

DISCUSSION PAPER ON SUSTAINABLE AGRICULTURE IN CUBA

(LESSONS FOR CANADA)

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Global problems of urbanization, soil degradation and a reduction in economic returns to primary producers have created the need for a new approach to agriculture.

Cuba's situation provides many lessons, although not a complete picture. Canada's farmers have complementary skills in many areas that Cuba does not. Cuba's leadership in organic crop production is of great interest to Canadian farmers and Canada's expertise in livestock production (in particular dairy production) is of great interest to Cuba's farmers. There is a need to bring sustainable agriculture lessons from Canada to Cuba and visa versa.

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CANADIAN CONTEXT

Beginning with the parenthetical, when it comes to sustainable farm and food policy, lessons for Canada are critically needed.

Up until now, Canada has had a relatively free ride when it comes to agriculture. Tidy, well-run and profitable family farms were passed down from generation to generation. Be it a 4-section grain farm on the Prairies, a 300 acre dairy in Quebec, a 30 acre orchard in the Okanagan or a 200 acre spud farm on PEI – they were (mostly) all “family farms” – of a scale one hard-working farm family could run with seasonal help.

Independent suppliers and processors lined up at the farm gate. Regional dairies were healthy. Dutch-clock auctions, central selling desks and supply management strengthened producer authority with processors. The average farmer in Canada was under 50. Some sectors – like beef –were characterized by 3-5 year price cycles, but they were known and understood by the industry and easily accommodated.

Strong farmers organizations - regional Farmers' Institutes and provincial Federations of Agriculture – spoke out in defense of sound farm policy. Cross-sectoral, they gave farmers from different commodity groups a chance to stand in one room, rub shoulders and learn of each other's issues and priorities.

Farming offered an attractive lifestyle. Living and bringing up your children in communities with strong rural values. Working harder than most but having change in your pockets at the end of the day take a few weeks off in the winter and send the kids to college, confident at least one would eagerly bring back the skills to steward the farm into the next generation.

Since the mid 1980's, much has changed. Farm prices have skyrocketed in many areas. Economic concentration pre and post farm gate is rampant. Parmalat and Saputo run Canada's dairies; Parmalat is up on corruption charges. Tyson — just slapped with a \$1.2 billion penalty in a US antitrust suit —and Cargill control 70% of the meat packing industry in Canada. Washington's continued closure of the US border to Canadian beef is putting ranchers on their economic knees, and there is no end in sight. The recently announced federal support of \$80 an animal will feed that same animal for only 10 weeks, yet Ottawa refuses to invoke a NAFTA Chapter 20 panel to slap the wrists of Washington and reopen trade. In a few years, Canada's beef sector could look like Canada's pork sector – all “managers” and few “farmers” as independent decision-making exits the sector.

Economic concentration is stealing margins out of the pockets of farmers – margins that must accrue to sustainable agricultural practices if farmers are to continue to care for and respect the land.

Farmers have generally lost touch with consumers, consumers have lost an understanding of and respect for farming, and politicians have been let off the accountability hook on farm policy issues.

Like the ecological importance of riparian zones that link water and land and birth life (bio-diversity), the socio-economic importance of farm communities – which link the capacity of the countryside and the needs of the cities — must be similarly protected. Implementing good farm policy is critical to this objective, because sustainable food policy is inimical to sustainable eco-systems, sustainable economies, and sustainable communities.

In our quest for food security and sustainability, Canada badly needs role models. In this context, Cuba offers some very unique lessons.

Prior to the early 1990's, Cuba's agriculture was characterized by large-scale monoculture. With one of the highest ratios of tractors to farmland in the world, Cuba had fully adopted the so-called "green revolution" model. Yet when crisis intervened (collapse of the Soviet Union and with it an abrupt loss of farm inputs such as chemicals, machinery, gasoline, feed grains, etc.), Cuba managed to reinvent herself, becoming in one decade — virtually overnight — a world leader in organic agriculture.

How was this possible? What lessons does Cuba offer for other Latin American Countries? What lessons does Cuba offer for Canada? This paper explores these questions.

CUBA

Socio-Political Context

The Republic of Cuba is a country of 11.2 million people, the majority of who live in urban areas. Cuba's climate is tropical; moderated by trade winds, it has a dry season from November to April and a rainy season from May to October

Cuba is a stable country with a high literacy rate (98% for men and women), an educated population and little evidence of corruption in its institutions and government. (See ANNEX 1 – Cuba in the World.)

Women are equally represented in the Cuban workforce. In agricultural vocational high schools, agricultural capacitation schools, colleges and universities, women are equally represented in the student body across most agricultural disciplines. Women, children and youth typically represent roughly two-thirds of farm co-op communities; women are well-represented on the boards of Cuba's CPA's, and in that role enjoy strong decision-making capacity, particularly as related to the economic affairs of the cooperative. Women constitute an apparent 5 to 10 per cent of Cuba's farmers.

Canada's Constitution was signed on a table made from Cuban mahogany, and from that time forward, Canada and Cuba have enjoyed a long and close history (see ANNEX 1: CANADA-CUBA: 100 Years of History).

From Green Revolution to Sustainable Leadership in One Decade

Agriculture is an important aspect of the Cuban economy and society. In the late 1980's, Cuba's farm sector was one of the most highly industrialized in the world. Today, just a little over a decade later, Cuba is recognized as a world leader in sustainable, organic farming methods and in urban agriculture.

The collapse of the former Soviet Union, Cuba's major trading partner, was the catalyst in this transformation. The loss of 70% of Cuba's food supply and virtually all agricultural inputs (tractors, tractor parts, petroleum, machinery, pesticides, fertilizers, feed grains) meant Cuba had to quickly find new ways to produce food for her people.

Cuba had 5 very important things going for her that made this transformation possible:

1. Scientific capacity. Following the Revolution, the Cuban government put a priority on the development of a strong science and technology sector. Beginning in the 70's and 80's, Cuban scientists started looking for alternatives to high input agriculture to make Cuba's farm sector more economically and environmentally sustainable. As a result, Cuba had the scientific knowledge and technical capacity to develop the bio-pesticides and bio-fertilizers needed to produce food in the Special Period.
2. Smart and capable farmers: Cuba's literate and capable farmers and a national farmers organization (ANAP) that puts an emphasis on skills and knowledge transfer meant new methods were easily adopted.
3. A solid system of agricultural extension to teach farmers sustainable methods.
4. Large Cooperatives: Cuba's large agricultural cooperatives made it much easier to "get everyone going in the same direction" quickly and effectively.
5. Excellent soils, water and climate, which certainly made things much easier.

These factors, combined with the agricultural knowledge, concepts and ideas handed across generations and the persistence of the Cuban people, made the impossible possible: Just 10 years after the collapse of the former Soviet Union, in a solemn session of the Swedish Parliament in December of 1999, Cuba's Grupo de Agricultura Organica was honoured over 80 other candidates from 40 countries to receive Sweden's prestigious Right Livelihood Award (referred to as the "Alternative Nobel Prize") for world leadership in sustainable, organic farming methods and urban agriculture.

In the words of Mavis Alvarez, now-retired Founding Member of ANAP (Asociación Nacional de Agricultores Pequeños):

"Sustainable technology is difficult without sustainable economic and social structures. The transition to sustainable techniques has also been easier for Cuban farmers than in other countries because of the security bestowed by the Cuban government: land rights, access to and ownership of equipment, availability of credit, markets, insurance and free health care and education. Cuban farmers are highly organized through the formation of cooperatives with real social and economic power, and the presence of national organizations that can represent the interests of individual farmers at the state level... Property rights include not only land, but also the materials necessary for production, such as farming implements, plows, housing and other buildings as well as ownership over the harvest itself. "

Much of Cuba's production is now cooperative. Agricultural education is a high priority throughout Cuba, undertaken by universities, vocational high schools, research centres, and a strong agricultural extension system. Emphasis is placed on agro-ecology, inter-cropping, organic soil management, the production and use of organic fertilizers, vermiculture, compost and biological controls (integrated pest management), urban agriculture and the use of medicinal plants. Cuba has gone from high-input, non-sustainable, monoculture to a diversified, sustainable model that is winning international recognition in only a decade.

How did they do it? What structural changes have occurred? What has been accomplished? What institutional framework has been put in place to support this? What can we learn from Cuba's experience? What is its relevance to Canada?

Structure of Production:

Prior to the Special Period, 80 percent of Cuban land was in state farms. Today, the situation is reversed: much of Cuba's production is now cooperative; in 1998, 1.7 million hectares of privately held land were under cooperative management by 231,409 members of Agricultural Production Cooperatives and Credit and Service Cooperatives.

