WORLDWIDE
FARMER-TO-FARMER PROGRAM
FAO-A-00-96-00005-00

YEAR SEVEN, SEMIANNUAL ONE

SEMIANNUAL REPORT
FOR OCTOBER 1, 2002 – March 31, 2003

Submitted to

USAID/DCHA/PVC

Submitted by

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International Development Division
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April 30, 2003

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Dates of project:	September 30, 1996 – September 29, 2003
Total estimated federal funding:	$3,842,898
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PROGRAM UPDATE

MEXICO

Micro-Enterprise Development

50 assignments have focused on Micro Enterprise Development

- **At least three (3) member-driven organizations will increase total sales revenues by at least twenty (20) percent by the end of the program**.

Results in this area exceed targets. Eleven (11) member-driven organizations increased their total sales revenues by 40 percent and higher.

Four member-driven organizations increased cocoa revenue through value-added marketing. This meets the result of at least a 20 percent increase in total sales revenues.

- Four cocoa value-added marketing associations have increased cocoa revenue 180 percent from a low of $795/ton received in 1998 at the beginning of the program through higher price for value added product ($2,227/ton in 2002). The total value of increased income and leveraged funds over the life of the program to date are estimated at $1,388,760 (please see included impact report for detail).

One community-based organization, Rio Florido, increased sales from 10 kg to 1000 kg (990 percent); therefore the program met the planned result of revenue increased by 20 percent.

- Community-based Rio Florido established production and increased sales from less than 10 kg to 1000 kg of value-added organic wheat to a premium market at 6 pesos/kg.

Two member-driven organizations, Santana and C-11, increased chocolate sales from nothing to over 750 kilos/month (100 percent). The result of 20 percent increase in sales revenues was met.

- Women's chocolate groups in Santana and C-11 increased chocolate sales from 0 to close to 750 kilos/month since September 2002.

One organization's members are receiving increased revenue of 47 percent, which exceeds the planned result of 20 percent in increased sales revenues.

- Mut Vits coffee cooperative marketing their coffee to premium markets has increased the amount members are receiving by 47 percent from $1.02 per pound to $1.50 per pound.

- **At least ten (10) new market linkages will be established that buy directly from participating Mayan communities.**

The program has exceeded this target. Thirteen (13) new market linkages were established that buy directly from participating Mayan communities

Rio Florido, a Mayan community, established four new market linkages that will buy directly from them.

- Community-based Rio Florido established sales of 1000 kg of value-added organic at 6 pesos/kg to 4 new buyers

An indigenous Mayan group set up one linkage with an organic-based distributor in Mexico City.

- Women's chocolate groups in Santana and C-11 sell to organic-based distributor in Mexico City

Mayan based Mut Vits established three (3) new market linkages with organizations that buy directly from them.

- Three new market linkages have been established for the Mut Vits coffee cooperative, 1 internationally, 1 nationally in Mexico City, and 1 locally in San Cristobal.

Four indigenous groups have set up four new market linkages with companies that will buy their cocoa directly.

- A total of 4 new marketing linkages have been established by 4 cocoa value-added marketing associations selling to Nestle, Corona and Alpici.

Organic rice produced by indigenous groups was presented at an International Food Fair, thereby establishing an international market linkage.

- Organic rice market being developed, rice presented at an International Food Fair.

- **An increase of at least twenty-five (25) percent in participation of Mayan women in business and organizational expansion.**

Results in this area have been positive, with one group exceeding targets substantially (393 percent vs. 25 percent) and another group reporting slightly less than the target (20 percent vs. 25 percent). This reflects women's involvement in new value-added processing in Tabasco. Impact will be gathered for the next semiannual report regarding women's involvement in the value-added organic wheat project in Chiapas.

Involvement of women in business and organizational expansion increased 53 percent between 1996 and 1997, and 393 percent by 1999, thereby exceeding the planned result of a 25 percent increase in the participation of Mayan women in business.

- Women involved in value-added chocolate processing increase 53 percent in 1997 from 1996 levels (15 to 23), and 393 percent by 1999 from 1996 levels (15 to 74).

Due to the increased demand for chocolate, the participation of women in one community-based organization increased by 20 percent, thereby assisting to meet the planned target of 25 percent increase in participation.

- Increase in women chocolate producers due to increased demand for chocolate (25 in 2000 to 35 in 2002).

Indigenous Community Strengthening through Agricultural Association Development

25 assignments have focused on Indigenous Community Strengthening through Agricultural Association Development

- **Active participation to include local community values in the political process.**

The result was achieved in this section. One group of local cooperatives in Chiapas was able to collectively present their case to the government for assistance in protecting their community area.

This item refers to the community's role in the political process. The cooperatives in Chiapas were able to present their case to the government for assistance in protecting their community area.

- Cooperative development in Chiapas has served to unite communities in this troubled region. Recently they were able to collectively present their case to the government for assistance in defending the Lacandona Jungle area for protected status.

Strengthening Local NGO Partners

21 assignments have focused on strengthening local NGO partners

- **Local partners developing income generating activities.**

DANA is a sustainable organization based on local community support centered in San Cristobal. We are confident that DANA will continue to provide support in the absence of Farmer-to-Farmer funding.

The program continues to work with ATCO to develop other sources of support. Currently Farmer-to-Farmer is their sole source of support and it is unlikely the organization will be able to continue their activities without Farmer-to-Farmer support.

DANA was able to hire a new staff person with a technical background who will assist the organization in achieving and exceeding their economic goals.

- DANA has expanded its capacity by hiring a new staff person. This person is an agronomist and licensed to certify production organic.

DANA has increased their income-generating activities by expanding their services to the eco-tourism sector. Income generated from this activity is recorded separately from DANA income. This income, however, goes to a DANA employee, which allows that employee to support himself while working for DANA.

- DANA has established an eco-tourism industry with the communities. Currently working on expansion of services through eco-tourism.

By establishing a marketing group within their organization, ATCO will be able to increase the income of the groups they serve through an increase in sales of cacao and value-added products. By providing financial increases to their clients, they create a value to the services they provide which can be developed into a tangible service that clients will recognize and pay for, thereby supporting ATCO.

- ATCO is starting a marketing group within its organization. This is a critical key to being able to facilitate marketing of value added products domestically and internationally.

JAMAICA/WINDWARD ISLANDS

***assignment numbers reference assignments conducted since the program developed new targets in FY 2000.**

37 assignments have focused on Increase in Sales to Premium Markets

Increase in Sales to Premium Markets

- **At least one (1) organization exporting produce on a regular basis.**

The Garlands' Farmers' Association has received financial support with the assistance of the Farmer-to-Farmer program to construct a cold storage unit. Construction has begun, but it is unlikely that the organization will complete all of the work necessary to establish regular exports prior to the end of the program. Once the construction is completed, we anticipate that they will begin exporting produce on a regular basis. It is also unlikely that another organization will be identified with the capacity to develop an export market prior to the end of the program.

One organization is building the infrastructure to have the capacity to directly export nontraditional crops from Jamaica to overseas ethnic markets in North America and England:

- Farmer-to-Farmer assisted Garlands' Farmers Association in accessing funds from Agriculture Services and Support Programme for the establishment of cold storage and a packaging building.

- **Increased income for at least fifty (50) producers of alternative crops through direct marketing of value-added products.**

25 producers have achieved increased income through direct marketing of produce. It is likely that an additional 25 producers will increase their income through program assistance, and this goal will be met. The program is currently working with groups representing an estimated 60 producers.

Thirty producers (Santoy and Garlands) direct marketing fresh fruits, vegetables, and mushrooms to the hotel sector:

- Farmer-to-Farmer developed grant funding of $34,275 USD for packaging, grading and cold storage facilities. These facilities will allow the Garland Group to better supply the hotel industry in Montego Bay. Sales have increased for the group 64 percent from March 2001 $2,168 USD to May 2002 at $3,560 USD.
- Santoy Farmers Association has introduced a grading system for produce, which has led to occasional increased profits due to high quality. Accurate figures are not available on the increase in income at this time.
- Five members of the Mushroom Growers Association of Jamaica direct marketing mushrooms to the hotel industry (please see included impact reports).

❑ **At least five (5) associations with increased income through expanded market share of value-added products.**

It is doubtful that the program will reach the goal of assisting 5 associations to reach this target. Three associations are developing increased market share. An additional two groups will need to be identified in order to reach this target. Associations with this potential are rare in Jamaica.

One umbrella association consisting of twelve smaller associations will be able to market HACCP certified honey through FTF assistance:

- With the establishment of a honey bottling plant now under construction, up to 1,260 members of the All Island Bee Farmers Association will be able to increase income through the expanded market share of their value-added product.
- Farmer-to-Farmer developed grant funding of $34,275 USD for packaging, grading and cold storage facilities. These facilities will allow the Garland Group to better supply the hotel industry in Montego Bay. Sales have increased for the group 64 percent from March 2001 $2,168 USD to May 2002 at $3,560 USD.
- Santoy Farmers Association introducing a grading system for produce has led to occasional increased profits due to high quality. Accurate figures are not available on the increased in income at this time.

❑ **(2) Associations and (2) private farms with increased Sales to Premium Markets**

This goal will be achieved. Two private farms have met this criteria and one association has met this criteria. The remaining association has been negatively affected by the September 11 terrorist act and corresponding decrease in tourists visiting Jamaica. It is expected that this trend will reverse itself and the group will be showing positive results prior to the end of the program.

Three Associations with direct sales to Premium Jamaican Markets.

- Mushroom Growers Association of Jamaica members increased profits totaling $19,617 driven by increased direct sales to the premium hotel industry (please see included impact reports).
- Farmer-to-Farmer developed grant funding of $34,275 USD for packaging, grading and cold storage facilities. These facilities will allow the Garland Group to better supply the hotel industry in Montego Bay. Sales have increased for the group 64 percent from March 2001 $2,168 USD to May 2002 at $3,560 USD.
- Santoy Farmers Association introducing a grading system for produce has led to occasional increased profits due to high quality. Accurate figures are not available

Two Private Small Farms with direct sales to premium Jamaican Markets

- An increase of 564 percent in revenue through increasing sales from $184.10 USD to $1,222.52 USD through the development of a marketing proposal identifying four new agro-processing markets for the Richard Thomas farm.
- Increased direct sales, and decreased costs through improved production methods has resulted in an increase of 100 percent in net revenue for Leighton Smith Fish Farms from average monthly production of $530 USD per pond to an average of $1,060 USD per month per pond.

❑ **At least five (5) agriculture organizations initiate export of produce on a regular basis**.

It is unlikely that the target of 5 organizations will be reached. Two agribusinesses are developing their capacity to meet export requirements. This will likely occur prior to the end of the program. Reaching this goal is dependent on identifying an additional 3 organizations with the capacity to export on a regular basis.

Two Agro Processors are preparing for FDA HACCP inspection to direct export Ackee to the Premium Ethnic Market in the United States:

- Southern Fruits and Food Processors (JEA & JAPA member)
- Port Morant Processors (JEA & JAPA member)

Improving Environmental Protection:

10 assignments focused on Improving Environmental Protection

- **Establishment of the regular marketing of environmentally friendly produced commodities from at least two (2) associations.**

The program will not meet this target. There is not a strong local market for environmentally friendly produce.

One informal cooperative utilizing organic techniques and an environmentally friendly drip irrigation method to irrigate crops:

- Eastman Organic Farm expanded production and marketing of organic produce through adoption of environmentally friendly irrigation methods.

- **At least three (3) sustainable agriculture training modules developed and dissemination through collaboration with associations.**

The program will not be able to meet this target. Land O'Lakes has not been able to identify the proper host/partner for this assignment.

- **At least fifteen (15) percent of association members adopting these environmentally friendly practices.**

This target was based on the development of training modules. The program will not be able to meet this target, as training modules were not developed. Technical assistance in environmentally friendly practices has been provided. While adoption of at least one environmentally friendly practice exceeds 15 percent of the producers with whom we work, it was not done through the creation of training modules.

Two associations and one Boys Home utilizing environmentally friendly production methods that occurred outside of the proposed manuals:

- Farmer-to-Farmer developed grant funding of $30,548 USD for an environmentally friendly drip irrigation system for Garland's Group. This stopped the group's original plans, which would have cemented an existing natural spring.
- Trained 18 youth and one instructor at the Muirton Boys Home in erosion prevention through tree planting for agro-forestry hardwood project.
- Santoy Farmers Association is utilizing green manure methods and beer bait for slugs. Santoy was also sensitized to organic agriculture, which led to utilization of IPM in their group plot of 8 hectares.

Support for the At-Risk Sectors of Jamaican Agriculture

11 assignments have focused on Support for the At-Risk Sectors of Jamaican Agriculture

- **Membership of youth increases by ten (10) percent in three (3) producers' associations**

The program will not achieve this target. While we do work with producer associations with a significant percentage of youth membership, these associations have not experienced an increase in overall membership of 10 percent.

Work has been conducted with youth populations but no increase has taken place:

- Working with 3 Jamaican producer associations with significant youth membership.
- Working with Garland Farmers groups, of which one-third, 4 of 12 members, are youth producers.
- Trained 18 youth and one instructor at the Muirton Boys Home in erosion prevention through tree planting for agro-forestry hard wood project.

- **Increased profits for five (5) woman-led/owned organizations.**

It is anticipated that this target will be reached. One organization has already achieved this target. The program has an additional 5 organizations that have received volunteers and will be evaluated for the semiannual report.

Work with 5 women-led/owned enterprises has been conducted/ impact on four of these assignments is yet to be assessed:

- Increased profits for the woman owned and managed R&D Nursery through the reduction of irrigation costs from $1,104 USD/month to insignificant monthly costs through a $400 USD investment in irrigation infrastructure.

SOUTH AFRICA (Please see included impact reports.)

Sustainable Increase in Rural Household Income

18 assignments have focused on Sustainable Increase in Rural Household Income

- **Assistance delivered to at least 500 small producers through collaboration with producer organizations will generate at least a five (5) percent increase in household incomes.**

Due to the level of personal accounting and the diverse and inconsistent nature of rural household income, accurate information is not available. Estimated Rural Household income is based on the minimum agricultural wage, assuming two working adults per household. Indications are that this estimation is higher than the average.

While results have far exceeded five (5) percent with the groups reached, only an estimated 91 households have been reached. Impact remains to be gathered on a number of assignments. Total involved households, however, will not make up the difference. The program has not been able to reach 500 small producers. This is due to the small size of groups(average of 23 households in these 4 groups reported on), the need for multiple volunteers to achieve sustained impact with some groups, and the limited number of volunteers. 500 small producers are more than could be reached by the number of assignments fielded to date.

Twenty (20) beneficiaries increased household income by twenty-two (22) percent

- Nkanini Dairy Project generated increased profits and savings totaling $8,544. This increase represents a 22 percent increase in estimated household income over a 12-month period for the Project's 20 beneficiaries.

Seven (7) beneficiaries increased household income by twenty-four (24) percent

- Ikhwezi Farm generated increased revenue and increased salaries totaling $3,320. This increase in revenue and salaries represents a 24 percent increase in estimated household income over a 12-month period for the Farm's 7 beneficiaries.

Seven (7) beneficiaries increased household income by ninety-two (92) percent

- Masakhane Farm generated $5,088 in new revenue and leveraged $7,500 in grants through the improvement of dairy production. This increase in revenue and assets represents a 92 percent increase in estimated household income over a 12-onth period for the Farm's 7 beneficiaries.

Fifty (50) beneficiaries increased household incomes by sixty-six (66) percent.

- Zama Ukuphila Trust generated $28,280 of new revenue and leveraged grants through the establishment of a goat milk production operation and $36,344 in new revenue and leveraged grants through the establishment of a poultry production and processing facility. This increase in revenue and assets represents a 66 percent increase in estimated household income over a 12-month period for the Trust's 50 beneficiaries.

