ($4.23 million and over 2,700 hectares were installed), greenhouse infrastructure ($3 million), processing plant equipment ($2.20 million) and land purchase (over $2 million).

## RESULT 5: ACCESS TO MARKET INFORMATION, BUSINESS MANAGEMENT AND TECHNICAL SKILLS TRAINING FOR MSMES INCREASED

Over 9,000 MSMEs received technical and/or business skills training and had access to market

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**OCOTEPEQUE — POTATO**

USAID-RED's technical training helped farmers in Ocotepeque improve potato yields. USAID-RED showed these growers practices such as high density plantings, proper seed selection, raised beds and crop-specific nutritional programs. Average yields increased from 28,000 pounds per hectare to 48,000 pounds per hectare.

information distributed by the project. This far exceeded the contract cited requirement of 4,000.

In order to achieve this result USAID-RED carried out a number of activities, namely development and dissemination of market analysis and buyers surveys, weekly price reports, direct support in the establishment of local and export market links for project clients, and market research and analysis training to the staff of local organizations to secure the sustainability of the marketing activities carried out by project staff during the life of the project.

Over 1,800 MSME's accessed the market analysis and price reports produced by the project through email and cell phone text messages, exceeding the minimum requirement of 1,750. A significant number of businesses also accessed this information through the project public web site.

Market information provided by the market surveys was key in determining which crops and processed foods to promote to potential clients. Furthermore, the market surveys gave USAID-RED clients an extra source of information to improve their negotiations with buyers or make decisions regarding what markets to enter. A total of twenty two market and buyers surveys were done and distributed among interested program clients on a wide range of products and markets, from a comprehensive feasibility study to produce and export MD2 pineapple to the US market all through out the year, to the local markets of Tegucigalpa and San Pedro Sula for concentrated juices and plantain snack chips. A list of all the surveys produced is included in the Annexes.

Also, project client and counterparts received weekly price and market reports for a selected group of crops: plantain, yucca, chayote, cucumber, egg plant, cantaloupe and honeydew melons, watermelon, butternut squash, basic grains fruits and vegetables, as well as prices for a variety of products for Salvadorian and European Union major markets. These helped project assisted farmers understand the weekly market trends and prices in different local, regional and international markets as well as improve their negotiations with intermediaries and obtain better prices for their crops.

During the last year, USAID-RED promoted the sustainability of the market information delivery by training three institutions: SAG-Agronegocios (the agribusiness section of the Ministry of Agriculture), FUNDER and World Vision. These received the complete distribution lists from USAID -RED and are now directly providing excellent quality market information. With this activity, the project has strengthened the country's domestic capacity to provide this type of service. This information will enable sustained access and utilization of market information beyond program interventions. The Ministry of Agriculture is also uploading these reports in its web site.
http://sag.gob.hn/index.php?option=com_content&task=view&id=1876&Itemid=908

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**OLANCHO — ASIAN VEGETABLES**

With support from USAID-RED, Asian vegetable exporters turned their heads toward Olancho to develop an independent outgrower program. The project provided support to the first dozen farmers in the production of long squash and eggplant. Most of these farmers increased their income because of the program. The project ended assistance in Olancho in early 2007, but having established an initial success, Asian vegetable production has increased in the region.

To achieve operational efficiencies for the off-farm

MSMEs, and to equip them with the skills and know-how to address problem areas and constraints in key management functions such as finance, accounting, operations, (supply chain management and distribution), marketing and human resources management, the USAID-RED team worked with 108 off-farm clients. These clients received individualized technical assistance tailored to the specific needs of the company. The majority of the assistance provided to off-farm MSMEs by the technical team was geared to improving efficiencies and meeting buyer standards.

| Sector | # of Companies |
|---|---|
| Inputs providers | 8 |
| Buyers / Distributors | 28 |
| Service Providers | 30 |
| Restaurants | 1 |
| Supermarkets | 8 |
| Meat Processors | 4 |
| Deli Products | 1 |
| Ice Cream | 2 |
| Dairy Processors | 8 |
| Bakeries | 5 |
| Other | 13 |
| **Total** | **108** |

## RESULT 6: IMPROVED BUSINESS LINKAGES FOR RURAL MSMES ESTABLISHED

USAID-RED made 850 business linkages to bring together MSM rural producers and local, regional and export buyers. 390 market links were made with buyers for the international markets and 460 with local market buyers.

For the vast majority of project clients, USAID-RED played a critical role in establishing new buyer contacts. The project was able to identify reliable buyers for export and local markets and served as a liaison for growers and processors to find a suitable match for their products and operation size. In order to truly implement its market led methodology, the USAID-RED team reached out to the local high volume buyers and developed a close relationship with 22 of them. Over time, and working in close collaboration with the buyers and the producers USAID-RED was able to develop a “market network” connecting multiple growers to specific markets.