In 1996, there were over 750,000 Cubans employed in agriculture as professionals, technicians, farmers and workers. As of 1998, there were:

- 1,139 agricultural production cooperatives (CPA's) with more than 63,000 members covering some 710,000 hectares (16% of total farmland),
- 2,578 credit and service cooperatives (CCS) with 168,484 members covering just less than one million hectares (22% of total farmland).
- 1,612 UBPC's (former state farms turned into worker cooperatives under the Agricultural Reform Act of 1993) with 272,407 members covering an estimated 1.5 million hectares (33% of the land).
- Lands held in special (usufruct) tenure but farmed cooperatively to produce coffee and tobacco account for a further 3%.

Organic Farming Practices¹

Cuba's success in large-scale organic agriculture has been achieved (and is maintained) through the widespread adaptation of sustainable farming practices including:

Organic fertilization and soil conservation. The use of organic and biofertilizers have allowed substitution of organic methods for chemical fertilizers to meet the nutrient requirements of crops previously met through external inputs. The use of manure, sugarcane byproducts (cachaza), organic fertilizers, compost, bioearth, worm humus, residues from sugarcane collection centres (biomass), waste water, cover crops, mulch, biofertilizers and other materials produce higher yields and improve soil cover, dry matter content, and soil properties.

Ecological management of pests, disease and weeds Elimination of pesticide use is one of the most difficult tasks in a conversion to organic farming practices. The research into bio-pesticides developed by the Cuban Ministry of Agriculture's National Plant Protection Institute (INISAV) is made available to farmers through the creation of a national network of 280 Centres for the Production of Entomophages and Entomopathogens (CREEs) which manufacture and distribute biocontrol agents suited to local crops and conditions. CREEs are positioned according to local needs and have work teams comprised of university-educated specialists, lab technicians and auxiliary staff. The products are sold directly to area farmers, reducing transport and storage needs. Production is highly diversified and specialized by region.

Livestock Management The loss of imported feed grains at the beginning of Cuba's Special Period resulted in sharp production cutbacks in Cuba's livestock production sector. Strong advances in crop rotation and polyculture have been employed to improve soil coverage and quality, control harmful pests and diseases and increase production. Successful use of legume-based livestock systems, silvo-pastoral and integrated crop-livestock systems have resulted in significant and sustainable increases in dietary protein. Bio-controls are used to treat mites and other insect pests.

Crop Management Presently, one million hectares (20% of Cuba's total farmland) are protected by the application of biological controls. Much of this land is in vegetable, tropical vegetable and fruit production. Most of Cuba's 32,000 hectares of citrus and tree fruits are managed organically. Organic production methods are being tested in sugar and coffee (4,500 hectares), cocoa, coconuts, pineapple and mango production. Crop rotations are used to reduce soil pathogens. Intercropping and the use of crop associations are widely used to keep pest populations low and to reduce disease and weeds; common are corn-bean and cassava-bean associations but more complex planting such as corn-squash-sweet potato-beans-cucumbers are also common. Integrated pest management programs are in place for 27 crops, controlling a total of 74 insect and mite pests and several fungal diseases.

Ecological Soil Management Organic techniques such as the use of living barriers, ground cover with locally adapted pasture species, contour plowing and conservation tillage systems are used to manage, conserve and recover compacted, salinized, eroded and otherwise degraded soils.

Urban Agriculture In the early 1990's, in response to food and petroleum shortages, Cuba made a major commitment to the production of food in cities, or urban agriculture. Today, organoponicos (raised bed organic vegetable production), intensive vegetable gardens, backyard and roof gardens, small (2-15 hectare) suburban farms and the self-consumption gardens of large enterprises, institutions and government offices together contribute an estimated 90 percent of the fresh produce consumed in Havana. The production goal for Cuba's urban agriculture sector is 1.4 million metric tons per year to meet the national nutritional goal of 300 grams of fresh vegetables per person per day. Key issues in the development of urban agriculture are conservation and management of soil fertility and integrated pest and disease management. Cuba is investigating the introduction of rabbits in urban agriculture models.

Green Medicines In 1992, organized production of medicinal plants began in Cuba. Today, there are 13 provincial farms and 136 municipal farms producing organic green medicines on 700 hectares of land. Cuba's current annual production of medicinal plants and of herbs and plants used for dyes is 1,000 tons and growing.

Institutional Framework

Cuban NGO's play an active role promoting projects that incorporate sustainable agriculture principles – for example increasing the efficiency of energy utilization, making the best use of local inputs, improving livestock nutrition and herd management, conserving biodiversity, reducing the use of chemical fertilizers, implementing low-input agricultural practices, producing quality seed, promoting the preparation and application of bio-fertilizers and bio-pesticides, rescuing traditional agricultural practices, and revaluing the family farm economy.²

The following are the lead NGO's in the agricultural and food security sector:

ACTAF (Cuban Association of Agricultural and Forestry Technicians) is an umbrella organization that coordinates the efforts of all groups and professionals having to do with crop production and/or forestry matters.

ACPA (Cuban Animal Production Association) is an umbrella organization that coordinates the efforts of all groups and professionals having to do with animals.

GAO (Organic Farming Group) an organization of Cuban scientists and professors formed in 1993 (through the leadership of the Ministry of Higher Education), which had as its founding principles:³

- To develop a national consciousness of the need for an agricultural system in harmony with both humans and nature, while producing sufficient, affordable and healthy food in an economically viable manner;
- To develop local agroecological projects, and promote the education and training of the people involved;
- To stimulate agroecological research and teaching, and the recovery of the principles on which traditional production systems have been based;
- To coordinate technical assistance to farmers and promote the establishment of organic and natural agricultural production systems.
- To encourage the exchange of experiences with foreign organizations (emphasis on Latin American tropics and sub-tropics) and with specialists in sustainable agriculture and rural development;
- To promote and publicize the importance of marketing organic products.

CEAS The Centre for the Study of Sustainable Agriculture is part of the Agrarian University of Havana (UNAH). Since 1998, the National Training Centre and CEAS have supported the Agroecology and Sustainable Rural Development Chair at the University of Havana for professors committed to sustainable agriculture. The impact of this program is multiplied through the national network of research institutions, and the farms and cooperatives that provide practical and demonstrational points of reference.⁴

FMC The Federation of Cuban Women places a high priority on promoting the role of women in community decision-making with respect to food security. Cuban NGO projects are focused on increasing employment possibilities, improving access to information and promoting a greater participatory role in the family.

ANAP - National Association of Small Farmers

Probably the most important and powerful of Cuba's agricultural NGO's, ANAP (Asociación Nacional de Agricultores Pequeño⁵ Cuba's National Association of Small Farmers) represents the cooperatives and individual farmers that make up the non-state-sector. ANAP provides organizational and productive support for training, promotion, marketing, international cooperation and the preservation of Cuba's farming traditions, experiences and culture.

ANAP has been representing the interests of Cuban farmers since 1961.

In 1993, following the collapse of the former Soviet Union, ANAP turned to international NGO's to help support their educational and training programs. Today, ANAP collaborates with more than 50 NGO's from more than 20 countries.

In 1996, ANAP began developing models for North-South-South cooperation (triangular aid). One example is a Belgian NGO that funds an exchange between ANAP and the Uruguayan Cooperative Centre. Many NGO's in Latin America have also sought funds from northern NGO's in order to provide scholarships for their farmers to attend Cuban schools and training programs and to participate in meetings and exchanges in Cuba.

These collaborations have served to strengthen the sustainable agriculture movement by building communication and solidarity across borders.

Today, ANAP's primary goal is to encourage and develop the use of agroecological farming techniques to improve production capacity. Much of ANAP's success can be traced to its reliance on farmer-to-farmer programs for promoting ideas and techniques and has been

particularly successful in disseminating teachings from scientific and technical institutions throughout its farmer membership, Some of its activities include:

- Nationwide training programs to build capacity among small farmers, cooperative members, grassroots organizations and ANAP leaders.
- Farmer-to-farmer training programs where farmers teach other about their experiences with sustainable agriculture through direct participation and communication.
- Reorientation of the National Training Center's education and training curriculum in order to emphasize agroecological knowledge.
- Collaboration with international donors and nongovernmental organizations (NGOs) to promote sustainable techniques.
- Farmer, extension and researcher participation in regional and national networks to discuss topics related to food security and sustainable development,

ANAP combines traditional knowledge and practices with new technologies in a participatory effort that enables farmers to educate each other. The organization is broad-based and horizontal in structure. With a national headquarters in Havana, the majority of ANAP's activities are decentralized through provincial and municipal offices. Planning meetings and programs are held at regional locations appropriate to the topics discussed to ensure that meetings are comfortable, accessible and inclusive - a model of communication that has had great success in Cuba.

Through farmer-to-farmer contacts, ANAP has been able to maintain a strong relationship with its members, making it very successful in disseminating teachings from scientific and technical institutions through its national structure, allowing information to reach farmers even in the most remote areas.

