



Entrenamiento y Desarrollo de Agricultores

BACKGROUND

This monthly bulletin provides information on current and future activities of the Farmer Training and Development Program (Entrenamiento y Desarrollo de Agricultores), a program of the Millennium Challenge Account of Honduras (MCA-Honduras) with funds provided by the Millennium Challenge Corporation (MCC) of the United States of America.

EDA started operations on Aug. 7, 2006 with the contract award by MCA-Honduras to Fintrac Inc., a US agribusiness firm retained to implement EDA field activities, in collaboration with FHIA (Fundación Hondureña de Investigación Agrícola) and Escuela Agrícola Panamericana (EAP) El Zamorano. The program is scheduled to operate through May 2011, by which time it will have directly assisted more than 8,255 farmers, increasing productivity, incomes, and employment. Field activities started in October 2006. This edition summarizes June 2008 activities.

AT A GLANCE

- 398 new producers started working with EDA in June, bringing the total to 2,610 producers that are receiving technical assistance (2,482 men and 128 women).
- More than 163 market links were made between producers and buyers, including local distributors, agro-processors, wholesalers and agro-exporters (for a total of 1,434 market linkages to date).
- 259 hectares were planted during June, mostly for corn, tomatoes, plantains, beans, jalapeños, chayote, watermelons, and onions. 3,127 hectares have been planted to date, 1,523 of which were planted in 2008.
- 2,841 participants (2,502 men and 339 women) attended 207 training events covering a wide range of topics: production (58 percent), market information (13 percent), business skills/finance (15 percent), postharvest (5 percent) and EDA program information (9 percent).
- 2,738 technical assistance visits in production were carried out with farmers and 51 in marketing, postharvest, and business skills.
- EDA clients were assisted in the preparation of 590 business plans.
- Two postharvest technical bulletins were prepared: "Eggplant Postharvest Management" and "Quality Standards for Romaine Lettuce."
- Presentations were prepared in "Assuring the profitability of high-value horticultural products," "GLOBALGAP and other certifications," "New business options: exporting fresh fruit and vegetables to Europe" and "EDA: activities and services."
- In June, EDA producers invested \$111,933 in their farm operations. This money went toward vehicles, packing equipment and irrigation equipment. To date, growers have invested \$1.52 million back into their operations.

EDA published five success stories including four with examples of program impact and results and one on EDA gender activities. Visit www.hondurasag.org for these publications.

EDA's direct technical assistance and training for producers is based on a market-led production methodology. Most of the technical assistance is provided directly to individual farmers, who receive regular extension visits on their farms from the program's agronomists. EDA has a highly qualified technical team that includes field agronomists, and technicians specialized in marketing and logistics, postharvest management, farm certification programs, business administration, finance and business development services.



An EDA passion fruit farmer surveys his crop in Copán.

EDA - CLIENTS

398 new producers joined the program in June, increasing the total of farmers receiving EDA's technical assistance to 2,610. EDA technicians offer assistance in 173 municipalities in the 16 departments assisted.

Client	New 06/08	Total 06/08
Lead Producer	45	773
Beneficiary Producer	353	1,837
In Selection Process	92	451
Buyers	-2	152



MARKETING

EDA agronomists forged 163 market links between the program's producers and buyers at local, export, and processing markets. Farm tours were carried out with buyers for producers in Olancho (cassava), Lempira (potato), Comayagua and El Paraíso (cucumber, tomato). Meetings were held with current and potential buyers of fresh and processed products to define demand, volumes and terms of sale. Training events were held to inform producers about market opportunities for cassava, plantains, sweet potatoes, potatoes, onions and passion fruit. EDA helped farmers serving the market in El Estadio to improve selling presentations. Price information for the local market was collected and distributed via radio and cell phone text messages.

PRODUCTION

EDA agronomists continue offering technical assistance and training covering basic practices, plantlet production, fertilization, irrigation, prevention and control of pests and diseases, identification of pests and host weeds, and integrated management of specific crops and pests.

Field visits were carried out with producers to observe the production systems of established crops, including cabbage, potato, tomato, sweet potato, corn (high density), carrot and chayote. Workshops were carried out in different regions on greenhouse production, basic practices, irrigation system installation, integrated pest management (IPM) and safe handling of pesticides and GAPs under GLOBALGAP. Farm training included transplanting and planting, IPM, plant nursery construction, management of drip irrigation systems and the disinfection of plantain corms.