USAID-RED also provided support to 31 agribusinesses to participate in international trade shows like ANUGA in Germany, IBERFLORA in Spain, the US Produce Marketing Association (PMA) Annual Trade Show (held in Atlanta, Miami and Houston during life of the project), and Fruit Logistica in Germany. The presence of these companies in the trade shows enabled them to establish new business as well as helped strengthened existing commercial relationships with their brokers.

## RESULT 7: ACCESS TO TECHNOLOGY MADE AVAILABLE TO RURAL MSMES

USAID-RED worked with 1,200 farming lead clients and 200 export and processing lead clients. These

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**SANTA BARBARA — MODEL SCHOOL FARM**

USAID-RED bolstered agricultural education at Escuela Agricola Pompilio Ortega by introducing them to new production methods and establishing their school farm as a model for students and neighbouring growers. Their model farm is now widely known in the region as a place to visit and learn about a variety of high value crops suitable for the western valleys of Honduras**.** “It was a real learning experience that isn’t available to most people and it will help me a lot. I like USAID-RED’s technique, teaching and guidance.”
Adilio Castellanos — *Grant holder, Escuela Pompilio Ortega*

clients received upgraded technology, production, postharvest and processing methodologies and know-how to be able to apply such improved technologies and become more competitive in the local and export market. Furthermore, data was gathered for over 12,000 project beneficiaries that adopted some form of improved production technologies in their business or received skills training by attending fields' days or processing trainings. The minimum standard for requirement 7.1 was 4,000 MSMEs equipped with the skills and know-how to apply improved production technologies and 150 MSM producers and exporters equipped with the skills and know-how to obtain export and quality certifications. The technologies introduced to all the clients assisted by the USAID-RED project were specifically considered with low-cost and high impact in mind.

In regards to requirement 7.2, the target was 21 program-assisted firms equipped with the skills and know-how to implement food safety systems such as HACCP. In addition, 18 MSM processors had to be equipped with the skills and know-how to obtain FDA certifications to export to the U.S. (or other certification as appropriate depending on the export market).

By the end of the project, USAID-RED technicians had provided integral training and support to over 200 food processing business. This intensive training enabled the implementation of formal GMP programs and HACCP programs in 27 companies. Furthermore, upon project start-up, many of these processing firms had the goal of exporting their product to other Central American countries and/or to the United States. USAID-RED worked with these companies and by the end of the project, 18 companies had achieved FDA or other markets export certification for 63 different products.

## RESULT 8: FINANCIAL SERVICES MADE ACCESSIBLE TO RURAL MSMES

USAID-RED directly assisted 261 lead clients in obtaining loans for more than $2.3 million.

Banco Popular Covelo and Finsol were the two financial institutions that provided more loans to project clients (119 and 58, respectively). Each of these loans averaged $3,633 for Covelo and $2,122 for Finsol. The average loan size for project clients was $9,098. In terms of dollar amounts, Banco Atlántida was the biggest lender with over $763,000 of credit delivered to project clients. Most of the loans given to project clients (72%) ranged between $1,000 to $10,000, 11 % of the loans were in the $10,000 - $20,000 range and nine percent of all loans were in the $20,000 or more category.

Perhaps the most significant activity that enabled new loans for project clients was the market-led technical assistance provided by the staff in the field and in the plants. After the first year, the first loan recipients were able to successfully make the timely payments and lead clients became subjects of credit for banks. USAID-RED was able to establish good relationships with a number of banks who became well informed of the project's activities and the new higher-value products that were being promoted.

The minimum standard to quantify this result was established as six MFIs equipped with the tools to develop and implement at least six financial products (at least one per institution) for rural MSMEs, and



**YORO — PLANTAIN**

USAID-RED initiated plantain production in several communities in Yoro. Before the project, Yoro was dedicated mostly to low value farming – traditional crops and livestock. In three years, USAID-RED transformed the region into a fully developed the plantain powerhouse, establishing two packhouse operations and initiating 55 plantain farm operations. Plantains production in the region now covers 195 hectares and production increased from 2 million pounds per year in 2005 to 7 million pounds per year in 2008. Producers in Yoro now supply Honduras' main plantain processors and are exporting fresh plantains to the Unites States.

250 program-assisted rural MSMEs access credit for production and processing technologies.

Although two financial USAID-RED specialists provided direct technical assistance and training to private Honduran banks and MFI's during 2006 and through July 2007, only four new financial products were launched by credit institutions, specifically to target the rural sector of Honduras. While these products were properly designed for the typical rural loans, the financial institutions that implemented them were regionally focused and only covered a portion of USAID-RED's clients.

## RESULT 9: SUSTAINABILITY STRATEGY DEVELOPED

The goal for this result was to improve the capacity of the local institutions to provide the services delivered by the contractor during the implementation of the contract.