Some of ANAP's training is conducted via the media. Nationwide, ANAP hosts regular programs on more than fifty radio stations, most community based. ANAP has created television shows specifically for farmers that reflect their lifestyle and cultural heritage and provide technical information and training. ANAP's magazine reports on the latest agricultural news and scientific knowledge, including theories and practices of agro-ecology. Promotional materials provide information on specific pests and diseases, biological pest controls, agroecological techniques, natural food preservation and other topics.

In the Special Period, when the economic crisis limits access to printing and publication materials, farmer-to-farmer training schools have remained the crux of all outreach efforts. ANAP's successes over fifteen years of communication and training for rural activism earned them UNESCO's International Communications Development Program Award in 1989.

In 1996, ANAP added sustainability as one of the Farmer-to-Farmer Extension Program's official goals. ANAP defines its commitment to sustainability and agroecological agriculture through three basic goals:

- To restore and promote the practices of small farmers through direct farmer-to-farmer exchanges of sustainable agricultural techniques.
- To support horizontal technology transfers through participatory methods that encourage the use of appropriate sustainable technologies.
- To conduct the research necessary to carry out successful agroecological extension, public education and appropriate technology transfers.

Education and Training in Agroecology

The National Subsystem of Agricultural Education, the National Education System, the Ministry of Higher Education, the Ministry of Agriculture, ACPA, ACTAF and ANAP all play a part in delivering the training and education that is an essential component of Cuba's success in organic agriculture.

In addition to the thousands of Cubans trained by the universities, there are tens of thousands trained by the Ministry of Agriculture and ANAP through courses, meetings, workshops, field days, talks and experiential exchanges (for example, courses given by the Institute of Veterinary medicine on traditional medicine and acupuncture for livestock).

Conferences and courses developed by ANAP have had good results. ANAP works with the Centre for the Study of Sustainable Agriculture (CEAS) a part of the University of Havana. As noted, since 1998, the National Training Centre and CEAS have supported the Agroecology and Sustainable Rural Development Chair at the University of Havana. The impact of this program is multiplied through the national network of research institutions and the farms and cooperatives that provide field trials and practical demonstrations. Every year, CEAS trains thousands of students, administrators and farmers in modern agroecological principles and techniques. ANAP is currently working to make this type of certified technical training available throughout the country by means of the decentralized training system used in their own extension work.

At the community level, the Agroecological Lighthouse Program of UNDP's Sustainable Agriculture Networking and Extension (SANE) Program has generated exceptional results working with a network of CPA's to provide specialized agroecological training programs to farm leaders. The most outstanding students join the masters program offered regionally. At the same time, training is offered to the general co-op membership and to farm workers. This training has contributed significantly to overall program success.

Agroecology is also an important part of the agricultural curriculum of Cuba's 143 polytechnic high schools throughout the country, a major expansion from the 55 that existed before the Special Period. Today, there are approximately 41,300 Cuban high school students enrolled in specialized agricultural programs focusing on organic fertilizers, vermiculture, composting, biological controls and medicinal plants. Many will go on to specialized jobs in agriculture, others will continue their studies at Cuban universities, which continue to play a critical role in the country's transformation toward sustainable agriculture.

Achievements

Through the use of sustainable organic methods, Cuba's production of vegetables and tropical vegetables now exceeds levels achieved before the Special Period. Bean production is significantly higher than a decade ago, and citrus production has recovered to 80% of previous levels. Production of rice, other fruits, milk, eggs, beef and poultry continue to lag in the Special Period,

In 1999, Cuba's urban agriculture sector alone contributed 876,000 tons of farm products, mainly vegetables, to urban communities, providing all Cubans with an average of 215 grams per day of fresh horticultural crops. (In 2003, the eleven cooperative members of El Rabinito, a national reference organopónico - one of 17 serving the city of Ciego de Avila - produced 60 kilograms of vegetables per square meter of soil.)

In December 1999, Cuba's GAO was awarded the Swedish Parliament's Right Livelihood Award ("Alternative Nobel Prize") for its work in disseminating and promoting organic agriculture.

Scientific, Technical and Socioeconomic Bases for the Development of Organic Agriculture in Cuba

How did Cuba do it? . In the words of GAO's Fernando Funes:⁶

"From the beginning of the "Special Period", the repercussions of the crisis were felt throughout the country. However, there was an immediate response, and in agricultural activity it was essential to rely on the alternatives that different research centres had been experimenting with for a number of years, as well as the possibility of recapturing the experiences of Campesino farmers who had knowledge that had been passed down by conventional agriculture. The accumulated cultural, political and technical preparation of the Cuban people, built up throughout the revolutionary period, played an essential role in helping Cuba face the abrupt change.

Thus, the Ministry of Agriculture rapidly started to apply initial research results on a large scale, in order to reduce and in some cases to offset the effects of the crisis on agriculture. Throughout the country, results obtained in decades prior to the 1990's were applied. Other ministries quickly took legal, economic and social measures, trying to adapt to the new conditions.

Soon, alternatives became realities, and as consciousness was gradually created among many farmers, technicians, researchers, professors, and officials, that it was possible to create an agriculture with a different vision. People came to believe that productive harvests could be obtained on positive cost-benefit terms, while protecting the environment and nature, without polluting soils, water and air, yet producing healthy foods without excessive energy use, and with reduced capital investment. After the beginning of the Special Period, there was a general shift in the directions of research, education and production, In this latter stage., the performance of these " new techniques" has been gradually shown to be effective in solving many critical agricultural problems. These scientific and technical activities as well as the accumulated experience of our farmers have had decisive results.

Cuba had scientific capacity. They had strong cooperatives (fly in one direction at one time). They had educated farmers. They had solid agricultural extension. And of course, they had good soils, water and climate, without which none of this would have been possible.

Perhaps the key phrase in Funes' description of Cuba was able to accomplish so much in such a short time is this: *"People came to believe... it was possible to create an agriculture with a different vision.* Government put a priority on it and because that priority reflected the interests of the farmers the capacity of the system and the sustainability of the community, it was accomplished.

Sovereign decision-making over agricultural and food policy – policy that crosses social, cultural, economic and environmental lines — has also been extremely helpful to Cuba in achieving its public policy objectives.

Infrastructure Support for the Growth of Urban Agriculture

Much of the work to create new urban solutions to issues of food security, poverty, health, nutrition and the economic and social sustainability of communities has been done in Cuba over the past decade.

The process through which they accomplished this was remarkable. And replicatable.

As explained by Dr. Nelso Companioni in *The Growth of Urban Agriculture*⁷ Cuba's National Urban Agriculture Group - comprised of specialists, government officials and urban farmers – directs Cuba's urban agriculture sector. Regional and local groups are responsible for the organization, development and regulation of urban agriculture in their zone, and the coordination between all entities and persons related to production, processing and distribution. Within each Popular Council

(local government at the neighbourhood level), a representative or agricultural delegate coordinates urban agriculture and related activities such as veterinary medicine, plant protection and biopesticide production. Different areas of responsibility are coordinated through the Popular Councils, which take into consideration the unique characteristics of local systems of production.

Within a municipality, the coordinating activities of the Popular Councils are carried out through the Municipal Urban Farm, which in addition to its coordinating role, has the infrastructure necessary to carry out technical and service activities, with the capability to gather together scientific and technical resources and farmers from different productive areas and related institutions. Typically, such centres offer neighbourhood courses to show urban Cubans how to produce food and herbal medicines from containers on their balconies.

Twenty-six administrative sub-programs attend to urban agriculture, each tied to specific topics such as vegetable production, medicinal plants, herbs, grains, fruits, the rearing of animals (hens, rabbits, sheep, goats, pigs, bees, and fish) and to the saving of seeds and the production of animal feed.

The mainstay of Cuba's urban agriculture sector is the Organoponicos, small (2 – 3 ha) food production units that dot the cities consisting of raised-bed, organic food production units that are highly productive (up to 59 kg per square metre from a "National Reference" organoponico in Ciego de Avila). Supplementing the organoponicos are intensive vegetable gardens (similar but without raised beds), small plots, patios and community gardens, workplace gardens, and "suburban farms". Agricultural production is characterized by intensive cultivation, waste recycling, efficiency of water use, and maximum reduction in agrottoxins (chemicals).

During 1999, vegetable production in organoponicos and intensive gardens provided the population with 215 grams per day per person of fresh horticultural crops (Companioni), contributing more than half of Cuba's nutritional goal of 300 grams of fresh vegetables per person per day.

According to World Sustainable Agriculture Association (Chaplowe, 1996), Cuba's community gardens have been an important component in community wellness and empowerment:

"In addition to increased food security, the gardens have also empowered many individuals and communities. They have renewed solidarity and purpose among the communities, sustaining morale during the ongoing crisis. The popular gardens have helped to build community pride; they clean up vacant urban spaces that had once been dumps, replacing these eyesores with greenery. The gardens also serve as a source of leisure, exercise and relaxation for many gardeners, a refuge where they can work with the land and reconnect with nature."