POSTHARVEST

Technical assistance in postharvest handling was provided for various crops and topics including: curing, classification, and packing for onions; harvest, preparation/packing for carrots for export to El Salvador; controlled ripening and exporting for plantains; and harvest and classification for eggplants. Training was provided in postharvest handling of plantains, harvest and postharvest of jalapeños and introduction to the postharvest management of fresh products; and sampling for quality and harvest volume for sweet potatoes.

BUSINESS SKILLS

Producers were trained in the use of logbooks, inventory control and cost controls for various crops. EDA provided assistance in calculating production cost and cash flow, the completion of loan request forms and 590 business plans for EDA clients.

OTHER ACTIVITIES

Activities with SAG: presentation at an FAO/SAG event regarding value chains; revision with SENASA auditors of the GAP control list in Comayagua; participation in meetings of the Horticulture Chain (potato) and Temperate Fruits and Vegetables; EDA presentation to irrigation system clients in the Quimistan valley.

MCC/MCA-Honduras: Presentation at events of the MCA-Honduras/ACA Program with AHIBA regarding the profitability of high value horticulture and with FUNED regarding risk reduction; field visit with MCC-Honduras representatives.

Others: Promotion event for plantain production in Yoro and export opportunities for horticultural products to Europe (with the Honduran-German Chamber of Commerce and Industry, and with participation from SAG, SIC, the European Commission, FPX and others); various trainings with Global Village in Ocotepeque; field tour with representatives of Global Partnerships interested in financing.



Farmers plant jalapeños in Olancho.



An agronomist closely examines plantlets in Santa Bárbara.



Farmers tend to plantains in Santa Bárbara.



Tomatoes are harvested in Santa Bárbara.

EDA – Systems

EDA provides technical assistance for the commercial production of high-value horticulture. Technical assistance is market-led and system-focused. The systematic approach is organized to achieve desired results, which, for EDA, means sustainable and profitable agricultural businesses.

A fundamental element in the “technological package” promoted by EDA is **drip irrigation**. To date, EDA has helped program farmers install drip irrigation on 622 hectares. This equipment is a direct result of funding from the MCA-Honduras small grants program. So far, EDA program farmers themselves have invested more than \$550,000 dollars in irrigation equipment.

The drip irrigation systems cost between \$800 and \$1,200 per hectare, excluding the pump. There are ways to lower costs, however, including using recycled drip tape and purchasing locally made filters.

The system recommended by EDA is simple, functional, and above all it is designed to be installed, operated, and maintained by the producer at a low cost. As the market dictates which crops will be planted, the systems need to be flexible so that they can be utilized with different plant spacing and planting densities, which different crops often require. The drip irrigation system allows for the most efficient use of irrigation water and is one possible solution for areas with limited access to water. As drip systems do not get the stems or foliage wet, there are normally fewer problems with disease. Drip systems also have little run-off, causing less erosion and contamination of water sources.

Depending on the proximity or distance of the water source in relation to the area under irrigation, drip systems can operate even with low pressure. On average, a 5-HP pump is needed to irrigate one hectare of cultivated land.

Because it is a pressurized system, drip irrigation requires a filtration system that will ensure that particles larger than the size of the drip holes in the drip tape will be caught, preventing blockage. In general, EDA recommends a 24-inch diameter 65 gpm sand filter and a 200 to 250 mesh (2”) ring filter.

In addition to the filter system, PVC tube (with UV-protection for above ground systems) carries and distributes pressurized water to the irrigated area. The application of irrigation water is carried out using plastic tape with drip holes. EDA recommends 8 millimeter tape, with a distance of 30 cm between drip holes, and a water flow rate of 3.4 liters per meter per hour at 8 pounds of pressure.

This drip system is also used for the diluted application of fertilizers and pesticides. After diluting the fertilizer, it is applied directly to the root area for better absorption. This system reduces costs, not only for materials, but for labor as well.

All systems require a maintenance program to repair leaks, monitor pressure, and wash tapes and filters. With a good maintenance system, drip irrigation systems can last up to three years.