Linkages between Subsistence Agriculture Sector and Commercial Agriculture Sector

8 assignments have focused on Linkages between Subsistence Agriculture Sector and Commercial Agriculture Sector

- **At least one hundred (100) livestock producers with fattening operations develop beneficial links to slaughterhouses and increase household incomes by twenty-five (25) percent**.

With the inclusion of poultry operations, the program will meet this target. 50 beneficiaries are reported on this period. Additional impact with 50 beef producers showing the development of

commercial connections between fattening operations and slaughterhouses that will amount to a more than 25 percent increase in household income are anticipated for the next semiannual report.

One Trust with fifty (50) beneficiaries developed integrated production and processing facilities. This increased revenue and developed beneficial linkages to a commercial market amounting to increased household income of thirty-seven (37) percent.

- Zama Ukuphila Trust generated $19,219 in new revenue through the establishment of a poultry production and processing operation. The production facility was able to use their new technical knowledge in this field to leverage $17,125 from government sources to establish production and processing facilities. The Trust has 50 beneficiaries. This increase in revenue and assets represents a 37 percent increase in estimated household income over a 12-month period for 50 households.

- **At least four (4) SME integrate marketing strategies for niche products and increase domestic and export sales by at least twenty (20) percent.**

At the recommendation of the USAID South Africa Mission, the program is collaborating with the Agrilink II program regarding this target. The Agrilink II program focuses on developing markets for emerging farmers. Due to this collaboration, the program is not planning on doing assignments associated with marketing. An opportunity with one SME was identified by a volunteer and resulted in impact towards this target.

One SME increased sales by sixty-seven (67) percent

- Nkanini Dairy Project increased sales from 30 liters a day to 50 liters a day.

- **At least sixty (60) dairy producers begin selling milk directly to small processors and increase household incomes by at least thirty (30) percent.**

The program has exceeded this target. Estimated household income for 84 dairy producers has increased 35 percent above the estimated minimum rural household income level.

One producer group with twenty members (20) increased household income by twenty-two (22) percent

- Nkanini Dairy Project generated increased profits and savings totaling $8,544. This increase represents a 22 percent increase in estimated household income over a 12-month period for the project's 20 beneficiaries.

One farm with seven (7) beneficiaries increased household income by ninety-two (92) percent.

- Masakhane Farm increased its milk production, revenue and assets. Their demonstrated knowledge of production issues leveraged $7,500 for pasture improvement from the provincial government. The farm's ability to meet commercial purchaser demands resulted in an overall increase in revenue of $5088. This increased household income for the Farms 7 beneficiaries an estimated 92 percent.

One producer group with fifty (50) beneficiaries began selling milk directly to small processors and increase household incomes by twenty nine (29) percent.

- Zama Ukuphila Trust generated $10,780 of new revenue through the establishment of a goat milk production operation. The SME was able to use their new technical knowledge in this field to leverage $17,500 from the provincial department of agriculture to establish a milking parlor and animal barn. The Trust has 50 beneficiaries. This increase in revenue and assets represents a 29 percent increase in estimated household income over a 12-month period for 50 households.

One producer group with seven (7) beneficiaries improved linkages with commercial markets and increase household incomes by twenty-four (24) percent.

- Ikhwezi Farm generated $3,320 of new revenue through improved production and efficiencies. The farm has seven beneficiaries. This increase in revenue and assets represents a 24 percent increase in estimated household income over a 12-month period for seven households.

Job Creation

18 assignments focus on Job Creation.

- **More than seventy-five (75) employment opportunities will be created through the combined impacts listed above.**

The minimum agricultural wage set by the South African Government is 650 Rand. At 8 Rand to 1 USD, this is $81.25 a month and $975 per year. Employment opportunities are determined by dividing increased revenue and assets by the yearly minimum agricultural wage.

The program has exceeded this objective. 92 employment opportunities have been created by the program to date.

One producer created nine (9) new employment opportunities through increased profits and savings.

- Nkanini Dairy Project generated increased profits and savings totaling $8,544. This is the equivalent of nine minimum yearly agriculture wages.

One SME created thirteen (13) new employment opportunities through increased revenue and assets.

- Masakhane farm, through increased milk revenue and leveraged grants, increased revenue and assets by $12,588. This is the equivalent of 13 minimum yearly agriculture wages.

One producer group created sixty-six (66) new employment opportunities through increased revenue and assets.

- Zama Ukuphila Trust generated a total of $28,280 of new revenue and increased assets through the establishment of a goat milk production operation and $36,344 of new revenue and increased assets through the establishment of a poultry production/processing operation. This is the equivalent of 66 minimum yearly agriculture wages.

One producer group created four (4) new employment opportunities through increased revenue and salaries.

- Ikhwezi Farm, based on volunteer recommendations for improved production and efficiencies, hired four new full-time staff people.

MALAWI

5 Assignment has focused on Sustainable Increases in Agricultural Income on Per Capita Base

Sustainable Increases in Agricultural Income on Per Capita Base

- **Productivity improvements on at least three (3) larger-scale dairy farms generate a ten (10) percent increase in profit margins on raw milk sales.**
- **At least four (4) dairy processors introduce new products/packaging into the local market;**
- **Participating processors, at least six (6), improve operating capacities and cost management leading to fifteen (15) percent increases in year-end profit margins.**
- **Improved member services increases membership and income to a break-even level of at least three (3) producer organizations.**

Achieving these targets is likely, due to collaboration with the ongoing Land O'Lakes dairy development program in Malawi. As assignments remain to be fielded, it is likely that reaching all of these targets will not occur prior to September 30, 2003.

Health/Nutrition Improvement

2 assignments have been done in this area

- **Nutritional outreach campaigns and support to women, children and orphans is undertaken by at least two (2) industry associations.**

Achieving these targets is likely, due to collaboration with the ongoing Land O'Lakes dairy development program in Malawi. As assignments remain to be fielded, it is likely that reaching all of these targets will not occur prior to September 30, 2003.

VOLUNTEER NUMBERS

Country	7-Year Program Plan	Completed	Remaining Planned
Mexico	**80**	**73**	**7**
Caribbean*	**115**	**88**	**24**
Philippines**	**75**	**51**	**0**
West Bank***	**0**	**12**	**0**
Southern Africa****	**36**	**36**	**15**
Non-core	**27**	**23**	**4**
Total	**333**	**283**	**50**

***We anticipate 3 fewer assignments in the Caribbean than originally planned. This will allow greater balance with activities in Southern Africa.**

**** Because the program has been relocated from Philippines, no further assignments are being done in this area.**

*****West Bank was not in the original proposal and due to violence is no longer receiving volunteers.**

******15 assignments were retargeted from West Bank to Southern Africa with the outbreak of violence there. These assignments were conducted in 2001. They were not in the original proposal and occurred prior to the extension.**

RECRUITING

The program experienced lower-than-average volunteer day numbers for this six-month period. There were several contributing factors to this. With the holiday season from mid-November to early January, the program typically experiences a reduction in the desire of consultants to travel and in host organizations to receive consultants. Added to this seasonal downturn, the build-up and subsequent war in Iraq increased nervousness amongst consultants and reduced program numbers below targets for this period. The program is rapidly increasing activity to address this issue as it goes into the busy summer season.

CORE COUNTRY UPDATES

- Mexico

The program has experienced a decrease in demand for consultants from our local partnering organizations, ATCO and DANA, in Mexico. The reasons listed above contributed to this decrease in the assignments being developed in Mexico. We are working with our partners in Mexico to identify technical assistance opportunities for the program. The program continues its strategic focus of developing micro-enterprises. This work strengthens linkages between rural Mayan communities to markets and increases their income by increasing the price they receive for their cash crops. A report on the work done with cacao producer groups in Tabasco is included in this report.

- Caribbean

Due to increased demand for technical assistance in Jamaica, an additional staff person has been hired. Winston Graves previously worked within the Jamaican Ministry of

Agriculture. The expertise and technical knowledge of Jamaican agriculture that Mr. Graves brings to our team is expanding the reach of the program. Land O'Lakes has developed a strategic relationship with the Jamaican Exporters Association and the Jamaica Processors Association. Land O'Lakes has been working with individual members of these groups. By formalizing our partnership with the industry associations, Land O'Lakes is developing a mechanism to distribute technical assistance not only to individual agribusinesses, but through out the targeted sector. The program also is working closely with On The Frontier on their USAID-sponsored Cluster Competitive Project focused on agriculture processors. All of this work is in support of our focus to increase access to premium markets for Jamaican agribusiness.

The program reviewed suspending activities in the Windward Islands. This was done due to concerns about the ability of the program to achieve significant impact given the distances and low population of the countries in the Eastern Caribbean region. Due to the alignment of the program with the Organization of Eastern Caribbean States (OECS), this organization's partnership with the Regional USAID office and existing commitments to local host organizations, Land O'Lakes concluded that the potential to achieve significant impact exists. The regional USAID office highly encouraged Land O'Lakes to continue work in the region in a letter of support sent to Land O'Lakes. Follow-on assignments are currently planned with two organizations on Dominica.

- Southern Africa

The South Africa Program is working in conjunction with another program Land O'Lakes is implementing. This program is establishing a cheese processing plant, funded through the USAID Mission Agrilink II program implemented by Enterprise Management and Innovation (EM&I), a South African Company. Through the extensive work of Farmer-to-Farmer volunteers throughout the Eastern Cape with previously disadvantaged emerging livestock farmers, an agribusiness was identified for this program. Farmer-to-Farmer volunteers worked in a number of areas to strengthen this organization and build its capacity. This work contributed to enabling the Zama Ukuphila trust to qualify for, and earn access to, the Agrilink II program. More information about the work Land O'Lakes has done with this organization and other livestock agribusinesses in the Eastern Cape are included in the impact report section of this report.

Operations in Malawi are in support of the ongoing Land O'Lakes Dairy Development program. Volunteer work has allowed us to address some of the fundamental issues Malawi is struggling with due to poverty and an ongoing regional drought. Assignments have been key in the survival of a number of producer groups with which Land O'Lakes works. In addition, important work has been done in developing feed for dairy cattle. This work is contributing to addressing malnutrition in both cattle and humans. By utilizing by-product from sugar cane processing for animal feed, we are decreasing malnutrition in livestock and increasing production of an important source of protein for humans, milk. This is also being done without diverting corn, another important local source of protein for humans, to animal feed.

NON-CORE ASSIGNMENTS

An ongoing Land O'Lakes school nutrition and dairy development program in Vietnam identified a strong demand for technical assistance. While the Vietnamese government has invested significant resources in developing the dairy industry, technical knowledge remains limited. Land O'Lakes fielded two volunteers to work in Vietnam to address this need. While impact is not currently available on these assignments, initial indications have been very positive. Local producers and dairy industry participants are eager to receive technical knowledge. With the dairy industry in Vietnam being in early development, opportunities for strategic volunteer technical assistance to achieve lasting results are strong.

FEDERATION OF SOUTHERN COOPERATIVES

Land O'Lakes staff traveled to FSC regional offices in Mississippi and Alabama in January of this year. The purpose of these meetings was to better identify strategic areas of collaboration. While FSC has extensive contacts within its network, many volunteer opportunities that the program identifies fall outside of FSC core competencies. Land O'Lakes activities in Southern Africa, for example, concentrate heavily on dairy. This is an area where FSC does not have strong connections. FSC has a domestic program linking their membership to premium markets in northern metropolitan areas. This experience corresponds directly with the work being done in the Caribbean to link producers to premium markets.

At these meetings the following opportunities were identified:

1. Dairy assignments should remain with Land O'Lakes, as this is a core competency of Land O'Lakes. Assignments in Southern Africa that are not associated with dairy will be forwarded to FSC for their evaluation. This will reduce FSC's involvement in Southern Africa.
2. FSC's involvement in horticulture and developing premium markets in the U.S. for its membership is a natural fit in the Caribbean. Activities here will be increased proportionally to the decrease in involvement in Southern Africa

In addition, there may be opportunities for producer groups in the Caribbean to directly access the markets FSC has developed in the U.S. Currently the market demand spans a greater time period than the growing season allows FSC members to meet. Developing market linkages for Caribbean producers to their existing market is a way that FSC could continue to supply their market, while developing producer groups in the Caribbean. Linking producer groups to these markets will require these groups to develop new skills. FSC's collaboration on the program provides an opportunity to provide the technical assistance needed to develop these skills.

Producer groups in the Caribbean face local demands for quality and quantity from the tourist industry that they are challenged to meet. There may be opportunities here for FSC to work with local producer groups by supplying them with produce from FSC members to supplement local production and service local markets.

Two assignments exploring these opportunities were conducted in February of this year. Additional assignments are planned that will address issues associated with importing and exporting produce, the development of a business plan, and the capacity building of producer groups.

MONITORING AND EVALUATION

Impact information from the core countries in South Africa, Malawi, Mexico and Jamaica are included in this report. In addition, an assessment of the results of the program working in East Africa with existing Land O'Lakes programs has been conducted and is included. The results we have received from working in collaboration with an existing Land O'Lakes program have been significant.

IMPACT REPORTS

Title of Assignment: Dairy Nutrition and Breeding
Host Enterprise: Cooperative Resources International (CRI), Kenya
FTF Consultant: Tom Dobler
Assignment Date: July 20-August 5, 2001
Assessment Date: March 18-27, 2002
Economic Impact: $804,699
Direct Beneficiaries: 271

Impact Summary Report

Leveraging its capacities as the world's largest dairy cooperative, Land O'Lakes (LOL) has improved the lives of thousands through the activities of its International Development Division. For over five years, Land O'Lakes has been working in the Kenyan dairy sector, increasing the commercial capacities of small dairy farmers. It has achieved this by working with others, thereby increasing its presence and capacities. This cooperative spirit is vital if the dairy sector of Kenya is to prosper. All those involved in the dairy industry in Kenya have begun to realize that their individual success depends on the success of the whole sector. It is significant that the biggest impact is felt by the 600,000 smallholder Kenyan dairy farmers who produce over 80 percent of the total milk output, thus increasing rural household incomes.

The dairy sector of Kenya is a $10.8 billion industry, which accounts for 10 percent of the nation's GDP. In 1992 the sector was liberalized, which brought prices down and tended to spread the benefits across the board, especially to the milk farmers through an expanded milk distribution network. One problem with the liberalization of the sector has been the withdrawal of direct government support of farmer education programs, mainly through extension agents. This has caused a severe stagnation of farming methods in Kenya. LOL recognized this problem early on and sought to address it with a volunteer intervention through the USAID-funded Farmer-to-Farmer program.

Land O'Lakes chose to work with Cooperative Resources International (CRI) to help alleviate this problem. CRI, a U.S.-based company that opened its Kenyan office in 2000, provides artificial insemination (A.I.) services to all regions in Kenya. It was this feet-on-the-ground capacity that LOL desired for this assignment. LOL also felt CRI would help themselves by helping the farmer – a truly value-added service. This meant training the farmers in progressive dairy methods which could help fill the vacuum left by the extension agents.

CRI welcomed the collaboration. They wanted to increase their sales and recognized the small dairy farmer as their largest market. However, they also realized that they were putting the cart before the horse, as most of these farmers weren't prepared to fully reap the benefits of A.I. until some fundamental issues were addressed. These issues included nutrition, husbandry, veterinary care, and record keeping. CRI also recognized that their staff lacked sufficient knowledge of modern dairy and A.I. techniques, including sales and business practices.

The volunteer chosen for this assignment was Tom Dobler, a lifetime dairy farmer from Burlington, Colorado. He went to Kenya on a three-week assignment in July of 2001. The objective of his assignment was to educate the CRI staff and dairy farmers on modern techniques and help develop feeding programs. He was also to train CRI staff in genetic planning and salesmanship and to pass on as much knowledge to them in the areas of animal nutrition and husbandry as possible. This was accomplished through both seminars and "field days," where individual farms were chosen to serve as models to the others.