The Cuban government has developed a set of sustainability indicators against which they measure the progress of the urban agriculture sector. These are:

- Use of soil conservation methods to prevent erosion.
- Degree to which seeds and starter animals (e.g. chicks) are produced locally
- Degree to which varieties and breeds are adapted to local conditions
- Degrees of crop-livestock integration
- Local water availability and soil moisture
- Efficiency of water use
- Amount of food produced/hectare/year
- Amount of food produced per capita
- Use of integrated pest management and disease management systems
- Net profitability of production' degree of participation of farmers in training courses and extension activities.

MAKING CONNECTIONS: THE CANADA CUBA FARMER TO FARMER PROJECT

Origins of the Work

For Canadian farmers, pushing the paradigm means showing farmers new ways to add value to stewardship (large scale organics) and re-capture margins from Canada's concentrated processing sector. The shift in thinking needed to accomplish this — the "belief that it can happen" that Funes speaks of — will not occur in response to articles in newspapers, no matter how persuasively presented. Nor by television specials (Country Canada, November 2002). Farmers need to see it for themselves.

Relationship Building

In 1999, Canadian Agrologist Wendy Holm initiated an educational exchange between farm groups in Canada and Cuba. The goal was to promote a better understanding of agricultural practices in each country and explore opportunities for collaboration to enhance sustainable agricultural capacity.

The original "Project Vision" of five years ago is contained in [ANNEX 2](#). Project schematics showing the Advisory Board and project structure are presented in [ANNEX 3](#).

Over the past five years, under the Canada Cuba Farmer to Farmer Project, some 289 Canadian farmers (46% female, 54% male) have traveled to Cuba in fifteen delegations. One Cuban Delegation of 27 Cuban farmers (15% female, 85% male) was brought to Canada by the Project in 1999. [ANNEX 4](#) presents a list of the Canadian farmers who have participated in the Project.

As the Project has demonstrated, Canadian and Cuban farmers have much to learn from one another. When the Canadian farmers stand on the edges of the vast fields of Cuba, look out across beautiful crops, and meet the eyes of the Cuban farmers, the pride they see reflected back is quickly recognized for what it is, stewardship. This, in turn, generates respect and solidarity built on sustainability — a shared sense of purpose — not on politics, creating the foundation for the next phase of the work: cooperative capacity building. (And, In the case of Cuba, a bi-lateral capacity building because we each understand important parts of the puzzle each needs to figure out.)

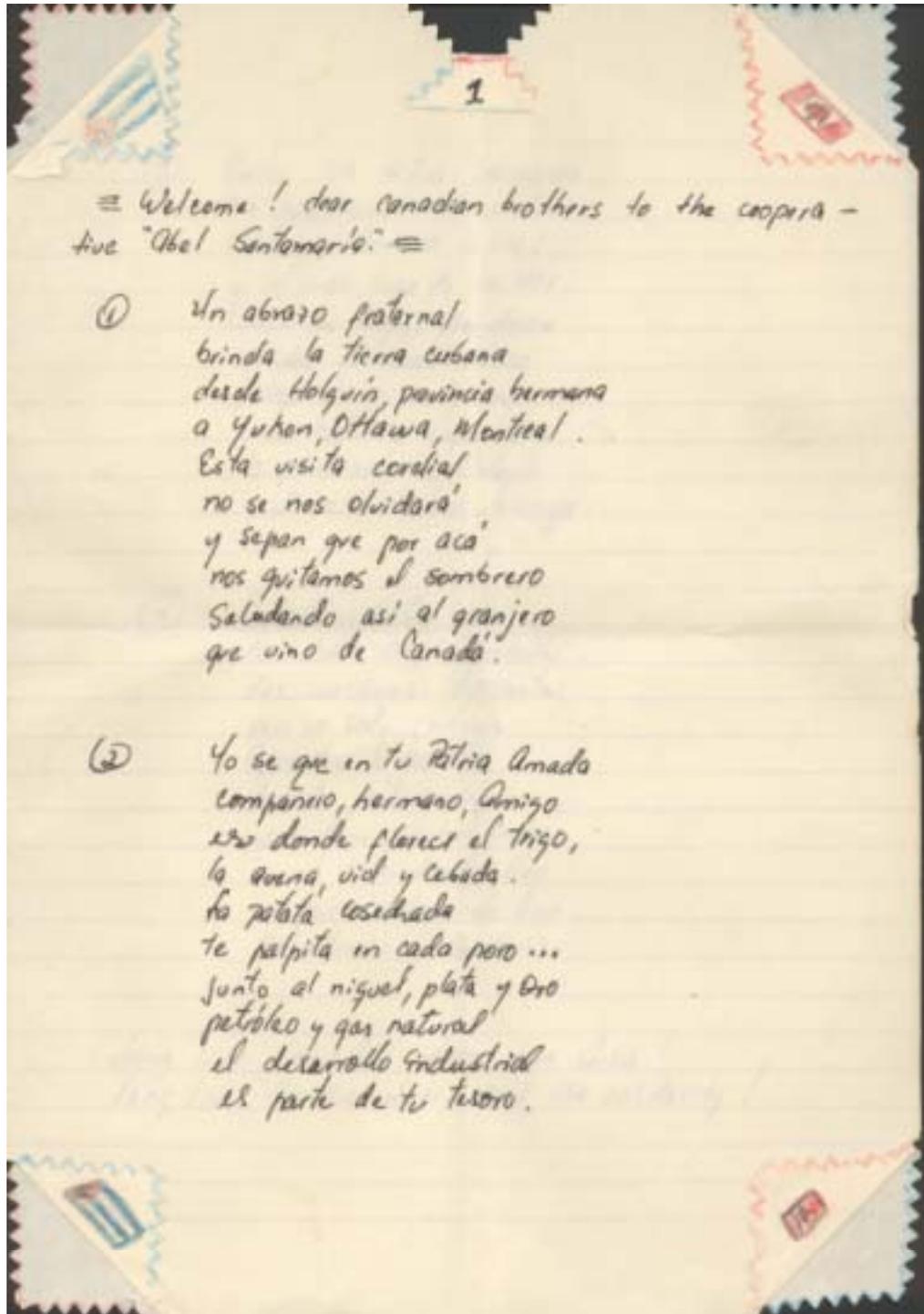
A good encapsulation of the perspectives gained by Canadian farmers when they visit Cuba is presented in the published articles of 2 Delegates, presented in [ANNEX 5](#).

Strengthening the Empowerment of Community

One of the strongest bonds within Cuba's socialist society is the bond of community. In capitalist nations, commodity has by and large replaced community as the driver of governments and their policies. Given the substantial capital required just to enter a political race, capital — and the commodification of markets that drive it — exercises inappropriate influence over politicians seeking election. The noose only grows tighter in office. This, to the detriment of community.

Strengthening community empowerment is of high priority if the goals of sustainability are to be reached. There can be no better demonstration of how this Project is contributing to an international sense of community than by sharing a story from our last (February 2004) Delegation:

We were visiting CPA Abel Santamaria, in Holguin province. We had just finished a meeting with the CPA President and were treated to a wonderful reception of local cheeses, fruits, coconut and rum. We were welcomed by a song from a wooden player organ, made in a local factory for which Holguin is famous. Then a farmer member of the co-operative stepped forward. Pinned to the front of his straw hat was a hand made paper Canadian flag. And he proceeded to read to us - with great dramatic flair - the following poem, written especially for us in Decima. (Decima is a ten line poem with an intricate rhyming pattern. Often, in the Saturday night festivals that occur in most cities outside of Havana, you will often see large crowds gathered around two men, who are verbally dueling in Decima - spontaneous poetry bouncing from one to the other, verse by verse.)



③ Entre los sitios hermosos
que admiramos día a día
Hudson y hermosa bahía!
y el gran lago de los osos.
Crean los bosques frondosos
vestidos de verde intenso
y bajo de un cielo inmenso
y un historial legendario
la península de Ontario
y el valle de San Lorenzo.

④ Canadá y Cuba son
dos solas resplandecientes
dos culturas diferentes
pero un solo corazón.
Aprovecho la ocasión
de este político impuro
para decir que mi sueño
en el sitio donde estoy
un joven cubano de hoy
Canadiense y Caribeño.

i long live Canada! long live Cuba!
long live the friendship and the solidarity!

I scrambled for a suitable response. Admitting I had no skills at Decima but felt such a beautiful poem could only be answered by a poem, I responded on behalf of our farmers:

*Farmers are the parents of the land.
We care for her fields and tend her soils
out of respect and love
that is universal.*

Farmers are farmers are farmers....