“Give a man a fish; you have fed him for today. Teach a man to fish; and you have fed him for a lifetime.”

In market-led production, training for the producer should focus on systems, rather than on crops. EDA promotes market diversification and believes that teaching farmers “how to fish” by showing them the **system** ensures they will be able to “fish” for life.



An EDA farmer checks his drip irrigation system.



EDA demonstrates drip irrigation installation.



A sand filter is incorporated into the drip system.



EDA RESULTS

EDA technical assistance in the department of Francisco Morazán includes training farmers in the implementation and expansion of basic production practices, providing better access to working capital, opening and expanding markets, incorporating new crops under calendarized plantings, and implementing good farming practices. With EDA assistance, producers in Francisco Morazán are improving the performance and sustainability of agricultural production and, in turn, increasing their incomes and expanding employment opportunities for their communities. Selected results include the following (comparing results from June 2007 through June 2008):

- 56 percent increase in areas receiving EDA technical assistance, from 16 to 28 municipalities, including municipalities from southern parts of Francisco Morazán, which are classified as vulnerable areas because of limited access to water and poverty rates.
- 199 percent increase in the number of producers receiving technical assistance, from 203 to 603 producers now implementing basic production practices, calendarized plantings, integrated crop management (ICM), good agricultural practices (GAPs) and fertilization programs.
- 258 percent increase in land area of crops cultivated using appropriate technologies, from 151 to 541 hectares.
- 99 percent increase in overall net sales, increasing from \$639,293 to \$1,276,217.
- 587 new permanent employment positions generated as a result of the assistance provided by EDA in the past 18 months.
- More than \$139,000 in capital loans for agricultural production from banks, OPDF, agricultural input stores, rural savings and loan associations, and cooperatives.
- More than 10,400 participants trained via 660 events in technical areas related to the productive value chain.
- More than \$707,000 in investments toward drip irrigation systems, vehicles, machinery, and agricultural equipment and small equipment donations received from MCA-Honduras.

Specific Results:

- Eight producers from El Ocotal started calendarized plantings promoted by EDA and are now including new crops for sales to supermarkets. Crops include cucumber, green beans, scallions, lettuce, tomato and zucchini. They have tripled their area under cultivation from 5 to 15 hectares annually, and their net sales have increased from \$11,350 with 5 hectares to \$22,500 with 5.6 hectares of calendarized harvests to date.
- Producers from Reitoca are experiencing excellent results after introducing plantains as a high value crop in the zone. The 6.34 hectares harvested in the first trimester of 2008 have generated net overall sales of \$35,900, an average of \$5,660 per hectare for 13 producers. Another 12 hectares will be harvested at the end of 2008 and 6.6 hectares in the first trimester of 2009.
- Julio Zelaya started a plantlet nursery to satisfy the demand of producers in Orica and the surrounding areas. A 572-square-meter greenhouse was donated by MCA-Honduras in July 2007. By June 2008, Zelaya sold more than 3 million tomato and sweet pepper plantlets with gross sales of \$36,316, total costs of \$28,421 and net sales of \$7,895. This is in addition to the sales expected from 2.11 hectares of tomatoes and 0.4 hectares of sweet peppers that Zelaya just started to harvest.



EDA conducts a plantain field day in Yoro.



EDA holds a second workshop in horticultural production for technicians from ONG and SAG.



Representatives from Global Developments (USA and Nicaragua) visit EDA farmers.



MCC Honduras visits EDA farmers.



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EDA ASSISTANCE ZONES

EDA provides technical assistance in 16 departments in Honduras and is currently working with 2,610 program farmers (773 lead and 1,837 beneficiaries). The production zones where EDA technicians are assigned are areas where, for the most part, producers have not previously received technical assistance in agricultural activities.

Department	Registered Lead Clients	Registered Beneficiary Clients	Clients in the Process of Selection
Atlanta	16	47	8
Choluteca	45	32	32
Colón	12	59	5
Comayagua	119	230	78
Copán	34	69	6
Cortés	20	51	38
El Paraíso	76	229	47
Francisco Morazán	185	461	84
Intibucá	22	47	30
La Paz	30	76	49
Lempira	17	60	1
Ocatepeque	59	165	22
Olancho	41	46	13
Santa Bárbara	39	129	10
Valle	13	23	5
Yoro	45	113	23
Total	773	1,837	451

FARM LABOR COSTS

Most active and beneficiary clients that are part of the EDA Program (76 percent) have reported farm labor costs of less than \$1,000 per year and only 2 percent have costs that are higher than \$10,000 per year at their baseline production level.