From the onset, USAID-RED established relationships with many local institutions and shared its experiences, through out the life of the program, in order to promote replication of successful initiatives. Formal presentations of the USAID-RED project, its philosophy and implementation strategies were made to over 800 staff members of institutions like the IDB, FHIA, Ministry of Agriculture (SAG), DICTA, SENASA, the US Peace Corps, ANACH, agricultural schools and universities, World Vision Honduras, FUNDER, FAO, USAID/MIRA, FIDE, CARITAS, MCA-EDA, Save the Children, CARE, ADRA, and the Ministry of Industry and Commerce (SIC).

The project also provided training and technical assistance to select counterparts to strengthen their capacities and enable replication of project activities. FUNDER, World VISION and SAG-Agronegocios were trained in the development of market information bulletins and are now developing and distributing this information to over 2,000 recipients. In addition, around 40 extensionists from World Vision, Caritas and FUNDER received intensive training in horticulture production systems and they substantially improved the delivery of technical assistance to their farmers. This is evidenced by their direct clients' increases in income reflected in 2007 and 2008 data collected.

Technical assistance and training was also provided to the 12 schools participating in the alliance program where in addition to working directly with over 4,000 students, USAID-RED trained 59 teachers in the agricultural divisions of the schools. All of the schools and NGOs' technical staff received a CD and hard copies of all the production, post harvest, processing and marketing manuals and technical bulletins produced by USAID-RED for their reference and use.

## RESULT 10: ALLIANCES ESTABLISHED WITH THE PRIVATE SECTOR TO LEVERAGE USAID RESOURCES

Alliances established by the project brought in $506,527 (in cash or in kind) in non-USAID resources, reaching a ratio of $3.98 per USAID dollar. USAID-RED established formal alliances with 12 agricultural schools and partnership agreements with three NGO's. A total of 17 private sector businesses also participated in these activities.

For the schools programs, the project invested $66,000, the schools invested $160,000 and the private sector companies added another $58,000. Matching contributions were $3.30 per USAID dollar.

The alliances established with the NGO's also provided an excellent commitment and response both from the NGO's themselves as well as from the growers they assisted. For this activity, USAID-RED allocated $49,000 in productive equipment for the model farms, partner NGO's invested $112,000 of their own funds, and benefitted growers added $112,000 of their own. Matching contributions reached $4.57 per USAID dollar.

The high leverage obtained by the USAID funds for the alliances activities is a reflection of the high confidence level that the partner institutions, private and non profit, had in USAID-RED project.

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**VALLE — WATERMELON**

USAID-RED improved watermelon production on more than 50 hectares. Yields increased from 28 cubic meters of watermelon per hectare to 42 cubic meters per hectare. The boost in yields is because of USAID-RED's complete package of technical assistance in basic practices including raised beds, drip irrigation, and integrated pest management.

# SECTION 5: CHALLENGES AND LESSONS LEARNED

Changing situations presented new challenges throughout the implementation of the Rural Economic Development Project. The management team addressed these by making adjustments to the implementation strategy along the way. In addition, this 41 month period was a valuable experience for Fintrac and its subcontractors and alliance partners and many lessons were learned. This chapter makes reference to some of the challenges and lessons learned in the implementation of the USAID-RED project.

## 5.1 LESSONS LEARNED

- Learning by doing – direct technical assistance to clients provided in their own farms is essential to demonstrate that making basic changes can make a big difference in the outcomes produced. However, the fact that neighboring producers see the new technologies being used and the successful results and have a great inclination to copy what their successful neighbors are doing can not be overlooked or underestimated.
- Updating production systems is indispensable for Honduran farmers to be competitive in the world market. Quality products and high yields are only achieved with modern production methodology and both are crucial to enable Honduran products to be competitive in the world economy.
- Involving the private sector to participate in the program, providing support at many different levels, buy-in on the market-led approach, and appreciating the value of operating as collaborators on the same team together with the producers and other members of the value chain instead of being in opposite teams. Companies dedicated to the provision of goods and services to the agriculture sector have found that projects such as USAID-RED provide adequate mechanisms to promote and create awareness of their products and services. In turn, USAID-RED benefited by substantially reducing training costs through sponsorships from these companies. In these events, participating farmers get direct access to inputs and services at preferred rates.
- Train the trainer program through local organizations to enlarge the number of beneficiaries reached with an exponential multiplier effect. Several NGO’s are also targeting the agriculture sector of Honduras to improve livelihoods and have the proper infrastructure in place to deliver this support. USAID-RED has been a benchmark for these institutions in terms of the production systems and latest technologies in production. By working directly with these organizations, and transmitting much of the project’s knowledge base, USAID-RED was able to increase their technical capacities, enabling them to provide a better quality technical assistance.