*Standing shoulder to shoulder, building respect,
we both grow stronger.
and that strength feeds and nurtures
community.*

*When our eyes meet, our hearts join
in a poem that will defeat politics,
and return justice and equity and cooperation
to the people.*

Viva Canada! Viva Cuba! Viva la Sostanibilidad Siempre!

Capacity Transfer - Dairy

Cuba has organic and urban agriculture skills to share with us, and we have animal husbandry skills to share with Cuba, the most intriguing of which is dairy.

The Cuban dairy farmers need to produce more milk for the Cuban population. After the collapse of the Soviet Union, the production of milk in Havana dropped from 320 to 60 million litres per year. In response, Cuba focused research on grass/legume relationships, adaptation and evaluation of low-input pasture varieties, minimum tillage and silvipasture and turned to the use crop by-products and harvest residues to substitute for imported inputs - sugarcane (tops and crop residues, bagasse, molasses, cachaza), rice (crop and milling residues), citrus (rinds), coffee, cocoa, coconut and kenaf.

Trials of new intensive pasture management systems (grass/legume) in Holguin close to doubled milk production (12 litres of milk per milking cow per day, up from 7 litres). An impressive increase, but still far below world standards and the needs of the Cuban people as targeted by Cuba's food policy (one litre of milk per day for every child under 12 years of age). Under very different circumstances, Canadian dairy farmers achieve production levels 4 to 5 times higher than their Cuban counterparts. Cuban farmers tend to believe that their inability to achieve better production remains rooted in their lack of access to feed grains. But Canada's farmers, who visited the trial plots of Los Pedestales in Gibara Municipality of Holguin Province, believe that if Cuban farmers could learn better herd and farm management practices, their current infrastructure would support production levels in excess of 20 litres of milk per milking (lactating) cow per day.

More milk production means better incomes for farmers and better nutrition for the Cuban people. Helping Cuba to achieve acceptable levels of pasture-based milk production offers a sustainable model for other Latin American and Caribbean countries.

If Cuba cannot increase domestic milk production capacity, imports are the only answer — milk or soy in the short term and return to a high-input, imported grain dependent model in the longer term. While environmental accounting practices are not yet up the task of providing reliable estimates of the

footprint-minimizing benefits of import substitution, it is clear that Cuba's reliance on imported milk, soy or feed grains to meet the nutritional needs of the Cuban people uses up more than scarce foreign exchange; it uses up scarce global resources (e.g. fossil fuels) — an unnecessary expense if Cuba's current experiment in sustainable livestock production methods can be proven successful with the transfer of farm and herd management skills.

Supporting production enhancements by combining new skills training with an already effective and efficient sustainable feed and pasture management system is a more environmentally sustainable solution than a return to large grain imports — which, absent skills transfer projects of this nature, will most certainly be viewed as the panacea.

Canadians are respected in the field of dairy management and the Canadians involved in the Farmer to Farmer project have been warmly welcomed. Many dairy bloodlines in Cuba are traced back to animals purchased in Canada in the 1960's and '70's. A demonstration project in partnership with Canadian dairy farmers that concretely shows a significant boost in milk production is likely to have a significant impact on herd management practices throughout Cuba.

If Cuba's low-input, sustainable livestock approach can be successfully supported by a transfer of new herd and farm management skills from Canada, this Project will have helped to birth a sustainable, pasture-based dairy production system that could serve as a model for Latin America.

Enhancing Sustainable Dairy Production Capacity in Cuba

International Centre for Sustainable Cities (ICSC) became a partner in this work in the fall of 2003. In February 2004, in response to a call for proposals from CIDA's Projects and Innovations, Environment and Sustainable Development Program, Canadian Partnerships Branch, a proposal was submitted in early February to *Facilitate an Educational Exchange Between Farm Groups in Canada and Cuba: Phase One: Enhancing Sustainable Dairy Production Capacity in Cuba*.

ANNEX 6 presents the Letter of Transmittal to CIDA from Dr. Nola-Kate Seymoar, President and CEO International Centre for Sustainable Cities to CIDA.

The Proposal is for a demonstration project in which Canadian farmers will share their expertise with Cuban farmers to enhance Cuba's milk production capacity. It is envisaged as a first step along the path of more meaningful farmer-to-farmer engagement that will have as its mandate the ethical sharing of capacity in support of sustainable farming communities, food security and the environment.

The Project's objectives are:

1. to facilitate an educational exchange between farm groups through the establishment of a demonstration project in Cuba;
2. to develop educational materials on sustainable pasture management and good animal husbandry; and
3. to distribute these materials in Cuba.

Phase One will focus on the delivery of north to south capacity building by bringing Canadian dairy farmers to Cuba teach Cuban farmers skills in dairy herd management to increase milk production capacity and to develop educational materials that will aid in the wider dissemination of herd management skills.

Enhancing Sustainable Dairy Production Capacity in Cuba has been developed in consultation with ANAP and has received the approval of the Cuban government (MINVEC). CPA 26 Julio, a farm cooperative in Havana Province, has been chosen by ANAP to be the project partner, and on-location meetings have been held with the CPA board of Directors.

NEXT STEPS

Enhancing Sustainable Dairy Production Capacity in Cuba is just the first step in what we see as ongoing, collaborative arrangements with Canadian and Cuban farmers and institutions.

Next steps should involve the scaling up and out of the initial exploratory project. If, through Canadian help, Cuba can boost milk production to levels once thought possible only with imported feed grains and in so doing address the nutritional and – by extension – economic needs of communities in a sustainable way without reliance on costly inputs, this model is worthy of amplification.

In Support of Sustainable Dairy Production

Next steps in the support of sustainable productivity increases for Cuba's dairy sector might include:

- Expanding the initial educational and training segments of the project to other communities.
- Construction of a small, rustic milking parlour at a nearby agricultural capacitation college for training purposes.
- Sharing (scientist to scientist) of Canadian technical expertise in grain and forages, pasture management and animal nutrition to maximize the productivity benefits of Cuba's successful experiments in grass/legume forages.
- Cooperative support for modification and extension of dairy herd management training to other cooperatives, perhaps to include replication of the success of this Project at a CPA in other dairy producing provinces (e.g. Camaguay and Holguin).
- Cooperative technical assistance in the development of rural milk cooling systems and value-added milk products to enhance rural economic development and the nutrition of urban Cuba's urban population.
- Support for genetic upgrading to Cuban dairy herd.
- Support to help Cuba transfer sustainable dairy production capacity to other Latin American countries.

In Support of Cooperative Capacity Building

Next steps in the support of sustainable capacity building might include:

- Extension of farmer-to-farmer capacity enhancement model to other livestock sectors – e.g. hogs and poultry.
- Commencement of South to North capacity enhancement project to build on Cuban expertise in organic large scale, crop and urban agriculture.
- Formation of a 10 person, bi-lateral student team (5 Canadians, five Cubans) to act as a "project gyroscope". Each country team would consist of one student each from the disciplines of agriculture, environment, cooperatives, health and ethics. Ideally, across different universities. To challenge assumptions and push the envelope; to elicit energy and transgenerational support.
- Assess potential for cooperative development of value-added agricultural enterprises (e.g. ice cream and cheese production if milk supplies increase, organic fruit juice and baby food production, etc.).

In Support of New Economic Models

The Canada Cuba Farmer to Farmer Project is comprised of three components:

PHASE ONE are the farmer delegations, through which farmers from across Canada are exposed to the Cuban experience, causing a paradigm shift with important consequences in Canada. The farmer delegations also provide the seedbed for collaborative, bilateral projects that find their footing and emerge through Phase Two work.

PHASE TWO consists of specific collaborative projects which emerge from the exposure of the farmer tours and serve to enhance the capacity of farmers in each country

PHASE THREE is the economic research component of the work.

ANNEX 7 contains a copy of a Discussion Paper intended to provide some preliminary thinking on the economic research component of the Canada-Cuba Farmer to Farmer Project. The paper reflects the author's concern with the effect of market concentration on economic, community and environmental sustainability and belief that the Canada Cuba Farmer to Farmer Project can contribute to the development of a new economic model for cooperative, ethical engagement that could be of use in many regions of the world. A model that makes economic sense to farmers.

This paper, written in 2001, should be updated to include reference to the physics of capital, today's global struggle of commodity over community, the public policy implications this raises for all countries, how Cuba's commitment to community has underpinned their Special Period success, and how Canada's — in learning from and amplifying this message — can contribute to more enlightened and sustainable economic thinking.

Presentations to International Conferences

The work of the Canada Cuba Farmer to Farmer Project has been presented at the following international conferences. Abstracts of the proceedings are contained in ANNEX 8.