The beneficiaries of this assignment were the dairy farmers in attendance, the staff of CRI, plus government officials and veterinaries, 271 persons in all. Not included in this number are all the client farmers CRI has served since and in the future. The value-added service CRI has been able to provide since this assignment has improved the dairy sector of Kenya. According to Tom Dobler, the most important accomplishment of this assignment was the large number of dairy farmers he was able to work with in such a short time. This was made possible through the efforts of CRI-Kenya and their staff.

According to the farmers, CRI, and Land O'Lakes staff in Kenya, Tom's most important accomplishment was quickly identifying the most significant problem farmers face in Kenya and offering the most effective solution. That problem is the feast and famine conditions that plague the region. He drew from his experience as a farmer and as a volunteer in Tanzania to present the appropriate solution: silage making.

Tom said, "It has always been my practice to attack the problem that will return the most benefit rather than try to correct all the problems a bit at a time and not really fixing any of them. So what do you hit first in the Kenya livestock industry? – Nutrition and how corn silage and lucerne hay play such an important part if done correctly."

By being able to effectively store their harvest from the rainy season through the dry season, all the while maintaining a high level of milk production through a consistent and nutritious diet, farmers were able to increase their annual production in some cases by as much as 150 percent. One farm reported an increase from 150 kg to 250 kg per day. Also, farmers have benefited by receiving a premium price for milk during the dry season. It has also lowered operating costs by not having to pay exorbitant prices for hay during the dry season. In the year following the assignment, 500 tons of fresh fodder were conserved in the form of silage.

Economic Impacts:
The following impact was observed and tabulated since Tom Dobler's assignment:

Increase in milk revenue: **$617,550**
This increase in revenue was achieved primarily from increased milk production, which led to greater sales. This was attributed directly to the impact of silage, which provided a more nutritious and consistent diet. Those farmers who participated in silage making and other feeding programs, as per Tom's recommendations, experienced an increase in milk production in the range of 40 percent to 150 percent.

The more consistent production level also increased revenue. Farmers usually experience a decline in production levels during the dry seasons. This general decline causes an increase in milk prices. Farmers who participated in silage making were able to reap the rewards of these seasonally higher prices.

Another important factor was heifers going to milk three months earlier than before the introduction of silage making. This was contributed to the faster growth rates observed. A significant factor for CRI was improved conception rates after the training. CRI technicians noted a 20 percent increase in first-time conception rates, thus reducing breeding cycle times, and cows with calves produce more milk. These extra calves will in turn become revenue generators themselves.

Increase in revenue from semen: **$68,054**
CRI experienced a 35 percent increase in semen sales in the year following the assignment, from 700 to 1000 straws of semen a month. CRI noted this was mostly due to increased customer confidence after hearing Tom's seminar. They have also observed that sales have increased at an even greater rate after initial sale which CRI contributed to their value-added services.

Reduction in operating expenses: **$112,168**
The largest portion of this savings came from a reduction in labor costs. Finding food for cattle is a labor-intensive effort, especially during the dry season. Silage making and purchasing lucerne greatly reduced these costs. Most farms reported a reduction of one to three laborers per day. This was explained by leveling out of the seasonal conditions. When there was plenty for the cattle to forage, the farmers could concentrate on silage making. Then when forage material became scarce, farmers had a readily available source of fodder. Also, the purchase of a milking machine by one of the larger farms saved the cost of six laborers a day.

CRI also observed a significant reduction in labor costs. Primarily because of the 20 percent increase in first-time conception rates, technicians had fewer trips back for second attempts. Secondarily, due to Tom's work on territory planning and team work promotion, there was far less redundancy and other hidden impacts; i.e., less fatigue in territory coverage.

Reduction in health care expenses: **$6,927**
These savings came in the form of a general disease reduction rate of 30 percent, especially mastitis, and the costs associated with treatment. Not included in disease reduction are the hidden benefits of increased production levels.

Total Economic Impact: $804,699

Title of Assignment:	Financial Management, Goat Farming & Management, Accounting & Recordkeeping, Business Plan Development
Host Enterprise:	Zamakuphila Trust, South Africa
FTF Consultants:	LeRoy Vanicek, James Schott, Carol Schott and Fatoumata Diallo
Assignment Dates:	July 30 – August 17, 2002-LeRoy Vanicek September 1-19, 2002-James and Carol Schott November 10-23, 2002-Fatoumata Diallo
Assessment Date:	March 26-28, 2003
Economic Impact:	$267,521
Direct Beneficiaries:	50

Impact Summary Report

The South African government is attempting to correct the imbalances of the past caused by apartheid. The issue of land distribution is one of those problems. The Black majority of South Africa owns 15 percent of the land while Whites own the rest. One that way the government is addressing this issue is the Land Reform Program, where the government buys farms on behalf of communities and gives these farms to previously disadvantaged people. Between 20 and 40 people normally benefit from each farm purchase. The beneficiaries are then trained on how to run the farms and are provided loans from agricultural banks to "jump-start" the farms, after which the government pulls out completely and they are treated as businesses. However, most of these endeavors fail and only a small minority actually become self-sufficient. Land O'Lakes is trying to address the problem by helping these emerging black farmers attain self-sufficiency by accessing additional financing and specialized training.

Zama Ukuphila Trust is a trust established in 1996 subject to the Land Reform Act. The trust owns the Prinsloo and Karkotskraal farms in Somerset East in Eastern Cape Province. These farms comprise about 4200 hectares, of which 15 are currently under irrigation. The Chairman of the Trust since 1998 is Mrs. Maggie Lazarus, a qualified and experienced teacher who grew up on a small holding and who has been involved in the Trust since its inception. The main activity to date of the farm has been crop farming and raising beef cattle, which generated gross revenues of $47,000 in 2002.

The Trust currently has approximately 50 beneficiaries, who jointly own the assets of the Trust, including the land. The Trust is managed by a Board of Directors, which in September 2000 recruited a professional farm manager and agriculture extension agent, Chris Wilken, who continues to manage the farm. The Department of Land Affairs and the Eastern Cape Department of Agriculture also provide assistance to the Trust, primarily through conducting feasibility studies for new projects, providing management assistance and, in some cases, contributing to project financing.

In November 2000, the Trust Board approved a new development plan aimed at generating meaningful income for the beneficiaries through the encouragement of more direct involvement of the beneficiaries in the farming operations. The long-range strategy is to establish stand-alone commercial operations that will be owned and

operated by a smaller group of the beneficiaries (10-12 on average). The Trust has already set up a geese-raising operation using this method. Also in progress are a goat milking and cheese processing business, a beef fattening scheme, a poultry business, and a swine operation. All of these units are generating revenues. The Land O'Lakes Farmer-to-Farmer program is working with each of these units to turn these revenues into profits, to help ensure long-term sustainability and wealth creation for the future owners.

Broiler Production and Processing

The broiler industry in South Africa can largely be divided into three segments, based on production size and market.

1. **Large formal sector**
   A large formal sector exists that is dominated by large producers of chicken, namely Rainbow Farms and County Fare. These groups run large poultry farms and abattoirs and produce for export as well as the local wholesale market. In some instances, large private poultry businesses produce live chickens on contract for sale under these brands.

2. **Intermediate sector**
   This sector consists of medium to large broiler producers operating independently of each other that begin growing their chickens from day one through six weeks of age. These producers either sell their chickens live to private abattoirs, to the informal live market, or slaughter them in their private abattoirs and sell the meat marked using their own brand. In the Eastern Cape region, Rocklands poultry and Anca Farms are fairly large producers who operate along these lines.

3. **Smaller and emerging segments**
   The smallest segment, but easily the most lucrative per capita, is the small-scale broiler producers segment. These producers produce between 50 and 1,000 chickens per six-week cycle. The market usually comprises small, informal outlets in poorer rural communities. There is a demand for live and slaughtered chickens in this segment. Very little capital is required to start this kind of business, and a small broiler business of up to 400 chickens per six-week cycle is enough to sustain a small family. Many poor families in the Eastern Cape are able to produce broiler chickens successfully, provided they are able to raise the start-up capital, maintain the cash flow and have access to the required technical assistance in growing these genetically advanced chickens.

The most significant challenges facing the industry are:

1. Lack of technical knowledge at the emerging level
2. Fatal diseases and lack of understanding of these diseases
3. Management in the emerging and intermediate levels
4. The occasional imports of surplus chickens, which adversely affects demand
5. The fluctuation of feed prices, affecting gross margins

Leroy Venicek's Assignment:
Mr. Leroy Vanicek is a volunteer who traveled to Zamukuphila to implement a basic financial management assignment. While he was there, he identified other areas such as cooperative organization and general business management where training was needed and provided assistance in these topics. Mr. Vanicek has over 20 years experience in managing cooperatives and supplying financial advice to farmers and managers. This experience, along with prior international development experience, allowed him to implement a quality assignment for Zamukuphila.

The volunteer provided training on business management, with special emphasis on cooperative development, financial management, marketing, and clear-cut distribution of duties among all the employees of the agribusiness. Hands-on training provided by the volunteer to the manager of the farm and his assistant helped them to establish and adopt efficient record keeping and general farm management practices. The training and recommendations were aimed at solving the management stalemate situation at the farm. The management and beneficiaries were not certain about their duties and responsibilities, which led to inefficient management of the farm and the corresponding lack of performance by the employees. Most of Leroy's recommendations and expected impact was aimed at the broiler enterprise.

Economic Impacts:
The following impact has been observed and tabulated following LeRoy Vanicek's assignment:

Increase in broiler revenues: $18,000
The farm has experienced positive changes since the volunteer's intervention. Financial matters are better understood by the managers, and financial statements are prepared on a regular basis. The cooperative is also able to draw up their own budget and can calculate profit margins that allow for sustainable growth of the enterprise. They are able to get higher prices since they are now selling to both the commercial and informal sectors. The enterprise was selling their chickens at a loss because of an incorrect marketing strategy and poor financial management. Utilizing the financial management skills taught by the volunteer, the host organization re-calculated the profit margin, increasing it to 30 percent. They were selling 2000 kilos a month at no profit. Currently they are making a profit of $1 per kilo, totaling $2,000/month.

Increase in transportation cost savings: $540
As was advised by the volunteer, the farm began to sell to the commercial sector. This allowed them to cut their transportation costs because the goods are now being collected by the processors. They previously had to pay approximately $60 a trip three times a month.

Increase in giblet sale revenues: $375
Chicken giblets were previously given away to farm workers. Now they are packaged and sold to the local processor.

Increase in feed cost savings: $1,575
The enterprise has shortened their broiler cycle from 55 days to 42 days, reducing feed costs and increasing savings.

Increase in labor savings: $563
Laborers are more effectively utilized due to increased efficiency. The decrease in working days has led to an increase in savings.

Increase in profits per broiler: $844
For the broilers they sell to the commercial sector, they receive a higher price. On average they receive an additional $.50 per broiler. They have been able to sell approximately 1,700 broilers to the commercial market, and this amount is expected to increase dramatically over the next year.

Grant received from Anti Poverty Trust: $7,750
The enterprise has become more aggressive in marketing themselves and has demonstrated innovation since Leroy's assignment. This has resulted in receiving a grant to purchase a new broiler house.

Grant from the Department of Agriculture: $9,375
This grant was used to purchase a broiler abattoir and slaughtering facilities. It was provided to the enterprise based on the many changes they made since Leroy's visit. It was noted by the Dept. of Agriculture that accessing the commercial market was most important.

Broiler Economic Impact Sub-Total $39,022

Goat Milk Production and Processing
Another venture is a dairy to make cheese from the milk produced by the farm's herd of 48 milk-producing Saanen goat does. The farm acquired these goats with the intention of starting a cheese-making operation. The 10 people mainly involved in raising the goats have been designated as the principal members of the dairy operation. Two American goat farmers and cheese makers from Colorado visited the Zama Ukuphila farm in September 2002 under the Land O'Lakes Farmer-to-Farmer program to assess the feasibility of making goat cheese on the farm. The volunteers concluded that an operation with at least 50 producing does could be technically feasible and financially viable. USAID, through E.M.&I., is prepared to contribute grant funding to help the dairy acquire necessary equipment and to pay for some of the cost of technical assistance the project will require.

The anticipated financial requirements of the project are approximately $46,000, consisting of capital requirements of $18,750 in Year 1, $12,250 in Year 2, and net working capital of $15,000. Land O'Lakes (via the Agrilink II project) seeks to provide its contributions on terms as close as possible to those that a purely commercial venture

could obtain in domestic financial markets and thus seeks ways to use its grant funding to guarantee or otherwise stimulate the provision of the necessary capital by domestic financial institutions. It is an essential test of the project's viability that it is expected to repay all or most of the grant funds received, whether at commercial or partly concessionary interest rates. Land O'Lakes will also provide technical assistance to the project through the Farmer-to-Farmer program.

Keeping with the private sector orientation of the grant program, and to ensure the project's ability to compete against commercial operators, it has been decided to separate the goat raising from the cheese-making operation and to reconstitute the cheese-making operation as a private company, Zama Goat Cheese (Pty) Ltd. (ZGC). ZGC will buy goat's milk from the farm but will not as a company be directly involved in managing the goat herd. It is expected that many of the initial shareholders of ZGC will be existing goat farmers. This separation will ensure that the milk producers receive a market price for their milk. It will also help the cheese operation to operate commercially and to obtain bank facilities and credit that a trust might not be able to obtain.

One of the main reasons for supporting this project is to create new sources of income among rural populations in the area, a large percentage of which live near or below the poverty line. By creating a guaranteed market for goat's milk, ZGC intends to see the local herd grow over the next five years from 50 to 300 producing does. Herd owners will include some existing goat farmers who are already beneficiaries of the Trust, but the creation of this market, worth an estimated $100,000 per year by 2008, will induce others to participate, either as new Trust members, as contract farmers or as independent farmers leasing land from the Trust. In this way all members of the Trust may benefit, while the management of the Trust itself will have its own incentives to provide technical assistance in goat husbandry to ensure that the quantity and quality of milk produced meets the growing needs of ZGC.

The total South African market for goat cheese amounts to about 100 tons per year, representing a fresh milk equivalent of no more than 1 million liters. Though substantial amounts of milk are sold informally as fresh milk or amasi to local populations, the commercial market for fresh goat milk is very limited, and much of it is supplied by imported powdered product sold as powder or reconstituted and sold fresh or frozen. At least 80 percent of the commercially produced goat milk in South Africa is made into cheese.

The market for goat cheese consists of two principal segments: the health food market, which buys goat products for their perceived health value (this includes lactose-intolerant consumers) and the gourmet market, which buys goat products for their unique flavor. There is considerable overlap between the two segments and the channels through which they are distributed and pricing, which is highly variable across the market, is not substantially different between the two segments. The main difference is in packaging and presentation and the kinds of retail establishments in which products are sold. The gourmet segment includes restaurants and tourist establishments as well as retail outlets.

ZGC has several potential markets it can address. In the Somerset East area and as far away as Port Elizabeth, the company will sell to local specialty shops, tourist restaurants, lodges and other outlets. In order to generate some immediate cash flow as it seeks to master the production and marketing of high-quality cheese, ZGC may retain up to 20 percent of its milk for transformation into yoghurt for sale in the area. The main markets where ZGC will position itself are likely to be in Gauteng and Western Cape, which possess a more sophisticated set of consumers, a greater variety and number of potential outlets, higher prices and a greater concentration of purchasing power.

ZGC will work through commission agents and selected distributors in these areas. Gavin Beaumont is a former goat farmer and goat cheese maker based in Grahamstown, who ran a successful operation for five years and was a main supplier to Woolworth's and Spar. Gavin has agreed to act as a marketing and technical advisor to the project for at least its first year of operation and will use his industry contacts to help ZGC establish multiple, reliable distribution channels.