- Train the trainer through alliances with educational institutions and the private sector had great value not only for strengthening the educational institutions but as a catalyst and motivator to young individuals to consider agriculture as their future for economic independence. These alliances also established closer links between the private sector and the educational institutions students, providing an important source for employment after graduation.
- Including women and youth as part of gender mainstreaming not only as equal beneficiaries of the technical assistance that the program had to offer but also being mindful and accommodating their needs and what income generating activities suit them best.

## 5.2 CHALLENGES

**Internal challenges:** While income growth is somewhat tied to employment growth, in almost all cases, the adoption of updated technologies dramatically improves efficiencies enabling farmers and processors to achieve significantly higher yields with the same level of employment or even a reduction in employment levels. Examples of these are:

Drip irrigation systems require one person to properly and efficiently irrigate, fertilize and apply pest and disease control inputs in a multi hectare farm. In contrast, overhead and gravity fed irrigation systems require much more labor, pest and disease controls and fertilizations are done as separate activities.

Covering beds with plastic mulch, or controlling weed completely when land preparation activities are being done allow a weed free field for the duration of a production cycle, while manual or chemical weed control requires a large amount of labor throughout the crop cycle.

Pest and disease identification and integrated pest management results in a dramatic reduction in use and frequency of chemical controls.

In processing plants, USAID-RED helped in plant layouts and recommended investments in modern food processing equipment which drastically increased efficiencies but almost always reduced labor requirements.

Another internal challenge to generating additional employment was USAID-RED's market assessment, through which opportunities were identified for production of less labor intensive crops. In addition to the opportunities presented by non-traditional, short cycle vegetables, USAID-RED was able to maximize sales increases by introducing farmers to plantain, pineapple and a variety of fruit trees.

**External challenges:** During the implementation period, Honduras, like the rest of the world faced record high double and triple digit increases in the price of fertilizers and other agricultural inputs, record high prices in fuel, affecting the cost of production as well as the transportation costs, in combination with very little financial support from the formal banks and MFI's. What this meant to Honduran farmers and processors was that net incomes narrowed, and given the higher costs, with their increases in income they were able to either maintain the same size of their operation or achieve a reduced growth.

# SECTION 6: LOOKING TO THE FUTURE

Through direct presence and in collaboration with private and public actors, valuable experiences were captured by USAID-RED in many areas. Despite achieving important economic development goals in the Honduran rural sector, a range of opportunities still lie ahead for the Honduran private sector, government and donors to take advantage of. In addition, the world economic and food crisis has had a direct impact in Honduras. The country's particular opportunities for economic growth, existing interventions and the current global setting should be taken into consideration for future interventions.

**Opportunities**

Through experience during the 41 month period, USAID-RED has been able to detect emerging industries with high success potential for the Honduran rural sector. Examples of these are the plantain, tomato, peppers, potato and pineapple industries. Attractive opportunities also lie ahead for micro and small farmers who are practicing calendarized vegetable production in the Honduran highlands, who are gaining market share as buyers are quickly replacing imported vegetables with domestic production, which is now competing in quality and with volume requirements.

Higher production levels also create excellent opportunities for the development of added value businesses (packing operations and processing). Future interventions should build on these opportunities to achieve a greater impact.

**Past and existing Interventions**

Of great importance is to understand and build on past and current initiatives in the Honduran rural sector. Under the USAID-RED agroforestry component, thousands of high value fruit trees were planted by hundreds of farmers, including peaches, Persian lime, avocado, coconut, and rambutan close to protected areas under natural resource management systems. The first harvests for these plantings are expected in the upcoming years. Future initiatives should consider following up on the work done in these areas.

The EDA project, financed by the Millennium Challenge Account in Honduras, is currently making substantial investments in technical assistance and in the provision of basic production equipment to over 8,000 growers who will achieve their first significant commercial experience by the end of their intervention in 2011. These farmers as well as others motivated by the success of their neighbors will continue to increase their production as long as there are markets demanding their products. Attention must be placed in the further development of processing and export markets to continue the expansion of market opportunities for the small and medium grower.

Several NGOs are currently working with micro and small subsistence farmers and have a strong presence in Honduras' poorest areas. The establishment of partnerships and alliances with these organizations should be considered for future interventions given the past experience that the combined and coordinated efforts produced in generating an important multiplier effect.

**World Economic and Food Crisis**

It is Fintrac's belief that actions towards reducing food insecurity may follow the same approach as commercial scale production development. That is, through upgrading production technologies, higher yields are achieved increasing the availability of produce, whether for self consumption or for commercial purposes. Technical assistance to subsistence farmers should be targeted to achieve substantial increases in productivity.

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# FINAL REPORT USAID-RED

## RURAL ECONOMIC DIVERSIFICATION PROJECT

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