- IFOAM World Organic Congress, Victoria, Canada, August 2002
- Seminario Para Onde vai a Agro-Ecologia? Goiania, Brazil, 6e8 novembro de 2003

LESSONS FOR CANADA

Farmers and their communities around the world are searching for ways to reduce reliance on chemicals and inputs and enhance the sustainability of agricultural production systems to eliminate harm to the ecosystem, improve the economics of farming and increase the availability of local, safe and nutritious food to rural and urban communities. Global problems of urbanization, soil degradation and a reduction in economic returns to primary producers have created the need for a new approach to support and enhance sustainable farming communities.

Cuba's situation provides many lessons, although not a complete picture. Canada's farmers have complementary skills in many areas that Cuba does not. Cuba's leadership in organic crop production is of great interest to Canadian farmers and Canada's expertise in livestock production is of great interest to Cuba's farmers.

There is a need to bring sustainable agriculture lessons from Canada to Cuba and visa versa.

There is a further need to protect, preserve and build on Cuba's achievements in sustainable agriculture that have been adopted during the Special Period. This is particularly so given the economic and societal pressures placed on Cuba by the ongoing and escalating US economic blockade against this small Island country.

Cuban farmers have the respect of their communities because they are working to meet the food needs of the people; a deficit-driven model where the politics of food security are paramount. Canada's farmers are generally removed from their community by a highly concentrated agri-food sector, produce more than the domestic market can absorb and must rely on export markets to return production costs; a surplus-driven model where the politics of trade are paramount.

The ability to craft sovereign food policy has been very important to Cuba's success. In Canada, as in other nations, there is increasing pressure to consider "sovereignty" as an antiquated concept that is unacceptable and indefensible at international trade tables (and therefore has no place in domestic policy discussions). Critical to Canadian domestic and foreign policy is a vastly improved defense of Canadian sovereignty — the ability to draw a line in the sand and say "here is where the needs of the market end and the needs of community begin".

As Cuba has shown, a dramatic shift to sustainable agriculture is possible, but it took severe economic conditions in Cuba to provoke it – with no inputs, they had to find a way to feed the people. Canada's farmers are similarly boxed in by concentrated economic players. Unless new solutions are found to capture back farm margins, this will be the last generation for many families. While Canada will not be going back to using oxen, there are many lessons from Cuba that are both adaptable and strategic. Cuba warrants a good hard look on a policy level.

Can Canadian farmers change Canadian farm policy to support sustainable communities? Of course - all that is required is the right role model and the political will.

Of particular relevance to future research in this area are the questions:

- How is it possible to make the transformation from the green revolution to sustainable agriculture?
- What obstacles can be anticipated from the Cuban experience?
- What mitigation efforts might be successful?
- What will empower farmers to lead the process?

ENDNOTES

¹ Much of the information contained in this section was taken from Sustainable Agriculture and Resistance, Transforming Food Production in Cuba, 2002, Institute for Food and Development Policy, USA. Translated from original Spanish Transformando el Campo Cubano: Avances de la Agricultura Sostenible, Asociación Cubana de Técnicos Agrícolas y Forestales (ACTAF), 2001

² Nieto, Marcos. *Cuban Agriculture and Food Security*. Sustainable Agriculture and Resistance, Transforming Food Production in Cuba, 2002, Institute for Food and Development Policy, USA. Translated from original Spanish Transformando el Campo Cubano: Avances de la Agricultura Sostenible, Asociación Cubana de Técnicos Agrícolas y Forestales (ACTAF), 2001

³ Funes, Fernando *The Organic Farming Movement in Cuba*. Sustainable Agriculture and Resistance, Transforming Food Production in Cuba, 2002, Institute for Food and Development Policy, USA. Translated from original Spanish Transformando el Campo Cubano: Avances de la Agricultura Sostenible, Asociación Cubana de Técnicos Agrícolas y Forestales (ACTAF), 2001

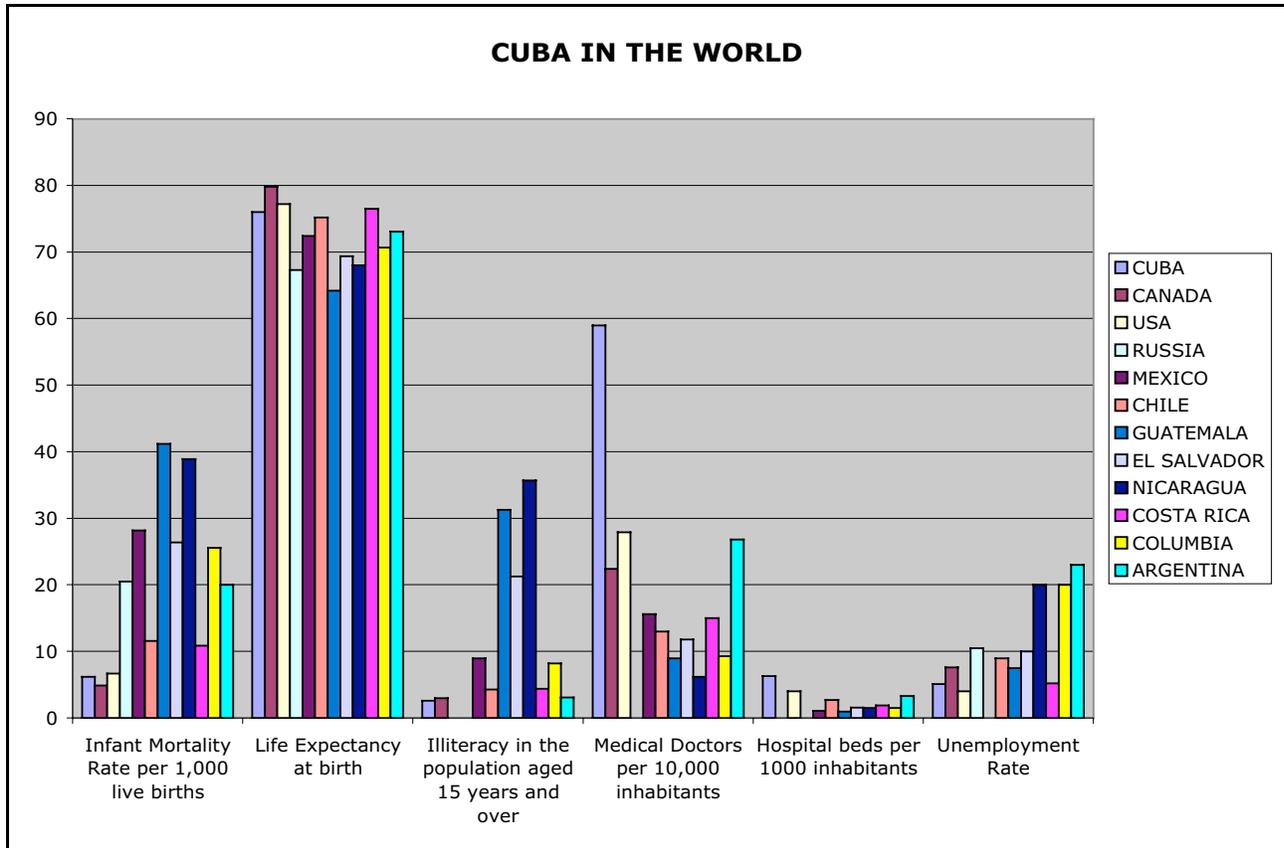
⁴ Alvarez, Mavis D. *Social Organization and Sustainability of Small Farm Agriculture in Cuba*. Sustainable Agriculture and Resistance, Transforming Food Production in Cuba, 2002, Institute for Food and Development Policy, USA. Translated from original Spanish Transformando el Campo Cubano: Avances de la Agricultura Sostenible, Asociación Cubana de Técnicos Agrícolas y Forestales (ACTAF), 2001

⁵ Ibid.

⁶ Funes, Fernando *The Organic Farming Movement in Cuba*.

⁷ Companioni, Nelso. *The Growth of Urban Agriculture*, Sustainable Agriculture and Resistance, Transforming Food Production in Cuba, 2002, Institute for Food and Development Policy, USA. Translated from original Spanish Transformando el Campo Cubano: Avances de la Agricultura Sostenible, Asociación Cubana de Técnicos Agrícolas y Forestales (ACTAF), 2001

ANNEX 1



	Infant Mortality Rate per 1,000 live births	Life Expectancy at birth	Illiteracy in the population aged 15 years and over	Medical Doctors per 10,000 inhabitants	Hospital beds per 1000 inhabitants	Unemployment Rate	GDP in USD
CUBA	6.2	76	2.6	59	6.3	5.1	19.2 billion
CANADA	4.9	79.8	3.0	22.4	7.6	934.1 billion	
USA	6.7	77.2	-	27.9	4	9.9 trillion	
RUSSIA	20.5	67.3	-	-	10.5	1.12 trillion	
MEXICO	28.2	72.4	9	15.6	1.1	-	
CHILE	11.6	75.2	4.3	13	2.7	9	
GUATEMALA	41.2	64.2	31.3	9	1	7.5	
EL SALVADOR	26.4	69.4	21.3	11.8	1.6	10	
NICARAGUA	38.9	68	35.7	6.2	1.5	20	
COSTA RICA	10.9	76.5	4.4	15	1.9	5.2	
COLUMBIA	25.6	70.7	8.2	9.3	1.5	20	
ARGENTINA	20	73.1	3.1	26.8	3.3	23	

SOURCES:

Central Intelligence Agency (USA) World Fact Book, Panamerican Health Organization Statistical Yearbook for Latin America and The Caribbean 2001 (UN Economic Commission for Latin America and The Caribbean)

ANNEX 1 (cont'd)

CANADA-CUBA: A look at 100 years

*From Granma International Digital, Cuba, English. July 30, 2003,
<http://www.granma.cu/ingles/2003/julio/mier30/30canada.html>*

FOR the last century, Cuban-Canadian relations have flourished in various branches and the two countries currently maintain more complex and deeper links, Michael Small, the Canadian ambassador to Cuba confirmed to *Granma International*.