In its two years of operation, ZGC will avoid the large retailers such as Woolworth's or Pick 'n' Pay. These retailers can offer attractive volumes of product uptake, but they tend to squeeze suppliers and charge hefty up-front fees for placing products on their shelves. The preferred avenue is for ZGC to market directly or through a small number of selected distributors/agents to specialty retailers and restaurants where their product can command a higher price. Based on a survey conducted, mainly in Gauteng, of retail and wholesale prices, it is apparent that ZGC should be able to command wholesale prices averaging at least $8.75 per kg and possible much more. At $7.50 the project is highly profitable; at $10.00 or more it is exceptionally profitable.

The initial product mix will be dictated by technical and financial considerations. As mentioned, yoghurt will feature in the initial production because it can generate immediate cash. Fresh and soft cheeses such as feta, ricotta and chèvre (a cream-cheese-like product that can be flavored with herbs, pepper, garlic, etc.) will dominate initially, largely because these are the easiest cheeses for learning how to master production. Hard aged cheeses such as cheddar, Gouda or Pecorino, or soft aged cheese such as Camembert may come subsequently as techniques improve and as market relationships become more solid.

Softer cheeses such as feta, chèvre and Ricotta can yield as much as 15 percent (i.e., for every 100 liters of milk, 15 kg of cheese can be produced), while harder cheeses yield less (closer to 10 percent). The lower yield is compensated for by higher prices. Some goat milk cheddar cheeses can sell for nearly $25.00 per kg, which translates to about $17.50 as the wholesale price to the cheese maker.

A marketing and branding strategy is still being developed. ZGC, in addition to developing its own brand, is likely to participate in a new initiative, called Kalahari Kids, which seeks to develop a national brand for South Africa goat products including meat, dairy products, fiber and leather.

ZGC will be managed by two members of the Trust: Mrs. Maggie Lazarus, currently Chairman of the Trust Board of Directors, and Mr. Anthony Lazarus. Both Mr. and Mrs. Lazarus are educated, and Mr. Lazarus has engineering, management and technical training and experience and has worked in food (margarine) production and other process industries. The project will benefit from extensive other assistance, provided through the Land O'Lakes Farmer-to-Farmer program and other sources. Gavin Beaumont will be an active advisor to the project, as will Merida Roets, a leading expert on goat husbandry and management and one of the directors of the Kalahari Kids initiative. The Farmer-to-Farmer program will bring volunteers to assist and train as cheese production begins.

Through a co-operative agreement between the Trust and Lovedale College in King William's Town, ZGC staff can benefit from a wide range of courses in agriculture and business management, designed to meet the evolving needs of Trust members. Other training can be obtained using grant funding.

The project is technically and financially viable. It should be able to withstand a variety of fairly severe market or supply shocks, including drought or other natural disasters.

According to a fairly conservative set of assumptions, the project should have generated total reserves of approximately $70,375 by the end of its fifth year of operation, after having paid interest and 60 percent of the capital grant principal. Though it will make a net loss in the first two years, by Year 5 it will be generating a net profit of $46,375 per year, paying workers salaries of about $58,500, and providing nearly $80,000 per year in income to farmers from its purchases of milk.

As such it is a project not only of significant commercial potential but also a source of meaningful income to a potentially large number of people and a chance to build meaningful wealth for a smaller, yet significant number.

James and Carol Schott's Assignment

Two volunteers worked with the group on herd management and cheese making. They are a married couple who currently run a very successful goat farm in the United States. One of the volunteers was Carol Schott, who trained the group on financial management. Her experience as co-owner of the goat farm and her activities in milking and cheese making allowed her to successfully train the producers. Mrs. Schott's involvement with the financial aspects of the farm also provided her with the necessary expertise to consult on management issues. The other volunteer was James Schott, who trained on goat production and processing. As the owner and operator of Haystack Mountain Goat Dairy, James has learned many skills related to the care of goats. Herd management includes housing, nutrition, vaccinations, worming, breeding, drawing blood, birthing problems, recognition of various maladies such as mastitis. He also has knowledge regarding the characteristics of high-quality dairy goats. His experience regarding milking procedures for producing healthy animals and quality milk as well as the care and storage of milk allowed him to assist the group in increasing their production. By the time the volunteers left, the group was able to make feta cheese and also a very healthy, non-expensive soap made from goat milk.

Fatoumata Diallo's Assignment
Fatoumata Diallo went to ZGT in November of last year to implement the Schott's recommendation to market feta cheese. She developed a business plan and an extensive marketing plan which laid the groundwork for what is now the Zama Goat Cheese company. Fatoumata is a recent MBA graduate and appreciated the opportunity to go back to her native Africa (she was born in Mali) and give back some of what she has learned in her new home, the United States.

Economic Impacts:
The following impact was observed and tabulated since the Schott's and Fatoumata Diallo's assignments:

Increase in goat milk profits: $10,780
Due to improved dairy goat herd management practices, milk production has increased from .5 liters per day to an average of three liters per day. The milk is now sold both to the formal and informal markets. The marketing and awareness of goat milk as a good product has had a good effect on sales.

Savings due to reduction in veterinary costs $219
Veterinary expenses have been reduced due to the improvement of the veterinary program.

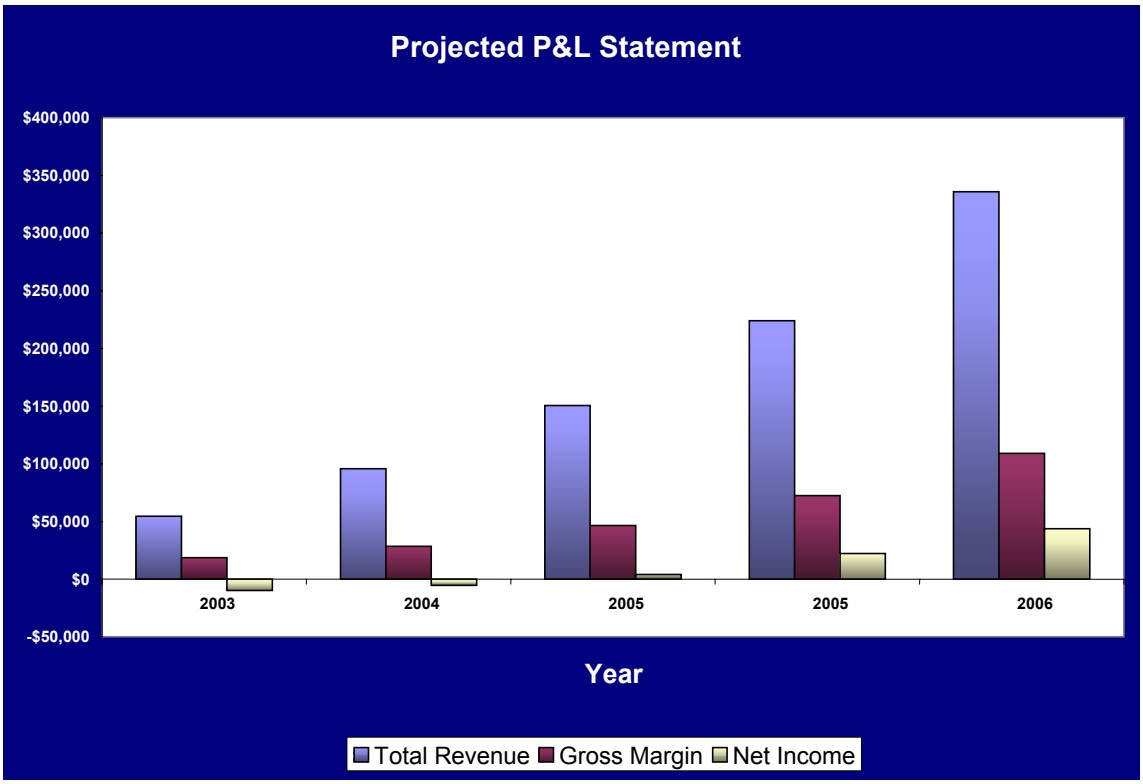
Grant through Agrilink II Project $200,000
Grant for the establishment of a cheese processing plant.

Grant from Department of Agriculture $10,000
Grant to purchase a milking parlor for goats.

Grant from Department of Agriculture $7,500
Grant to purchase overnight facility shed.

Goat Milk Economic Impact Subtotal $228,499

Projected Profit and Loss Statement for the Zama Goat Cheese Company



Title of Assignment: Dairy Production
Host Enterprise: Masakhane Holding Trust, South Africa
FTF Consultant: Wayne Schoper
Assignment Date: May 18 – June 1, 2002
Assessment Date: April 1, 2003
Economic Impact: $12,588
Direct Beneficiaries: 7

Impact Summary Report:

The western region of the Eastern Cape has two distinct areas where milk is produced - the west side and the northeast region of Port Elizabeth. The South African dairy industry is a diverse industry incorporating primary production, transportation of milk, processing and manufacturing of milk and dairy products, distribution and marketing. Dairying is the fourth largest agricultural sector in South Africa. With an estimated gross production value of 3.4 billion Rnd, it represents 7.5 percent of the gross value of all agricultural products. Dairy is also one of the leading rural industries in terms of adding value through further processing. Much of this processing occurs in rural areas generating small industries and employment in country regions. South Africa's climate and natural agricultural resources are not particularly favorable for dairying, except in a number of coastal fringe areas where limited pasture grazing occurs on natural and irrigated pastures. Although specialized dairy farming occurs throughout the country, milk production mainly forms part of mixed farming enterprises in the main interior milk producing areas. The coastal regions of the Western, Southern and Eastern Cape provinces, together with KwaZulu Natal, contribute more than 53 percent of national mill production. Masakhane is situated in the hearth of the western region.

Masakhane is a small, family owned, 120-hectare dairy farm. It is managed and partly owned by Mr. Leon Barends, whose family is very dedicated to the successful running of the farm. There are 25 milking cows, which are artificially inseminated, and heifer cows that are retained and raised. For some time the farm has had a feeding problem, which resulted in low milk production. They currently need a small amount of money to install irrigation pumps in their pastures since the main recommendations coming from the volunteer centered on irrigation. It was recommended that they should install a new irrigation system to improve their pasture quality. This will improve their feeding regimen, thereby, increasing milk production. The Department of Agriculture has granted the farmers a small amount of money to help the farm through the current feeding crisis.

The volunteer chosen for the assignment was Mr. Wayne Schoper. Mr. Schoper is responsible for planning, implementation, and evaluation of agricultural educational programming, specializing in crop and dairy management. He provides leadership in the Southwest District for the Dairy Initiatives programs including: multi-county Dairy Diagnostic Teams; Dairy Demonstration Farms; financial and expansion planning utilizing the FINPACK farm financial management computer program; forage research projects; and dairy educational events. All of these experiences allowed for him to be an ideal candidate for this assignment. The volunteer spent the time working very closely

with the manager of the farm. He primarily conducted on-the-job training and had several good recommendations for the farm enterprise.

Economic Impacts:

The following impact was observed and tabulated since Wayne Schoper's assignment:

Increase in revenue: $5,088

After following volunteer recommendations, the farm started producing more milk. Once they had a larger quantity of higher-quality milk, they were able to get a better price from their purchaser.

Grant from Department of Agriculture: $7,500

The grant was used to purchase and install irrigation pumps in the pastures. The volunteer visit was directly responsible for getting this grant. The Land O'Lakes office in South Africa took the volunteer recommendations and held a series of discussions with the Department of Agriculture. These discussions culminated in the farm receiving this grant.

Title of Assignment: Dairy Production and Business Management
Host Enterprise: Nkanini Dairy Project – Qumbu, South Africa
FTF Consultant: Al Schuetz
Assignment Dates: January 25 - February 7, 2003
Assessment Date: March 20, 2003
Economic Impact: $8,544
Direct Beneficiaries: 20

Impact Summary Report:
The South African dairy industry is a diverse industry incorporating primary production, transportation of milk, processing and manufacturing of milk and dairy products, distribution and marketing. Dairying is the fourth largest agricultural sector in South Africa. With an estimated gross production value of 3.4 billion rand, it represents 7.5 percent of the gross value of all agricultural products. Dairy is also one of the leading rural industries in terms of adding value through further processing. Much of this processing occurs in rural areas generating small industries and employment in country regions. South Africa's climate and natural agricultural resources are not generally particularly favorable for dairying, except in a number of coastal fringe areas where limited pasture grazing occurs on natural and irrigated pastures. Although specialized dairy farming occurs throughout the country, milk production mainly forms part of mixed farming enterprises in the main interior milk producing areas. The coastal regions of the Western and Eastern Cape provinces, together with KwaZulu Natal, contribute more than 53 percent of national milk production.

The dairy sector in the Eastern Cape contains 64,000 cows, each of which yield an average of 16 liters of milk per day. The industry employs roughly 2,700 laborers and supports close to 11,000 laborers and family members. A few thousand industrial worked are also supported by the dairy industry, such as milk buyers, feed, fertilizer and chemical companies.

The problems that afflict the dairy industry range from low milk prices in relation to rising input costs, unfair competition from subsidized milk producers, rapidly deteriorating roads used by milk tankers, and reduced funds for research. Despite all of the problems within the sector, the favorable natural resources in the region give dairy farming a chance to grow within the area.

Nkanini Dairy Project is a very successful, small, rural dairy project which is run by a group of very dedicated women. It is located in the heart of a very poverty-stricken pocket in the Eastern Cape. The women own 3.5 hectares of land, twenty-one cows, nine of which are milked. They grow their own feed, although the land is not under irrigation. Milk production is the main activity of the farm enterprise.

The volunteer chosen to implement the dairy production and management assignment was Mr. Al Schuetz. Mr. Schuetz's experience in dairy procurement and as a dairy foods corporation manager allowed him to provide valuable technical assistance to the women of Nkanini. During his career as a manager, the volunteer was responsible for all

operations, maintenance, engineering, personnel, labor negotiations, quality assurance, milk supply, production and cheese operations. Mr. Schuetz trained the dairy producers at Nkanini on the life cycle and reproduction of dairy cattle, and also how to exercise proper health care procedures. Sustainable health care will help the business compete within the dairy business. The producers were also trained on methods that would ensure a noticeable increase in milk volumes, along with keeping proper records and how this is useful in the dairy industry.

The volunteer recommended that the producers consider merging with other producers in the area so as to maximize the volume of milk in the area and to start making progress in the formal sector market. This would increase milk volumes and guarantee a better price for the milk. This formation would also empower other farmers in the area and for once people would start milking for a profit and not only subsistence.

He further recommended that they set up proper accounting systems, as there was none existing earlier, which contributed to poor cash flow. It would also impact the business, as they would be able to save money and purchase more needed equipment.

Mr. Schuetz advised on the wisdom of forming links and networking with other role players in the industry, so as to maximize information flow in the sector. He recommended that they study their market carefully, so as to sell to the end user, rather than to a middleman who is going to make a profit out of what they bought from the business.

Recommendations were made to milk twice a day, instead of just once in the morning, as the cows were capable of producing both in the mornings and evenings. This would maximize production, which would in turn make more money for the enterprise.

Economic Impacts:
The following impact was observed and tabulated since Al Schuetz's assignment:

Increase in annual profits: $7,800
The women were milking only once a day and producing about 30 liters a day. After receiving the volunteer recommendations, the women started milking twice a day. Now, they are able to produce 50 liters of milk per day. They have also stopped selling the milk to only one farmer and have expanded; selling milk to small depos throughout the village. This provides them with a wider market, which ensures that they sell all of their milk. Previously, they made roughly $337 per month. Now that they are milking more, their production and profits have increased to $650 per month.

Increase in annual savings: $744
The enterprise is saving money as a direct result of the basic financial management they were taught by the volunteer. They now save close to $62 per month, with the goal of buying more milking cows before the end of the year.