Farm labor costs(\$)/ year	% Clients*
< \$1,000	76%
De \$1,001 a \$5,000	19%
De \$5,001 a \$10,000	3%
De \$10,001 a \$15,000	1%
> \$15,001	1%
TOTAL	100%

* 1,470 clients with baseline data

TRAINING

EDA technicians carried out 204 events during June, training 2,841 people – 2,502 men and 339 women.

Area	# Events	# People
Business Skills	15	414
GLOBALGAP	12	96
Market Information	14	342
Others	6	126
Postharvest	8	138
Production	143	1,478
Project	6	247
Total	204	2,841

Examples: Cultural practices in the farm; managing crop costs/sales logs; field visits to observe the management of various crops; improvements in transplants and plantings; installation and maintenance of drip irrigation system and fertigation; IPM control of pests, diseases and weeds; soil management, preparation and conservation; adequate use of pesticides; sampling for pests, diseases and weeds; postharvest handling; market opportunities.

PLANTED AREAS

The first group of program farmers started new plantings in November 2006 using technology promoted by EDA technicians. To date, program farmers have planted 3,127 hectares.

Crop	Area (Hectares)		Total
	Until 05/08	06/08	
Chard	0.14		0.14
Avocado	106.10	8.00	114.10
Garlic	0.28		0.28
Celery	1.26		1.26
Rice	4.38	0.45	4.83
Squash	9.54		9.54
Eggplant	38.51	2.10	40.61
Broccoli	4.83	0.04	4.87
Coffee	38.95	3.15	42.10
Sweet Potato	74.59	5.00	79.59
Onion	149.05	8.28	157.33
Scallion	3.16	0.01	3.17
Sweet Pepper	87.14	5.04	92.18
Habanero Pepper	0.00	0.50	0.50
Jalapeño Pepper	73.90	8.39	82.29
Tabasco Pepper	25.22		25.22
Coconut	64.90		64.90
Cauliflower	5.00	0.08	5.08
Bitter Melon	14.63		14.63
Spinach	0.15		0.15
Floriculture – Fresh Flowers	12.57		12.57
Strawberry	4.08	0.05	4.13
Bean	50.42	28.35	78.77
Bean-Seed	11.20		11.20
Fruits – Guava	17.76		17.76
Fruits – Persian Lime	1.00		1.00
Fruits – Mandarin	3.00		3.00
Fruits - Mango	1.00		1.00
Green Bean	10.89	0.74	11.63
Fresh herbs – Basil	0.16		0.16
Fresh herbs – Chives	2.10		2.10
Fresh herbs – Cilantro	1.94	0.08	2.02
Fresh herbs – Dill	0.07		0.07
Fresh herbs – Chamomile	0.35		0.35
Baby corn	0.00	0.30	0.30
Lettuce	15.50	2.22	17.72
Corn	293.30	65.15	358.45
Corn - baby	24.40	3.95	28.35
Sweet Corn	0.00	3.00	3.00
Malanga	1.40		1.40
Passion Fruit	47.53	1.67	49.20
Cantaloupe	0.00	0.70	0.70
Okra	7.83		7.83
Potato	158.24	6.83	165.07
Papaya	47.65	1.64	49.29
Chayote	20.98	8.26	29.24
Cucumber	77.26	5.17	82.43
Pineapple	1.15		1.15
Baby Squash	0.52	0.18	0.70
Plantlets	0.47	0.40	0.87
Plantain	320.50	30.87	351.37
Radish	1.05	0.02	1.07
Rambutan	39.20		39.20
Beets	3.05	0.06	3.11
Cabbage	89.84	5.16	95.00
Watermelon	276.44	8.05	284.49
Tomato	534.19	33.92	568.11
Cassava	32.99	7.90	40.89
Carrot	34.33	3.19	37.52
Zucchini	21.89	0.17	22.06
TOTAL	2,867.98	259.07	3,127.05