He added that both nations have worked together during the last 100 years and he hoped they would carry out even more joint work in the years following the centenary, celebrated with a full program of activities. Relations between both countries are set to grow and this year 4000,000 Canadians are scheduled to visit Cuba, thus making that country the main source of tourists to Cuba, Small informed.

The diplomat and Eusebio Leal, City of Havana historian, inaugurated a photography exhibition at the Fototeca de Cuba displaying the principal activities that have taken place between the two countries; Cuba's Ministry of Foreign Affairs, the Canadian embassy and Cuban institutions sponsored the show.

Leal recalled that in 1903 the first commercial office of the Republic of Cuba was opened in Yarmouth, Nova Scotia. He highlighted Canadian collaboration in restoring Havana's historic center, particularly the Plaza Vieja and the oldest house located in this world heritage site.

The city historian commented on a 16th century voyage through the Caribbean Sea by Admiral Samuel de Champlain and the many valuable maps he made. Also mentioned was famous soldier and sailor Pierre Le Moyne d'Iberville, who died in Havana in 1706; both men were the precursors of modern Canada. Leal paid tribute to William Ryan, the Canadian revolutionary who rose to the rank of brigadier general in Cuba's 10 –year War of Independence.

Ryan was one of the *Mambises* (19th century independence fighters) captured and shot by the Spanish in 1873 in Santiago de Cuba, when he returned to the island aboard the *Virginus* steamer after fulfilling a mission for the Republic in Arms.

Ambassador Small noted that the exhibition shows the high-profile relations between both peoples and in various sectors, notably trade, politics, health and sports and others.

In that context he recalled that this year, 260,000 Cubans honored a Canadian hero by taking part in the Terry Fox anti-cancer run. The diplomat concluded by highlighting that such solid examples of mutual friendship are the basis for building a better future together.

ANNEX 2: Canada Cuba Farmer to Farmer Project Vision Statement, 1999

Thousands Gather In Havana As Farmers' Stewardship Award Kicks Off Earth Summit Ceremonies

HAVANA, CUBA. June 24, 2004: Farmers from all over the world gathered tonight in this cosmopolitan coastal city 90 miles off the Florida keys to honour their own. As Havana prepares to play host to the world at this year's Earth Summit — 33 years after the first Stockholm Environmental Summit — conference organizers rush to put the finishing touches on the Havana Protocol, a sustainable farming accord expected to draw solid support from both emergent and influential (Group of Twenty-Two) nations.

With a wave to cheering Canadian and Cuban farmers, key note speaker Russell Husch, Co-Chair of the trendsetting Fair Share Cooperatives, opened his remarks with a shared remembrance and a smile: "This time 6 years ago we were just back from our first visit to Cuba, scrambling trying to find someone who would believe in this idea enough to fund it. Well, we found our angel, and the rest is history..."

Husch drew warm applause from the international crowd as he recounted how a handful of BC and Cuban farmers — with little more than a good idea and some mutual respect — started out sharing with Cuba BC's organic inspection and certification system. And from that humble beginning built FSC into today's global leader in the fresh and processed organic products market — providing safe, nutritious, non-adulterated, non-genetically-modified, sustainably produced food products to eager customers in Europe, the Pacific Rim and North America.

FSC comes into this conference having racked up an impressive first in both product quality and consumer awareness at last month's prestigious Euro-Food Exposition in Brussels. But it is FSC's financial returns to its members that Husch is most proud of: "Like the Financial Times article said the other day: We didn't do anything that the large transnationals weren't doing; we just did it better and smarter. Being the little guys, the trick for us was to identify a mouse-hole that the big cats

— the Cargills and the Grand Met Foods and the Archer Daniels Midlands — couldn't run thru. Commercial organic was one. Cuba was another. In combination, they were unbeatable.

Cuba's organic soils, favourable climate, large cooperatives, skilled farmers, wide array of bio-pesticides/products and effective farm extension was what first interested Husch. Canadian farmers brought to the table access to capital, equipment, technology, infrastructure and markets. The result was a cooperative joint venture model so economically robust it sent the conventional market analysts back to their drawing boards trying to come up with an explanation as to how this little cooperative market player could so quickly command a leading edge in the sophisticated and highly competitive international agri-food sector. A leading edge that worked in the sustainable interest of both the farmers and their communities.

"It was simply the right time in the market. And we were ready." said Husch. "In BC, we were operating under government environmental controls that were among the most stringent in the world. We had to farm smarter and cleaner. But our land costs were going up, and we were losing out on our traditional markets to cheap competition from the US. Partnering with Cuba was a natural." According to Husch, their first joint venture with a Cuban cooperative started with a deal thru BC grower-owned SunRype to supply and market organic grapefruit juice concentrate. "That went so well for us we invested in a cooperative juice and concentrate plant down here and began running other products" said Husch. "Just about the same time, one of our Lower Mainland growers got into a cooperative joint venture to supply organic cabbage and bananas into Eastern Canada and Europe. Then our greenhouse industry became involved and it just sort of took off from there... Now we're also growing certified organic seed for many of Cuba's vegetable crops."

Some eighteen months after the BC-Cuba links were up and running, strong European demand provided needed foreign exchange to support Cuban imports of organic grain from BC's Peace River and the Prairies. Three years and a lot of hard work later, farmers in both countries have finally managed to bring Cuba's livestock

industry back from the brink (where it languished for 15 years since the collapse of the former Soviet Union and with it Cuba's access to feedgrains).

Cuban government statistics released last week underscore the success of FSC's experiment: by next month, Cuba will have surpassed its domestic food policy goal of 100 grams of fish or meat per person per day, triggering a green light for exports of organic pork, organic chicken and the latest arrival on the gourmet table, free-range, ranch-raised, organic crocodile.

Tomorrow, Husch and FSC Co-Chair Edelio Gonzales Guerra will accept, on behalf of their membership, the Earth Summit's prestigious [Partners in Global Sustainability Award](#).

In tonight's opening remarks, an aging Maurice Strong praised the leadership shown by Cuba, Canada and the farmer members of the FSC cooperative: "FSC farmers have shown that sustainability pays and in so doing have created a wonderful new model for underscoring the importance of farmers and farmland to the sustainability of communities and our environment."

But the FSC success story goes well beyond a robust economic model. Last month, both Husch and Guerra shared a platform in China as that country recognized the contribution FSC has made to the creation of new linkages between centrally planned and open market economies. Large farmer cooperatives in Northern China, recent members of FSC, hope next year to begin supplying organic rice to waiting buyers in Latin America and Canada.

"I am glad Canada was able to help foster the initial interchange between our farmers and Cuba's farmers that got all this started" said Canadian Prime Minister Lloyd Axworthy, who arrived in Cuba yesterday to attend tonight's formal opening ceremonies of the Earth Summit. "I can't think of a better example of sustainable, constructive engagement between our two nations. I'm very proud to be a Canadian and to be here with Canadian farmers tonight."

The Earth Summit will run until Friday.

ANNEX 3

**CANADA-CUBA
FARMER TO FARMER
PROJECT**

RELATIONSHIP BUILDING

FARMER DELEGATIONS

Promotes awareness of:

- a) Cuban agriculture (world leadership in large scale organic farming, use of biopesticides and biofertilizers, healthy co-ops, one strong voice for farmers, effective farm extension, respect)
- b) Strategic potential for collaboration.

Seedbed for new ideas.

CUBAN PARTNER
ANAP (in assoc with ICAP)

SELF-FUNDING (expenses)

CAPACITY-BUILDING

**BILATERAL,
COOPERATIVE
NON PROFIT PROJECTS**

Cooperative, bilateral capacity building initiatives such as:

PROJECT ONE: Canada helps Cuba to increase milk production, Cuba helps Canada enhance centres of excellence in commercial scale organic and urban agriculture.