Total $8,522

Title of Assignment: Business Management
Host Enterprise: Ikhwezi Farm, South Africa
FTF Consultant: Donna Rosa
Assignment Date: January 25 – February 7, 2003
Assessment Date: March 21, 2003
Economic Impact: $3,781
Direct Beneficiaries: 7

Impact Summary Report

The South African dairy industry is a diverse industry incorporating primary production, transportation of milk, processing and manufacturing of milk and dairy products, distribution and marketing. Dairying is the fourth largest agricultural sector in South Africa. With an estimated gross production value of 3.4 billion rand, it represents 7.5 percent of the gross value of all agricultural products. Dairy is also one of the leading rural industries in terms of adding value through further processing. Much of this processing occurs in rural areas generating small industries and employment. South Africa's climate and natural agricultural resources are not generally particularly favorable for dairying, except in a number of coastal fringe areas where limited pasture grazing occurs on natural and irrigated pastures. Although specialized dairy farming occurs throughout the country, milk production mainly forms part of mixed farming enterprises in the main interior milk producing areas. The coastal regions of the Western and Eastern Cape provinces, together with KwaZulu Natal, contribute more than 53 percent of national milk production.

The dairy sector in the Eastern Cape contains 64,000 cows, each of which yields an average of 16 liters of milk per day. The industry employs roughly 2,700 laborers and supports close to 11,000 laborers and family members. A few thousand industrial worked are also supported by the dairy industry, such as milk buyers, feed, fertilizer and chemical companies.

The problems that afflict the dairy industry range from low milk prices in relation to rising input costs, unfair competition from subsidized milk producers, rapidly deteriorating roads used by milk tankers, and reduced funds for research. Despite all of the problems within the sector, the favorable natural resources in the region give dairy farming a chance to grow within the area.

Dairy enterprises owned by black emerging farmers have an array of ownership patterns, all of which are very challenging in terms of running a profitable business. The new government is trying to redress past imbalances, and so tends to buy these businesses and then hand them over to the beneficiaries to own and run. In the case of Ikhwezi, a totally different scenario prevails. The land is owned by the Roman Catholic Church, who has no intention of selling the land. They are only prepared to sell all of the movable assets on the farm, including very sophisticated dairy production and processing equipment.

The dairy business was managed by the present incumbent on behalf of the Church. When the Church decided to sell, the manager decided to try and purchase the assets along with six other workers, but ran into a problem in getting finances since they did not own the land.

The local municipality decided to help the group and bought the business on their behalf, with the understanding that the municipality would hand over the business when the group has demonstrated that the group can manage the business and make a profit.

The volunteer chosen for the assignment was Donna Rosa, who came to train the group on business management. Ms. Rosa's experience in business planning and strategic marketing made her a valuable candidate for the technical assistance assignment. She also has extensive experience in conducting market evaluations, recommending entry strategies, and developing marketing plans and strategic/tactical business plans that drive growth. All of these skills transferred into solid business advice for the enterprise.

During the course of her assignment she helped set up spreadsheets and templates to track the finances of the business. This was invaluable to the manager, Mr. Irvine Nyoka, who had little experience in this area. Simple financial analysis was also done to enable the manager to pull together data over time to spot trends. Ms. Rosa emphasized the importance of tracking trends for the businesses buying and selling decisions. She also set up budgets, which were previously not done.

The volunteer helped to map out the future direction of the business, and a conclusion was reached that the business would not be aided by diversification of farm production – the addition of pigs, poultry, and vegetables – but by diversification linked to the production of value-added dairy products such as butter and yogurt.

A meeting was arranged by Ms. Rosa and Mr. Nyoka with Mr. Ayanda Wakaba, who oversees the local economic development program, and Mr. Jonathan Boakye, of Athan & Associates, who has been assigned by the municipality to provide accounting support and financial advice. It was clear that they are very supportive of the business. They saw that Mr. Nyoka had obtained outside management support through the Farmer-to-Farmer program, showing them that he is dedicated and resourceful, thereby substantially lowering their investment risk. Using the financial data Ms. Rosa organized, a decision was made to secure financing for an upgraded irrigation system.

Economic Impacts:

The following impact was observed and tabulated since Donna Rosa's assignment:

Increase in labor savings: $461
Improved efficiencies created by the volunteer in both internal processes and use of information technology. This has improved the efficiency and controls within the enterprise and saved labor time.

Increase in household income: $800
Four new employees were hired. Each earns $100 per month. Household income has therefore increased for four families that did not have any form of income before.

Increase in production: $2,520
The new irrigation system has been purchased and installed. It will provide additional pastures for winter grazing, thus providing significant savings in feed cost. It has already saved $60 per day in water fees and labor.

Total Economic Impact $3,781

Title of Assignment: Cooperative Business Development, Dairy Rations Formulation
Host Enterprise: Mzuzu Dairy Farmers Association and Central Region Milk Producers Association, Malawi
FTF Consultant: Frank Blackburn, Roy Chapin
Assignment Dates: September 13-30, 2002 (Chapin)
January 4-26, 2003 (Blackburn)
February 21-March 16, 2003 (Chapin)
Assessment Date: March 12, 2003
Direct Beneficiaries: 335

Impact Summary Report:
While the Malawian Government has previously supported work on livestock feeds and feeding, most of the recommendations from these projects are by target groups. In part this may imply that the technologies promoted may not be appropriate to many local situations, farming systems, as well as the current and future economic situation. Commercial livestock feeds tend to be expensive in Malawi for a number of reasons including monopolistic pricing tendencies; inadequate local production of conventional base ingredients such as cereals (especially maize) and protein sources. The situation is worsened by Malawi's recent erratic rainfall pattern, observed since the major drought of 1992.

The widespread shortage of the staple maize in the current agriculture season (October 2001-September 2002) has unraveled the need for the Malawi dairy program to increase emphasis on the diversification of supplementary feeding strategies, especially the sources of energy and crude protein. Most farmers have traditionally depended on maize bran (madeya) as a source of supplementary crude protein and energy. However, in times of food crisis, madeya gets scarce, as happened this year, as poor households tend to eat madeya and most people tend to crush whole maize straight away (whole maize meal). This has in part led to reduced dairy productivity. Alternative strategies include promotion of leguminous agro-forestry species in pasture establishment and use of cassava tubers and leaves. Tubers provide an energy base, and leaves provide a protein base. The production of roots and tubers is believed to be on the increase, but its commercial utilization is still low.

Several factors contributing to the urgent need for volunteer assistance to improve the milk productivity and nutrition of cattle includes:

1) Critical shortage of dairy cattle. With a human population of 11 million, Malawi has a cattle population of less than 700,000. Of this only 10,000-12,000 are dairy cattle;
2) Local unavailability and high cost of basic drugs (the drug market has a lot of imperfections) and feed supplements;
3) Harsh financial market due to long-time instability of the economy (leading to lending costs far higher, about 50 percent, than average business rates of return, in the region of 30-35 percent);

4) Few households keep dairy cattle due to shortage of dairy cattle and financial constraints, in turn making most producer organizations (cooperatives or popularly known as milk bulking groups, MBGs, unviable currently, i.e., not measuring up to adequate self-financing, hence limited impact on member services).

The Mzuzu Dairy Farmers Association and Central Region Milk Producers Association are involved with the assistance program in Malawi selected Roy Chapin for both assignments in Malawi on dairy rations to aid Land O'Lakes in the dairy development program. Land O'Lakes has developed the infrastructure to collect and market milk from small stakeholders throughout Malawi. The focus has been on improving milk production and profitability. Roy was selected to implement the assignment in Malawi on dairy feed rations because of his training in animal nutrition, practical experience on livestock and dairy ration, and for his experience working at commercial farms and feed manufacturers. With Roy's assistance, it is anticipated that his work would result in an increase in new or improved products, an increase in production over pre-assignment levels, an increase in the efficiency of the dairy milk production, and an increase in revenue through increased sales receipts as a result of Roy's intervention.

Roy is president of Chapin Livestock Supplements and received his doctorate in animal nutrition at Cornell University, NY. Dr. Chapin has formulated, manufactured and sold liquid feed for beef and dairy animals plus vitamin, mineral and protein supplements for dairy, beef, swine and dogs. Dr. Chapin has also formulated extensively for large dairies in California, Oregon and Washington that home-mixed their own rations. He has worked as a consultant on numerous international development assignments. His experience internationally has included work on dairy nutrition and feed formulation in Ukraine, Uzbekistan, Bangladesh, India, Dominican Republic, Kosovo and Russia.

The focus of the dairy rationing assignments has been on improving milk production and profitability. Roy visited dairy farmers throughout the country (in Lilongwe, Blantyre and Mzuzu) to evaluate options for improved milk production. Since there was a sugar plantation in the southern part of the country (Blantyre) with excess molasses, manufacturing a liquid feed (molasses, urea, phosphoric acid and vitamins and minerals) was the best option. During the first visit, the concept was presented and sold to the various associations, before and after pictures were shown of various cows from a similar feeding trial in Ukraine a few months earlier, and the molasses was purchased for a future test mix, to be conducted in March 2003. An article discussing the formulation, mixing, and delivery and feeding of liquid feed was written for this first assignment by Mr. Chapin.

In March 2003, one ton of liquid feed was mixed and distributed to 17 farmers throughout Malawi (Blantyre, Lilongwe and Mzuzu). This provided feed for 24 cows to test the liquid feed for six weeks. Preliminary results in-country during the assignment period showed substantial milk yield increase. The potential impact in Malawi is in the range of 50-100 percent increase in milk production of cows fed liquid feed with balanced rations. There are about 10,000 milk cows with good genetic potential to

produce milk in Malawi. Since most milk producers market through the milk bulking stations serviced by Land O'Lakes field representatives, it will be possible to access the majority of these cows with liquid feed. In addition to increasing profitability for the producers, more milk will be available for a population that needs more energy and protein through improved nutrition.

Impact from Roy Chapin's visits has included him assisting in making nutrition a key agenda for the Land O'Lakes Malawi Project. He has already formulated and implemented nutrition trials that have after three weeks led to increased milk yields and improvements in body condition and sheen. Farmers in the areas of the country whose cows are on liquid feed want more of it, and those who are not yet on liquid feed want to participate in the program.

Cooperative Development in Malawi

The component on development of efficient milk producer organizations focuses on milk bulking groups and cooperatives in Malawi. It aims to achieve organizational strengthening and wide adoption of production best practices. In-house technical assistance is provided by the business development specialist and field agents, with backstopping by field coordinators.

A striking observation has been that the adoption of business records at both farmstead and cooperative levels has been typically low. There are varied reasons for this. The Bunda College is currently piloting a dairy records scheme, which may have a wealth of information on this. The bottom line remains that business records are crucial to the commercialization of dairy business.

Frank Blackburn was selected to travel as a volunteer consultant for the Farmer-to-Farmer project to conduct the cooperative development training in Malawi. Frank has many years of experience providing training and cooperative services, particularly on livestock-based cooperatives, and has conducted approximately 40 technical assistance assignments and training workshops on cooperative development for Land O'Lakes.

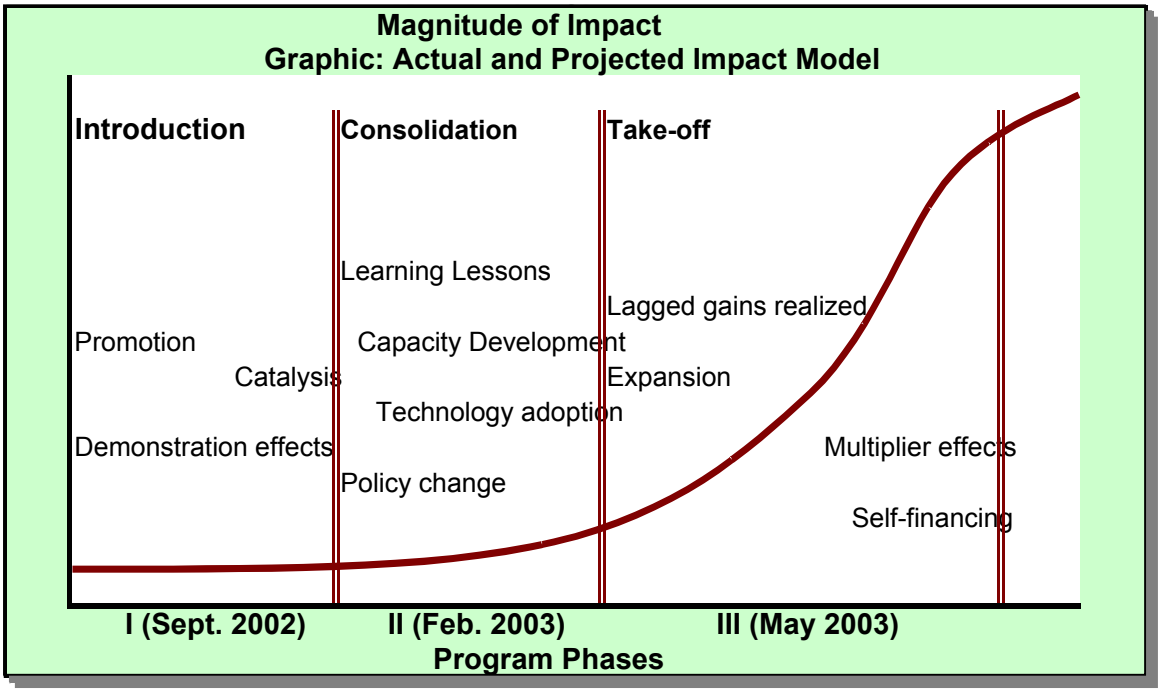
There are three dairy farmers associations in Malawi, one in each of the three regions of the country. About 50 milk bulking groups are affiliated with these associations. The milk bulking groups are being encouraged by the Ministry of Commerce and Industry to restructure as business cooperatives. This is a small part of the privatization program as Malawi shifts from a government controlled economy. The Land O'Lakes project includes support of this effort.

The milk bulking groups are milk collection stations for small shareholder farmers. Most of the farmers have one or two cows and bring their milk to the collection station after milking. The milk bulking groups have bulk tanks with a cooling system to hold the milk until a truck from a processing plant picks the milk up. One of the associations has bulk trucks that pick the milk up from the stations. The milk is usually picked up two or three times per week.

The milk bulking groups that Frank visited seem to be operating as cooperatives for the most part. They have elected committees of farmers who govern the operation of the collection station. With farmers bringing milk to the station twice a day they have a lot of opportunities to discuss the business, but only a few are legally registered as cooperatives. Some have submitted their registration, some are working towards registration but it was determined that most are waiting for some assistance in getting registered. Although the entire cooperative law of Malawi was not reviewed, it was still determined that registration is probably not a complicated process and it is not expensive. There is some reluctance to registration as a cooperative business in the Southern Region. This relates to the taxation of businesses in Malawi and that reluctance must be overcome.

Key findings from the coop assignment include the need for developing successful, market-oriented business cooperatives in order to strengthen the elected boards. A board that understands and actively carries out responsibilities for leadership, planning and controlling gives the cooperative an advantage over any other type of business serving farmers. Individual board members have different types of experience. While some do require training in all of the topics, others are more in need of refresher programs and workshops on more technical topics.

Expected Economic Impact:



Expected Results and Timing:

Feeds Trials Pvt. Sector Uptake Farmer adoption Nutrition Yield Income

As shown in the displays above, Land O'Lakes is entering Phase III of this program. The strategic objective here is farmer buy-in. Through the LOL milk bulking system in Malawi, we have access to 6,500 of the country's estimated 10,000 cows. Though still waiting for the final results from the feed trials, our preliminary results have shown cows on the liquid feed diet to have increases in milk production from 50 to 100 percent. So a high adoption rate by farmers would yield significant results. To achieve this we have planned an intensive training program utilizing talented young Malawians. They will be instructed by Farmer-to-Farmer volunteers using materials developed at the California Polytechnic. Then the trainees will become the trainers and share their knowledge to farmers at seminars organized around the LOL milk bulking centers. We have also planned a financing scheme to provide liquid feed to farmers through their established credit at the milk bulking centers. Ideally it will become a seamless process throughout Malawi. Farmers drop off their milk at the bulking centers and take home their liquid feed. We expect significant impact in the entire dairy sector.

Title of Assignment: Oyster Mushroom Production
FTF Consultant: Mikey Foley
Host Enterprise: Mushroom Growers Association of Jamaica
Date of Assessment: July 8-28, 2001
Economic Impact: $24,375.84
Direct Beneficiaries: 15

Volunteer Impact Summary:
The Mushroom industry was identified by Land O'Lakes under the focus areas of alternative crops and premium access to markets. The fresh mushroom market in Jamaica is virtually untapped, yet hotels, restaurants and grocery stores all import mushrooms. Mushroom imports in 1998 were 14 million JMD or $264,151 USD.

The industry has not grown due to poor production techniques. Contamination control was the core of poor production in both spawn and mushrooms. Substrate pasteurization techniques plagued the growers' ability to produce good yields of mushrooms in controlled environments. The Scientific Research Council (Government of Jamaica) was directing the MGAJ in producing mushrooms, but SRC had been unable to foster profitable growers under their program. Growers recognized that they were suffering from poor production practices and also questioned the quality of spawn purchased from the Scientific Research Council.

The Farmer-to-Farmer program provided an oyster mushroom specialist to enable the growers and SRC to produce quality and consistent mushrooms in order to better serve the local tourist market. Once a viable oyster mushroom industry was established, the door would be open for specialty mushrooms including straw mushrooms, portabellas and button mushrooms. The specialist also investigated the spawn production at SRC in order to identify the poor quality or contaminated spawn. Once it was determined that there was a strong potential for masked contamination in the spawn, Dr. Jorge Juliano was given the assignment of working with the SRC in spawn production.

Currently there are two growers who are positioned to lead the industry in Jamaica because of Farmer-to-Farmer's technical intervention.

Host Background:
The Mushroom Growers Association of Jamaica (MGAJ) was launched in November of 1998. The focus of the association was to pull farmers together to communicate and share information in order to solve problems. The association has an executive body and approximately fifteen members, of which only five are producing at the moment. The five members who produce are the ones who attend meetings regularly and participate in agriculture shows in order in increase the public's awareness of mushrooms. Production technology has been their largest hurdle in gaining momentum in the industry.

A market survey was completed a few years ago showing there is a strong market for mushrooms. A typical all-inclusive hotel utilizes two hundred pounds of oyster mushrooms on a weekly basis. There are approximately twenty of these hotels on the

island. This equates into a demand for 4,600 lb of oyster mushrooms alone on a weekly basis, yet this still does not take into consideration the number of smaller hotels, upscale grocery stores, and restaurants.

In the past, producers complained of spoilage and post contamination after the pasteurization of substrate. Local inputs were tried for substrate: guinea grass, African star grass, banana leaves, coffee parchment, corn stalk and various other inputs have been tried.

Each grower has a similar but different growing facility with various capacities. In general, the grow rooms (fruiting rooms) are naturally ventilated. They are made with greenhouse mesh material and misters and fans are placed within the rooms. Most all of the growers have a dark room. They all utilized a pasteurization process of steaming the substrate.

Volunteer Profile:
Mikey Foley has a wealth of experience in mushroom production beginning in 1973. Mr. Foley has a Master of Science degree and teaching credentials. He began as an apprentice mushroom grower and in 1985 became Manager of Agriculture for Castle and Cooke Mushroom Division in Salem, Oregon, with both production and management responsibilities. He has conducted over 30 developmental aid projects relating to mushroom production in more than 13 countries.

Expected Impact:
The producing members of the Association will be able to produce on a consistent basis and capture the tourism/hotel/restaurant market. Producers will increase their income and create a viable mushroom industry within the association, and production levels will increase on a consistent basis. Producers will then have more efficient farming systems set in place and an alternative crop will be established in Jamaica.

Observed Impact:
Duncan's Farm and Garnett Williams's Farm were selected for the impact report. An additional producer does not produce on a regular basis. Duncan's farm is run by a husband and wife team, Carl and Juliet Duncan. Garnett Williams is the sole proprietor of his farm.

Measuring temperatures was a major emphasis of the assignment for a multitude of reasons: production analysis, recording daily temperature fluctuations, verifying proper pasteurization, and measuring substrate temperatures after inoculation. While not all growers record their temperatures, the introduction of measuring temperatures has led to improved production practices especially in the pasteurization of substrate.

Duncan's farm does not like to tamper with the growing mycelium during the first two weeks and experience no problems with mycelium during the first two weeks. Williams Farm does measure temperature for monitoring purposes but does not record the temperature, yet both farms emphasize the measuring of the pasteurization process.

The growers relate their production improvements to the technology transfer of improved pasteurization techniques: increased time of soaking of grass from one hour up to 48 hours for improved pasteurization (growers are soaking for up to 16 hours – overnight soaking), use of ventilator box in pasteurization and cooling and thermometers with 60cm long stems were provided for increased awareness and better control of steaming temperatures. High efficiency particulate air filters were built into ventilation boxes for improved pasteurization methods by supplying biologically clean air during steaming, cooling and inoculation.

Economic Impacts:
The following impact was observed and tabulated since Mikey Foley's assignment:

Increase in labor savings: $5,545.20
One minor recommendation that substrate grass does not need to be cut for pasteurization and growing purposes led to labor savings. On Duncan's Farm the cost of labor is $18.86 per day and Garnette Williams Farm cost of labor is $14.15 per day. The time spent cutting grass weekly equals approximately two days of labor – 2 hours per day. Labor savings on cutting grass on Duncan's Farm = **US $3,168** and on Williams' farm = **$2,377.20** since assignment date.

Increase in profits: $17,616
Garnette Williams' farm has moved from a loss of $40 per week to a profit of $124 per week, which is an increase of $164 per week. Since the assignment this has led to an increase of **$13,776**. Mr. Williams is producing sixteen 4-kg blocks of mushrooms. His increase in production is a direct result of improved pasteurization techniques. The Duncans estimate that they have moved from unsteady production to a consistent production of 37 lb per week, profiting $120 per week or approximately $480 per month. This sustained production continued for eight months until a second technical intervention by Farmer-to-Farmer further enhanced their production. The Duncans benefited from a sustained production over the course of eight months at **$3,840**. This has enabled them to secure their markets and meet the demands of their purchasers.

Increase in gas savings: $1,214.64
One 45-kg cylinder of gas costs $43.39 and usage was previously one cylinder per two weeks. Consumption is now down to one cylinder per three weeks, which is a savings of $14.46 week (33 percent).

Total Economic Impact $24,375.84

Title of Assignment: Spawn Production
FTF Consultant: Dr. Jorge Juliano
Host Enterprise: Scientific Research Council of Jamaica
Date of Assessment: April 1 to 27, 2002
Economic Impact: US $5,841.50
Direct Beneficiaries: 4 SRC staff members and 1 Mushroom Growers Association of Jamaica Member (MGAJ)

Volunteer Profile:
Dr. Jorge Juliano is a plant pathologist with over thirty years of experience in the mushroom industry, whose experience encompasses plant management, research and product development. He has over 15 years of experience teaching at a university level. Dr. Juliano was the Senior Scientist in the Research Department at Dole Mushrooms and conducted over 100 research projects (casing soil formulations, compost supplementation, strain selection and development, fresh mushroom quality, etc.). He is acutely experienced with the technical aspects of spawn production and biological quality control of the spawn. He has conducted repeat volunteer experiences in Russia, Kyrgyzstan, Bulgaria, Turkmenistan, and Ukraine.

Host Background:
The Scientific Research Council, which falls under the jurisdiction of the Ministry of Agriculture, works to effectively engage in the strategic management of science and technology for national growth and development of Jamaica. Currently there are four staff members in the mushroom unit at the SRC consisting of a senior scientific officer, scientific officer, lab technician, and labor worker.

The MGAJ complains of poor spawn being produced by the SRC, which ultimately affects their business. Without good spawn the industry cannot move forward.

Jorge Juliano, a Farmer-to-Farmer consultant, worked with the MGAJ and identified that there is a strong potential for masked contamination, which can be difficult to detect visibly. Jorge found various reasons why the spawn may contain masked contamination, and SRC wants to ensure that their spawn is of the best quality for the mushroom growers. They also want to move into grain production of spawn to expand their product for the mushroom growers.

Expected Impact:
Spawn provided to mushroom growers will have an acceptable level of contamination. Higher-quality spawn will be produced as a result of the volunteer intervention, thus an alternative crop will be established in Jamaica. Mushroom growers in Jamaica will receive better quality spawn and achieve a better-quality mushroom and more consistent output of mushrooms, thereby assisting the mushroom growers to capture local markets.

Economic Impact: The following impact was observed following Jorge Juliano's assignment.

One of the greatest impacts of the assignment was the work done on the current substrate production techniques for spawn production. Dr. Juliano made thorough recommendations on the current production of sawdust substrate and contamination control, which led to the most beneficial impact of improved quality of spawn for oyster mushroom production. The Duncan's Farm claim a 50 percent increase in production due to the improved quality of spawn from SRC. This fifty percent increase in production is a decrease of losses from contaminated spawn from SRC. The Duncan's Farm claims that they have not received contaminated spawn from SRC since the technical intervention.

Increase in profits: $5,841.50

The Duncan's farm experienced a doubling in production due to improved spawn from SRC. Prior to Juliano's visit, they experienced a loss of 50 percent of their mushrooms due to contaminated spawn. Production increased from 37 lb/week to 75 lb/week. This led to an increase of US $5,841.50 for the year when Duncan's mushrooms are sold at a profit of US 3.24/lb.

Total Economic Impact $5,841.50

Title of Assignment:	Cacao Production & Marketing
Host Enterprise:	Tabasco Cacao Producers, Mexico
FTF Consultants:	Michael Evnin, Joachim Milz, John Burstein, M&M Mars, Harriet Behar, Gerardo Gonzalez, Richard Bronson, and Arturo Jimenez
Assignment Date:	1998 - 2002
Assessment Date:	March 3-5, 2003
Economic Impact:	$1,388,560
Direct Beneficiaries:	400

Impact Summary Report:

People throughout the world consume over one million tons of chocolate every year. The demand for the "food of the gods," as it was known to the ancient Maya, shows little sign of abating. Though international prices are currently low, big increases are expected, particularly for high-quality flavor beans. They are the most difficult to produce, but southeastern Mexico is fortunate to have high production potential. Currently Mexico as a whole produces about 36,000 metric tons of cacao. Approximately 80 percent of this crop comes from the state of Tabasco, with the remaining 20 percent coming from the Pacific coast of Chiapas.

The rural communities of the state of Tabasco have experienced multiple generations of government and private economic development activities, many of which have been significant departures from traditional growing of maize and cacao. Tabasco rural families have subsisted on these two crops for 750 to 1,000 years, with between 1.5 and 5.0 hectares under cultivation per family group. Even with demand for Tabasco's cacao bringing a slight premium to some small growers, world prices are depressed well beyond the level that would mean profitability. The result is cacao income is below the actual cost of production.

Groups of women in northern Tabasco have found an alternative to the traditional marketing system. They have begun to process cacao beans into solid chocolate. The goal of the women's groups and the Farmer-to-Farmer program is to improve family income, improve the educational level and health of their families, and to relieve financial pressure on their husbands. Farmer to Farmer volunteers have assisted in improving both cacao production and preparation of consumer-ready chocolate.

The volunteers who implemented the assignments for this project were highly qualified in the areas of production and marketing. The strengths of the volunteers enabled the Tabasco Cacao Association in achieving large returns from the assignments and the ultimate sale of cacao and chocolate. Volunteers Evnin, Milz, Burstein and the consultants from M&M Mars educated the cacao growers on the production of cacao and informed them on how they could increase the amount of cacao trees they currently own. They were also able to help construct equipment and obtain necessary equipment such as dryers, to make the chocolate processing much easier. Organic production and assistance with organic certification was provided by experts Behar and Gonzalez. The cacao producers were aware that organic production would provide them with a much higher

return and were very interested in becoming organically certified. The volunteers helped the producers through this three-year-long process, and ,currently, some of the producer organizations are very close to becoming organically certified. Marketing of the processed cacao into chocolate was another large and important component of this project. World experts from M&M Mars spent time educating the producers and the women's organizations on how the chocolate could be marketed for a much higher return. These assignments were invaluable, as now, many of the processors are able to sell directly to the purchaser and increase their family income. All of the volunteers who assisted with this project had significant experience in the international development arena and most with Mexico specifically.

Economic Impacts:

The following impact was observed and tabulated since the volunteers worked in Tabasco, Mexico:

Increase in cacao sales: $572,000

Through the Farmer-to-Farmer program, cacao producers were able to increase cacao sales from $795 USD per year in 1997 to $2,227 per year in 2002. This results in an increase from $318,000 to $890,000 for the group of 400 cacao producers. Due to the involvement of Farmer-to-Farmer volunteers in the cacao sector of Tabasco, cacao farmers were able to significantly increase their sales of cacao. In addition to increasing sales, they are now able to ferment, dry and transport their own cacao, instead of selling it in its green state to local middlemen. The producers are now allowed a certain amount of freedom they were denied in the past. They have the ability to choose their buyers and also negotiate a fair price and timely payment. This did not occur earlier when they were unable to process the cacao beans past the green, beginning state.

Profits per hectare increased: $291,000

Farmer-to-Farmer volunteers assisted the producers in increasing their profits per hectare. Profits increased from $181 per hectare in 1997 to $364 per hectare in 2002. If each of the 400 producers had two hectares, the profits for the group of producers increased to $291,200. Volunteers Michael Evnin and Joaquin Milz assisted the growers in increasing their cacao yields by providing assistance in organic production. They also assisted with processing equipment so as to increase the value of the cacao, therefore bringing in a better price for the goods. Assistance was also provided in marketing and import/export, illustrating to the producers that there are other avenues where cacao can be sold for a higher price.

Services from state government increased: $5,460

Since Farmer-to-Farmer volunteers assisted in human resource training, producers are now able to receive services from the state government on a monthly basis. In 1997 they were able to receive $455 annually. In 2002 they were able to receive that same amount monthly. The government saw that the producers were becoming a viable group, contributing to the economy of the state. The initiative sought out by the producers to receive this training showed the government that they are striving to improve their current economic condition. The Farmer-to-Farmer program was able to train people in

each participant community, estimating at a total of 10 technical specialists in organic agriculture.

Increase in income for women: $261,800
Volunteer work on the Farmer-to-Farmer program assisted in the development of the role of women in the families and village communities. Women now earn $110 monthly or $1,309 annually making chocolates in the various processing centers. Previously women did not contribute anything to the income of the family. They had a fundamental role in the development of the village communities, but up until this moment, it had not been reflected upon economically. Today, each woman that makes chocolate is able to contribute close to $1,309 annually to the family budget. This is also significant since the work is year round and constant and does not revolve around an agricultural cycle of eight months. This work will undoubtedly increase as they are more avenues for marketing and an increased demand for the chocolates the women are currently producing.

Increase in funds from the Government of Tabasco: $204,000
Farmer-to-Farmer training in organic cacao production and orchard diversification led to the cacao producers receiving close to $255 per producer per hectare from the Government of Tabasco to embark on a new form of production agriculture in the area. The state government has liberalized funds that promise to assist the producers who are interested in a new form of production of close to 6,400 hectares of land. All of the 400 producers that work with the project are eligible for the funds.

Increase in funds from Government of Mexico: $40,000
Each cacao producer that owns at least one hectare of land received $1,000. This money is used to assist the cacao industry. Due to the volunteer interventions of the group from M&M Mars, Michael Evnin and John Burstein, the cacao producers were able to portray an increase in quality production, therefore making themselves the best candidates for grants from the Mexican Government.

Increase in grants from the Canadian Embassy: $8,300
Farmer-to-Farmer volunteers assisted the growers in receiving grants for certification, inspection, and packing material for the chocolate. Volunteers Harriet Behar, Gerardo Gonzalez and Arturo Jimenez assisted the producers in organic certification, legalization and export/import, allowing them a chance to receive this type of grant from the Canadian Embassy.

Increase in funds received from the Dutch Embassy: $6,000
Funds were received to improve the environmental conditions of the cacao fields. Due to the fact that many of the producer groups were close to receiving organic certification, the Embassy provided them with this grant.

Total Economic Impact $1,388,560

Attachment A

PROGRAM MONITORING TABLES
TABLES I-X

FTF Program Inputs and Outputs

Land O'Lakes has implemented our FTF tracking database to collect, store, and report the information contained in these tables. In a few cases, we were not tracking this information but have introduced new procedures to gather this information.

Table I.1-Annual Volunteer Inputs

	FY 00	FY 01	FY 02	FY 03
A. Total LOP number of volunteers	31	85	110	124
Male	26	71	87	98
Female	5	14	23	26
B. Annual number of international FTF volunteer trips	36	71	33	18
C. Annual average cost per volunteer day	$734	$444	$861	$1,427[1]
D. Annual estimated value of FTF volunteers' professional time	$129,595	$301,893	$151,813	$101,050

[1] The high 'cost per volunteer day' reflects the low number of volunteer days so far this year. We expect the average for the year to be below our average volunteer cost per day for LOP of $798.

Table I.2-Cumulative Number of Volunteers and Assignments by US State of Origin

		Cumulative Number of Volunteers						Cumulative Number of Volunteer Assignments					
		Previous Total		This Period		New Total		Previous Total		This Period		New Total	
Regions	**States**	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**
Northeast													
	Connecticut		1				1		1				1
	Delaware												
	Maine		1	1		1	1		1	1		1	1
	Maryland	2				2		5				5	
	Massachusetts	1				1		1				1	
	New Hampshire												
	New Jersey	3			1	3	1	3			1	3	1
	New York	2				2		2				2	
	Pennsylvania	2	1	1		3	1	3	1	1		4	1
	Rhode Island												
	Vermont	3	1		1	3	2	3	1		1	3	2
	Washington, DC	2	2			2	2	4	2			4	2
	Subtotal	**15**	**6**	**2**	**2**	**17**	**8**	**21**	**6**	**2**	**2**	**23**	**8**
Southeast													
	Alabama	1				1		1				1	
	Arkansas												
	Florida	4				4		5				5	
	Georgia	1		1		2		1		1		2	
	Kentucky												
	Louisiana												
	Mississippi			1		1				1		1	
	North Carolina												
	South Carolina												
	Tennessee												
	Virginia	1	1	1		2	1	1	1	1		2	1
	West Virginia												
	Subtotal	**7**	**1**	**3**	**0**	**10**	**1**	**8**	**1**	**3**	**0**	**11**	**1**
Midwest													
	Illinois	1				1		1				1	
	Indiana												
	Iowa	3		1		4		3		1		4	
	Kansas			2		2				2		2	
	Missouri	1				1		2				2	
	Nebraska	2		1		3		4		1		5	
	Ohio		1				1		1				1
	Subtotal	**7**	**1**	**4**	**0**	**11**	**1**	**10**	**1**	**4**	**0**	**14**	**1**

Table I.2-Cumulative Number of Volunteers and Assignments by US State of Origin (Cont.)

		Cumulative Number of Volunteers						Cumulative Number of Volunteer Assignments					
		Previous Total		This Period		New Total		Previous Total		This Period		New Total	
Regions	**States**	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**
Upper Midwest													
	Michigan	3				3		6				6	
	Minnesota	21	5		1	21	6	24	5	2	1	26	6
	North Dakota		1				1		1				1
	South Dakota	1				1		1		1		2	
	Wisconsin	5	1	2		7	1	6	2	2		8	2
	Subtotal	**30**	**7**	**2**	**1**	**32**	**8**	**37**	**8**	**5**	**1**	**42**	**9**
Rocky Mountain													
	Colorado	6	2			6	2	7	2			7	2
	Idaho	2				2		2				2	
	Montana												
	Utah												
	Wyoming	1				1		2				2	
	Subtotal	**9**	**2**	**0**	**0**	**9**	**2**	**11**	**2**	**0**	**0**	**11**	**2**
West Coast													
	Alaska	1				1		1				1	
	Hawaii	2				2		2				2	
	California	2	2			2	2	6	4			6	4
	Oregon	5	1			5	1	5	1	1		6	1
	Washington												
	Subtotal	**10**	**3**	**0**	**0**	**10**	**3**	**14**	**5**	**1**	**0**	**15**	**5**
Southwest													
	Arizona												
	Nevada												
	New Mexico	4	2			4	2	6	2			6	2
	Oklahoma												
	Texas												
	Subtotal	**4**	**2**	**0**	**0**	**4**	**2**	**6**	**2**	**0**	**0**	**6**	**2**
other	Mexico	2				2		3				3	
	Puerto Rico	1				1		1				1	
	Holland	1				1		3				3	
	US Virgin Islands	1				1		1				1	
	Jamaica		1				1		2				2
	Subtotal	**5**	**1**	**0**	**0**	**5**	**1**	**8**	**2**	**0**	**0**	**8**	**2**
	TOTAL	**87**	**23**	**11**	**3**	**98**	**26**	**115**	**27**	**15**	**3**	**130**	**30**

Table II-Annual Volunteer Outputs

	FY 00	FY 01	FY 02	FY 03
A. Annual estimated value of resources leveraged by the grantee/volunteers in the U.S.	$8,159	$12,380	$4,405	$10,860
B. Annual estimated value of resources leveraged by the host in host country	$11,887	$45,695	$16,637	$531,939
C. Annual estimated value of resources mobilized by Host	$0	$0	$0	$3,460
D. Annual total number of direct beneficiaries of FTF volunteer assistance	486	980	1,001	956
Male	425	639	630	453
Female	61	341	371	503
1. Annual number of persons receiving direct formal training (a subset of direct beneficiaries)	294	620	2,346	3,845
Male	261	379	1,316	1,177
Female	33	241	1,030	2,668
E. Annual number of Hosts who have participated in U.S. based training and exchange programs through all sources (e.g. USIA, NET, Cochran, etc.)	3	0	1	0

Table III - FTF Host Assignments Cumulative Summary

FTF Hosts	Previous Total	New Total
A. Host with a single FTF assignment	81	91
B. Hosts with multiple FTF assignments	25	32
Total number of Hosts	**106**	**123**

Table IV - Annual and Cumulative Total Number of FTF Hosts

	FY 00		FY 01		FY 02		FY 03	
Host Categories	Annual	Cumulative	Annual	Cumulative	Annual	Cumulative	Annual	Cumulative
A. Private Enterprises	1	1	25	26	13	39	11	50
B. Organizations	23	23	21	44	9	53	4	57
C. NGOs	3	3	7	10	3	13	2	15
D. Rural Financial Institutions	0	0	0	0	1	1	0	1
Total Number of Hosts	**27**	**27**	**53**	**80**	**26**	**106**	**17**	**123**

The results in **Tables V** through **IX** come from hosts who have been surveyed during this reporting period. Field staff usually complete impact surveys 6 to 12 months following the volunteer assignment. The schedule of the impact survey was based upon the expectations of the volunteers.

Table V. Hosts with Improved Business Operations as a Result of Grantee/Volunteer Assistance

	FY 00			FY 01 Hosts Assessed			FY 02			FY 03		
FTF Hosts	Hosts Assessed	Hosts Impacted	% of Hosts Impacted	Hosts Assessed	Hosts Impacted	% of Hosts Impacted	Hosts Assessed	Hosts Impacted	% of Host Impacted	Hosts Assessed	Hosts Impacted	% of Host Impacted
A. Number of hosts providing new or improved products and/or services.	7	7	100%	3	3	100%	27	24	89%	21	18	86%
B. Number of hosts with production increases over pre-assignment levels.	4	4	100%	6	6	100%	21	19	90%	21	19	90%
C. Number of hosts with increased business efficiency or resource conservation.	3	3	100%	2	2	100%	22	20	91%	15	14	93%
D. Number of hosts receiving increased revenue/resources through increased sales receipts as a result of grantee/volunteer intervention.	6	6	100%	6	6	100%	15	13	87%	18	13	72%
E. Number of hosts with increased profits.	7	7	100%	8	8	100%	15	14	93%	21	19	90%

Note: Numbers in FY 00 and FY 01 Hosts Assessed columns were not reported prior to impact, due to previous data collection methods.

Table VI. FTF Hosts with Improved Organizational Capacity as a Result of Grantee/Volunteer Assistance

	FY 00			FY 01			FY 02			FY 03		
FTF Hosts	**Hosts Assessed**	**Hosts Impacted**	**% of Host Impacted**	**Hosts Assessed**	**Hosts Impacted**	**% of Host Impacted**	**Hosts Assessed**	**Hosts Impacted**	**% of Host Impacted**	**Hosts Assessed**	**Hosts Impacted**	**% of Host Impacted**
A. Number of organizations formed as a result of grantee/volunteer intervention.	1	1	100%	1	1	100%	7	6	100%	5	4	80%
B. Number of hosts using new or improved planning techniques, program methodologies and/or management practices, including the use of a business plan or a strategic plan.	7	7	100%	2	2	100%	22	19	86%	14	14	100%
C. Number of hosts with increased revenue/resources through new grants and/or increased fees.	2	2	100%	0	0	0%	11	9	86%	9	8	89%
D. Number of hosts that have increased their membership as a result of grantee/volunteer interventions.	3	3	100%	1	1	100%	9	8	89%	12	12	100%

Table VII - FTF Hosts with Improved Services to Membership/Employees as a Result of Grantee/Volunteer Assistance

	FY 00			FY 01			FY 02			FY 03		
FTF Hosts	**Hosts Assessed**	**Hosts Impacted**	**% of Host Impacted**	**Hosts Assessed**	**Hosts Impacted**	**% of Hosts Impacted**	**Hosts Assessed**	**Hosts Impacted**	**% of Hosts Impacted**	**Hosts Assessed**	**Hosts Impacted**	**% of Hosts Impacted**
A. Number of hosts that have successfully intervened on behalf of members with government or business.	1	1	100%	3	3	100%	10	8	80%	9	9	100%
B. Number of hosts with new training courses or new subject matter for courses to use with membership or associates.	0	0	0%	0	0	0%	7	6	86%	12	12	100%
C. Number of hosts with improved training materials and skills.	0	0	0%	0	0	0%	10	9	90%	12	12	100%

Table VIII - FTF Host with Improved Financial Services to the Agricultural Sector as a Result of Grantee/Volunteer Assistance

	FY 00			FY 01			FY 02			FY 03		
FTF Hosts	**Hosts Assessed**	**Hosts Impacted**	**% of Hosts Impacted**	**Hosts Assessed**	**Hosts Impacted**	**% of Hosts Impacted**	**Hosts Assessed**	**Hosts Impacted**	**% of Hosts Impacted**	**Hosts Assessed**	**Hosts Impacted**	**% of Hosts Impacted**
A. Number of Hosts with an increased number of agricultural related loans	0	0	0%	0	0	0%	2	2	100%	1	1	100%
B. Number of Hosts with loan delinquency rate < 10%	0	0	0%	0	0	0%	1	1	100%	0	0	0%
C. Number of Hosts that provide improved banking services to the agricultural sector												
1. Number of Hosts with an increase in average loan size	0	0	0%	0	0	0%	0	0	0%	0	0	0%
2. Number of Hosts with an increase in Producer Portfolio Value (ag production and processing loans)	0	0	0%	0	0	0%	0	0	0%	0	0	0%
3. Number of Hosts with an increased number of Branches/Groups	0	0	0%	0	0	0%	1	1	100%	0	0	0%
D. Number of Hosts with an increase in Enterprise Portfolio Value (microfinance loans)	0	0	0%	0	0	0%	0	0	0%	0	0	0%

Table IX - FTF Hosts with Improved Use and/or Protection of the Environment as a Result of Grantee/Volunteer Assistance

	FY 00			FY 01			FY 02			FY 03		
FTF Hosts	**Hosts Assessed**	**Hosts Impacted**	**% of Hosts Impacted**	**Hosts Assessed**	**Hosts Impacted**	**% of Hosts Impacted**	**Hosts Assessed**	**Hosts Impacted**	**% of Hosts Impacted**	**Hosts Assessed**	**Hosts Impacted**	**% of Hosts Impacted**
A. Number of Hosts adopting one or more practices to improve waste or pollution management.	0	0	0%	0	0	0%	6	6	100%	2	2	100%
B. Number of Hosts adopting one or more practices to improve natural resources management (soil, water, forest, grazing lands, national park land, etc.).	3	3	100%	3	3	100%	11	9	82%	2	1	50%

Table X - Increased Awareness in the U.S. Agricultural Sector Concerning International Agricultural Development

Indicators	FY 00	FY 01	FY 02	FY 03
A. Number of FTF volunteers who have performed public outreach activities.	4	8	7	43
B. Number of media events by implementors and FTF volunteers.	9	4	15	38
C. Number of group presentations by implementors and FTF volunteers.	6	6	6	61

Newspaper and Newsletter articles received in the past six months are included in **Appendix C**.

Attachment B

SEMIANNUAL FINANCIAL SUMMARY

Attachment C

NEWSPAPER ARTICLES

Carl and Juliet Duncan, a husband and wife team, grows mushrooms at home in St Andrew

US experts advises Jamaica on mushrooms

JAMAICA is seeking to expand its mushroom production and a US expert was in the island recently talking to local farmers on the issue.

Mickey Foley's visit was made possible by the United States Agency for International Development (USAID) under its Farmer to Farmer programme, and according to Mushroom Growers' Association president, Harold Graham Foley made a number of worthwhile suggestions on how to use improved technology in mushroom cultivation.

He visited almost all of the mushroom farms, Graham said. Currently there are five active mushroom farmers in Kingston and St Andrew and St Catherine.

Graham is confident of Jamaica's capacity to grow the delicacy.

"The business is lucrative but there are a lot of problems such as farmers not getting the quality substrate, especially the grass, which we require and that could lead to contamination of the mushroom," he said.

Jamaica produces about 5,000 kilos of mushroom annually, less than two per cent of the what is consumed here

"Jamaica's production is just a little drop in the bucket. The industry needs financing from the Government as most of the effort is private," Graham told the *Jamaica Information Service*.

The Journal Lifestyle Sunday, January 5, 2003 1C

Wayne Schoper visits Vietnamese Dairy Farms

Land O' Lakes project makes history

By FRITZ BUSCH
Journal Staff Writer

SLEEPY EYE — University of Minnesota Agriculture Extension Educator Wayne Schoper became the first American to visit Vietnamese dairy farms earlier this year.

The trip was an enlightening experience for Schoper to say the least.

For starters, such a trip is not for the faint-hearted. After a 12-hour flight to Tokyo with a 2-hour layover, Schoper flew 6 hours to Bangkok, Thailand and 2 more hours to Ho Chi Minh City, (formerly Saigon, South Vietnam).

The country has about 75 million people officially, and about 100 million total since a good share of the people are never counted, Schoper said.

Besides the Vietnamese, the country's population includes 1.25 million Tay, 1 million Thai and Chinese and 900,000 Khmer. Ho Chi Minh City has nearly as many people as the state of Minnesota, more than 4 million. Hanoi has 1.5 million people and Haiphong has a little more than 1 million inhabitants.

Schoper said just about every square inch of the country is planted, much of it with rice. Most Vietnamese are farmers. Corn is often planted on one side of a mountain and coffee on the other. Spices and rice are other major exports.

Vietnamese milk consumption is among the lowest in the world. Land O' Lakes Dairy is addressing the issue by helping create a school milk program.

North and South Vietnam were unified in 1976. Government leaders call the country a republic but it is tightly controlled by the Communist Party. The 496-member National Assembly meets twice a year to endorse laws and policies made by the Communist Party.

Nonetheless capitalism is alive and well in Vietnam with many thriving small businesses.

Schoper found very few automobiles or Sport Utility Vehicles in Vietnam. Only the wealthy, which is a very small percentage of the population, owned cars. Most Vietnamese travel on bicycles or on small moped motorcycles in short sleeve shirts in the 95-degree daytime temperature that didn't drop much at night.

Schoper, who is a much larger man than most Vietnamese people, said he got lots of attention in rural areas because he was often the first American people ever encountered.

Standing taller than six feet and weighing more than 200 pounds, he towered over the Vietnamese. In fact, he dwarfed them.

"Vietnamese, which are very petite and usually 5-4 or 5-5 tall, would come up to me and touch me to see if I was real I guess, Schoper said. "They were amazed at how much bigger I was than most of the men there. They treated me like a celebrity."

He saw many French tourists but very few Americans. Schoper found lots of evidence of the Vietnam War , old bombs and rockets in a museum, old bomb craters, parts of B-52 bombers, U.S. Army tanks, helicopters, jeeps, anti-aircraft weapons.

Vietnam's version of a war memorial featured the names of hundreds of thousands of Vietnamese that died in the war. Schoper was not allowed to enter the memorial.

He was offered the chance to tour a tunnel that was built during the Vietnam War but declined.

"I just wasn't made for that small space," Schoper said.

Another exhibit showed the damage Agent Orange (a defoliant) did. There is still lots of negative propaganda about the war but it didn't keep the Vietnamese from befriending Schoper.

He admitted it was a bit traumatic to talk to them about the Vietnam War. They have forgiven us for the war but haven't forgotten it. Still, most Vietnamese want to move on and join the world market, Schoper said.

He was very impressed with the work ethic of the Vietnamese.

"They'll work circles around most people," Schoper said.

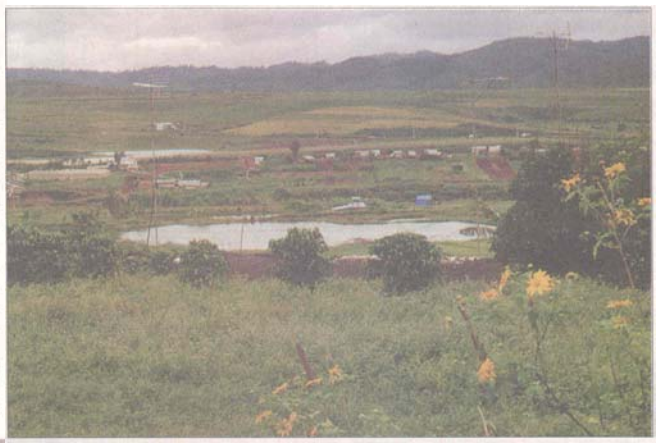
Just for kicks, literally and figuratively, Schoper spent some of his spare time firing an M-16, a high-powered American rifle used in the Vietnam War.

The People's Army of Vietnam has 1.1 million members. A small navy, air force and paramilitary force serves as the militia and defends borders.

Dong is the basic money unit in Vietnam. An American dollar was worth 1,500 dong. Gasoline

Submitted photos

A Vietnamese farmer prepares a bag of seed.



costs $4 per gallon.

Bargains were found elsewhere. A good meal outside large cities could be purchased for $1.50 to $2 in American money. Motel rooms in rural areas cost about $10 per night.

Schoper admitted he lost weight in the heat and humidity of Vietnam but he never got sick. He often washed his hands.

The national beers , Hanoi, Saigon and Tiger beer were among his favorites.

Among Schoper's favorite hangouts in Ho Chi Minh City was a German restaurant with a micro brewery that sold beer for .30 cents per liter.

Pickled snake was a Vietnamese delicacy he didn't try. A typical Vietnamese breakfast and lunch included rice and soup. Very little meat is consumed in Vietnam, he said.

One thing that bothered Schoper about the visit was seeing Vietnamese farmers spraying chemicals without wearing any protective gear.

While many farmers feed their dairy herds chopped elephant grass, which is similar to American ditch hay. Schoper introduced the idea of feeding cows pelletized corn and soybean meal.

Obsolete American farm implements like 4 and 6-row equipment would be beneficial in Vietnam, according to Schoper.

He sees a huge market for soybean meal and seed in Vietnam. In return, the Vietnamese could export things like spices including ginger root, coffee and rice.

Schoper was glad he made the trip.

"Overall, it was a fantastic experience," Schoper said. "I learned so much more than I left behind. The Vietnamese were very open and responsive to me. They often offered me tea and wanted to talk about America, especially in rural areas. They are very eager to make sure I was comfortable and happy."

Among his main points to Vietnamese farmers was to help them improve dairy herd nutrition with better feed and more vaccinations.

Schoper's visit, taken on his own vacation time, was paid for by the Land O' Lakes International Dairy Project.

Above: Schoper poses with several Vietnamese farmers and agriculture officials.

Right: Schoper toured farmland, some of which he considered lush.

Building the Dairy Business...Abroad

The Farmer-to-Farmer Program sends volunteers to underdeveloped countries to grow and improve agricultural businesses

■ **Contributed by** *Donna Rosa*

This is a story about a city girl on a dairy farm, and not just any ordinary dairy farm, but one in South Africa, and one in need of some friendly business support. It's about the journey from New Jersey to South Africa, about helping and sharing, and working and caring. And about the realization that running a little farm on another continent is not so different from managing a large business here in the United States.

A few months ago I didn't know which end of the cow got milked. Today I know more than I care to about mastitis and manure and teat dips. That bit of enlightenment was part of a bale of learning obtained through a volunteer project offered by Land O'Lakes Inc., Arden Hills, Minn.

About the program

The United States Agency for International Development (USAID) funds the Farmer-to-Farmer Program, which is administered by Land O'Lakes and other organizations. The program is responsible for sending experienced volunteers to farms in underdeveloped countries, to grow and improve agricultural businesses in a sustainable fashion.

Land O' Lakes operates in Jamaica, Mexico, South Africa, Malawi, Nigeria and the former Soviet Union. The projects are not just about dairy, though. They include alternative crops, environmental protection, cooperative development, genetics, processing, marketing, livestock, business development, aquaculture and financing.

■ **Ikwezi Farm Enterprise is located in Umtata, a small farming community 174 miles west of Durban, South Africa.**

How did I wind up on the Dark Continent? In late 2002, I'd been thinking about doing some volunteer work, and promised myself that after the first of the year I'd start scouting around. On December 30, an email from Land O'Lakes popped into my inbox, asking if I'd be interested in a volunteer assignment in South Africa (I'd contacted them earlier that year). It was a sign. It was fate. It was a really cold winter in New Jersey, and 80°F sounded pretty darned good.

■ **The farm had 56 cows and automatic milking machines. The company also purchased a lot of the milk it further processed from a neighboring farm.**

I was so ready, but for what? I had no idea.

Getting acquainted

My assignment was in Umtata. Where is that? I located it in my atlas, about 175 miles south of Durban. At least it was on the map!

I was sent travel details, country information and background on Ikwezi Farm Enterprise. They needed general management support, planning and training. I could help with that, but I knew this would be unlike other jobs and consulting engagements I'd had previously. I asked for a sample report from another assignment and contacted

Could You Be One of the Few, the Proud, the Sweaty?
The Farmer-To-Farmer Program needs volunteers with all kinds of expertise—food technology, HACCP, distribution, operations, agriculture, business development, marketing, management and more. Assignments are typically 2-3 weeks, and all expenses are paid. A report is required upon completion. For more information, visit www.landolakesidd.com to view available assignments.

Inside the News

← ■ Modern pasteurization equipment ensured a safe milk supply.

■ These local women worked on the farm. Not only did they milk the cows, they also did all the cleanup. The drums are used to store amasi, the regional cultured milk.

its experienced volunteer. That was a good move, and I felt a lot more comfortable. After some immunizations and a very long flight, I found myself at the very bottom of Africa.

Mandisa Ntlabati, the smiling coordinator for the region, greeted me at the airport. The 80°F turned out to be more like 95°F, but at this point, it did not matter. There was no turning back, and the following day we set out for Umtata.

There I was introduced to the farm manager, Irvine Nyoka, and I was to spend the next two weeks working for him. I surveyed the 56-cow, 7-person, 70-hectare farm and wondered what the heck I was doing there. I jumped right in. Then I looked down at my fashionable gold (N.Y.C.-department store) sandals that were now caked in manure and figured I had a thing or two to learn.

This was the largest farm in the area, and it had onsite processing facilities. It had automatic milking machines, a pasteurizing line and a cold room to make amasi, or maas, a local cultured drink. Most of Ikwezi's 500 liter per day output was made from purchased milk.

The farm was recently purchased by the local municipality, with the intention of eventually transferring ownership to the workers and the community. It was a solid business, and Irvine was an entrepreneur in his soul. He had smarts, good instincts, the ability to run a farm and a deep, intense burning to make it work. He would do whatever it took, including asking for help—and that was me!

Where do I start?

Irvine had a lot going for him, including funding, a healthy herd, room for expansion, steadily growing production and plentiful raw material supply. The basics were there; all I had to do was fill in the holes so there would be a solid foundation.

It was like putting together a giant 3-D puzzle, and it wasn't easy to work on a laptop in scorching heat with dive-bomber flies landing on me. The records consisted of a pile of handwritten invoices, some bills and a payroll journal. No daily production records. No quality control testing, in or out, or any production costs. There were no monthly income or expense logs, and certainly no air freshener.

I set up some sales and expense spreadsheets in Irvine's newly acquired computer, in order for him to keep track of what's coming in and what's going out. I also made an invoice template that would calculate totals, and a payroll spreadsheet that streamlined the weekly payroll.

But there were bigger issues. The workers did not understand who owned the farm, who they worked for and that eventually they would be owners—facts that should make morale and productivity high, but unfortunately, they were low. And Irvine had no backup. As if that wasn't risky enough, he had only three customers, one of whom represented 98% of his business—and it was very low margin. Even worse, that customer was a competitor—another dairy. This situation had to be handled carefully.

Luckily, there was another volunteer working in the area who had production and farming background. I asked him to come out to Ikwezi for a technical opinion, and his expertise proved quite valuable. He verified that the farm could easily produce value-added products such as yogurt and butter. He had a number of other terrific operational suggestions as well. Irvine originally planned to expand through addition of pigs, chickens and vegetables, but he liked our suggestion of further-processed dairy products much better.

The outcome

After just two weeks, Irvine had basic record keeping, a production/sales analysis, suggestions for a better organizational structure (an assistant), a new strategic direction, an understanding of the need to broaden the customer base and recommendations for follow-up volunteers to help with production, market development and labor issues. Efficiency improved dramatically. I could not address all the larger issues in the two weeks I was given, but more help in the form of additional volunteers would follow. My numbers indicated that he was close to breakeven, a remarkable feat after only four months of operation.

When the assignment was completed I felt as though I experienced South Africa, not just visited it. I got just as much out of it as the farm did. Now let me tell you about Latvia….■

Donna Rosa is a business management/marketing consultant with 20+ years in the food industry. Her international experience includes a 2.5 year stint in Europe and a project for the United Nations. She is not afraid to go where no Manolo Blahniks have gone before. She can be reached at donna_rosa@hotmail.com.

The Saigon Times Daily

January 27, 2003

LENGTH: 139 words

HEADLINE: U.S. FARMER COMES TO HELP LOCALS

BYLINE: Hong Van

BODY:

(SGT-HCMC) A U.S. veterinarian arrived in HCMC late last week to help local farmers with advanced cow-raising techniques, the second expert coming to Vietnam under an agricultural assistance program.

Walter Edward Hylton, the owner of Hy-Hill Farm in Virginia, is now working with farmers in the outlying districts of Cu Chi and Hoc Mon in two weeks under the program Farmer to Farmer launched by the U.S.-based **Land O'Lakes,** Inc.

According to **Land O'Lakes,** the 58-year-old volunteer will work at the agricultural co-operative Nguyen Van Lich, the cow farms Sao Mai, Tan Phat Thinh, and two farms in Cu Chi's Trung Lap Thuong Commune and Hoc Mon's Xuan Thoi Thuong Commune.

Hylton, who used to work as a college lecturer in veterinary medicine in Canada, will also instruct three veterinarians from Vietnamese companies.

JOURNAL-CODE: FSGT

LOAD-DATE: January 27, 2003

Resident relishes raising rabbits

Carl Summerall says they have great economic potential.

By AMANDA KOONCE
SENTINEL CORRESPONDENT

He's called the "rabbit ambassador," and his mission has gone global.

Carl Summerall of Astatula is a vocal proponent of the value of rabbits for food and profit. The longtime Lake County resident has served as superintendent of the Lake County Fair's rabbit show for the past 20 years and devoted much of his time to touting the benefits of the oft-overlooked rabbit.

He was recruited by Land O'Lakes Inc., a dairy company that produces cheese, butter and other dairy-based products, to be part of its international Farmer-to-Farmer program, where he visited the Commonwealth of Dominica.

The people of Dominica, an

PLEASE SEE **RABBITS, H9**

COURTESY OF CARL SUMMERALL

Bunny business. Carl Summerall (right) instructs Eldon Nicholas of Dominica in rabbit care.

Orlando Sentinel
OrlandoSentinel.com
SATURDAY, NOVEMBER 23, 2002

COURTESY OF CARL SUMMERALL

In the Caribbean. Nelson Smith (left) and Eldon Nicholas of Dominica check the rabbits in their cages.

Rabbits could boost economy

RABBITS FROM H1

eastern Caribbean island located between Guadeloupe and Martinique, have traditionally farmed bananas, but the sloping, volcanic terrain of banana plantations has made harvesting difficult and expensive.

The national government is now looking for ways to boost Dominica's struggling economy.

Summerall spent three weeks recently touring the nation of 71,000 people, visiting rabbit farms and conducting seminars on how to make rabbit meat production a more profitable enterprise on the island.

"The people of Dominica are the friendliest people I have ever met," Summerall said of the farmers and villagers.

His primary focus was in the southwestern village of Cochrane, where the population of 250 people already had begun raising some rabbits.

The seminars included information on the nutritional value of rabbit meat as well as how raising rabbits can supplement a family's food supply and income.

He instructed villagers on the rabbit breeds most appropriate for meat production, their care and maintenance, breeding programs, proper feeding diets and the importance of record keeping.

Hands-on workshops included construction of wire rabbit cages, slaughtering for food and cooking the meat on a charcoal grill.

Summerall delivered a presentation to a 4-H group in the village of La Plaine, where members already had experience raising rabbits as annual projects.

He said the most significant factor holding back efficient production of rabbit meat in Dominica is the absence of an affordable, high-quality pellet feed.

Rabbit farmers on the island feed the rabbits native grasses and vines that contain more water and fewer nutrients than the pellet feed, so rabbits that traditionally take eight weeks to mature are taking up to 12 weeks to become ready for slaughter.

Summerall addressed the feeding situation during a television interview in the capital city of Roseau, and he also met with Raymond Austrie, Dominica's permanent secretary for the Ministry of Agriculture and the Environment.

The two also discussed the potential of the country breaking into overseas markets selling rabbit meat.

Summerall said he thinks a return trip might be planned next summer to see whether his recommendations were implemented.

Summerall visited some of Dominica's sights during his trip, including Trafalgar Falls, Emerald Pool, Freshwater Lake, Fort Shirley and Middleham Falls.

Land O'Lakes Inc. sought Summerall out for the assignment after noting his membership in several organizations dedicated to rabbit raising.

The retired Howey-in-the Hills police chief is currently first vice president of the Lake County Fair Association and remains active in rabbit showing. He has been named an official "rabbit ambassador" by Purina Mills Inc.