CUBAN PARTNER
ANAP

e.g. CIDA

**ECONOMIC POLICY
DEVELOPMENT**

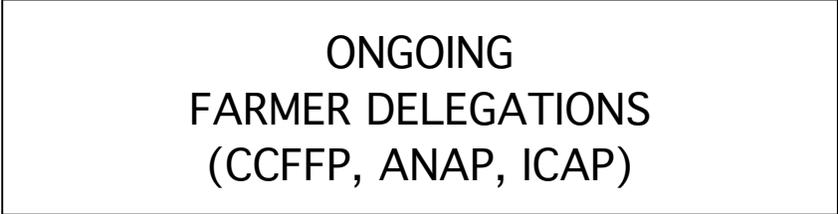
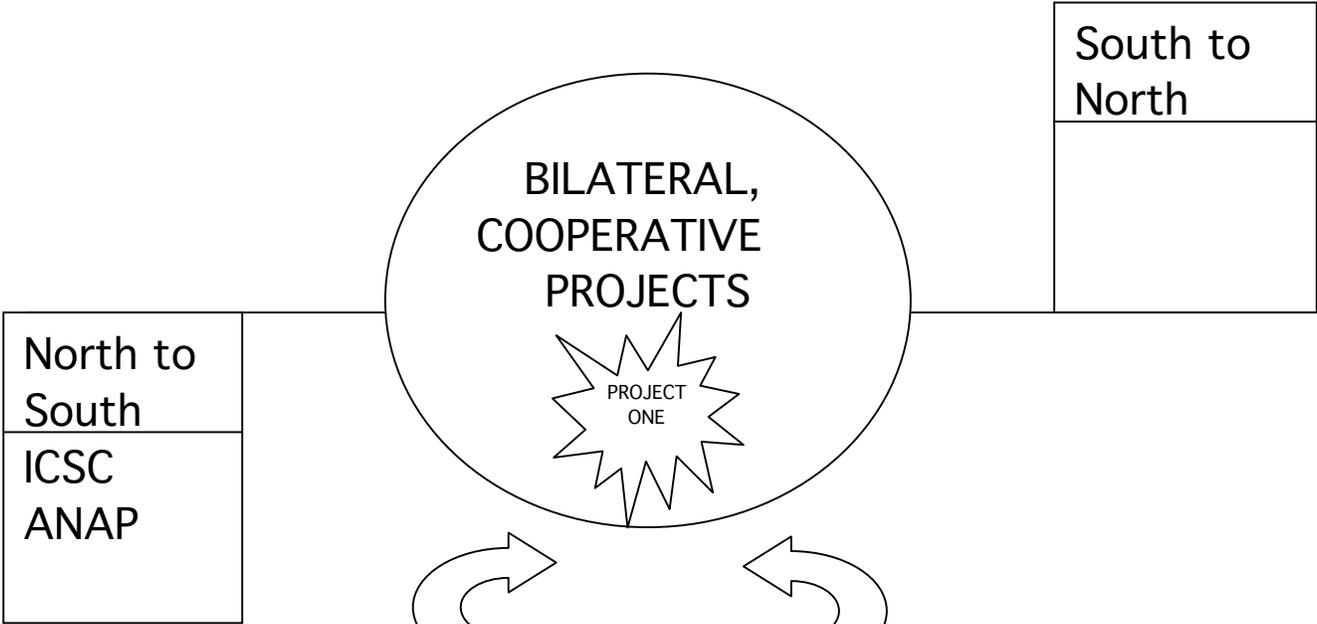
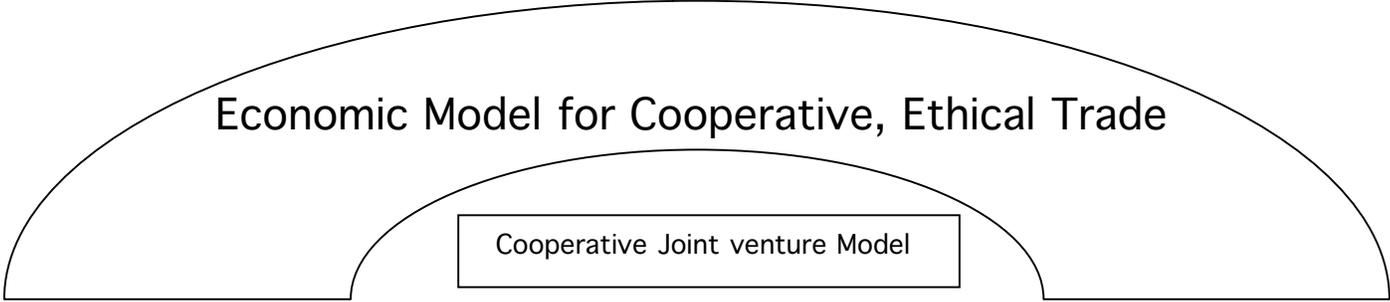
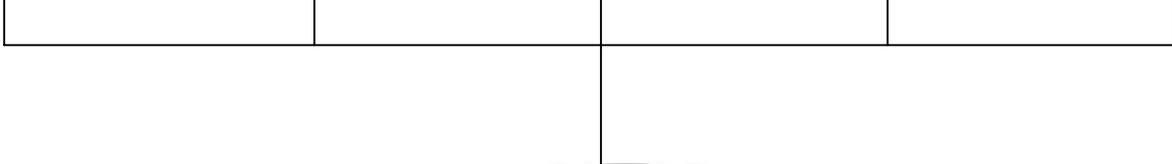
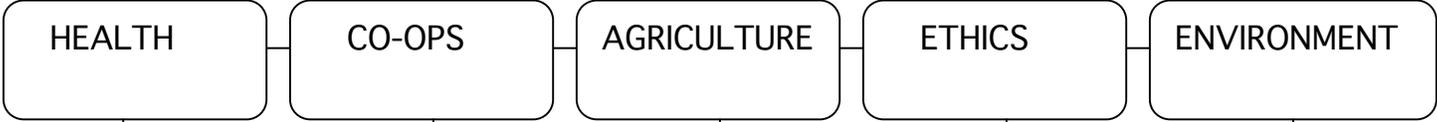
**ETHICAL INTERNATIONAL
CO-OPERATIVE JOINT
VENTURE MODEL**

Creation of farmer-led, sustainable cooperative joint venture roadmap to marry the large-scale production capacity of Cuban farmers (e.g. in citrus) with the technology, marketing and capital access of Canadian farmers to competitively capture and ethically share value added from international organic markets.

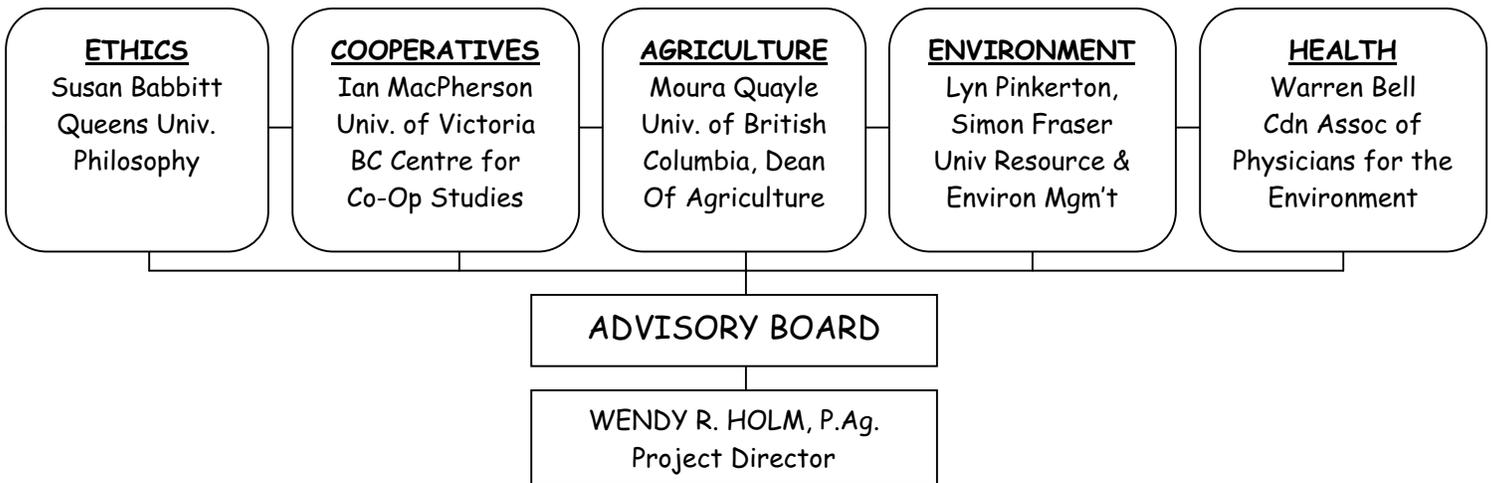
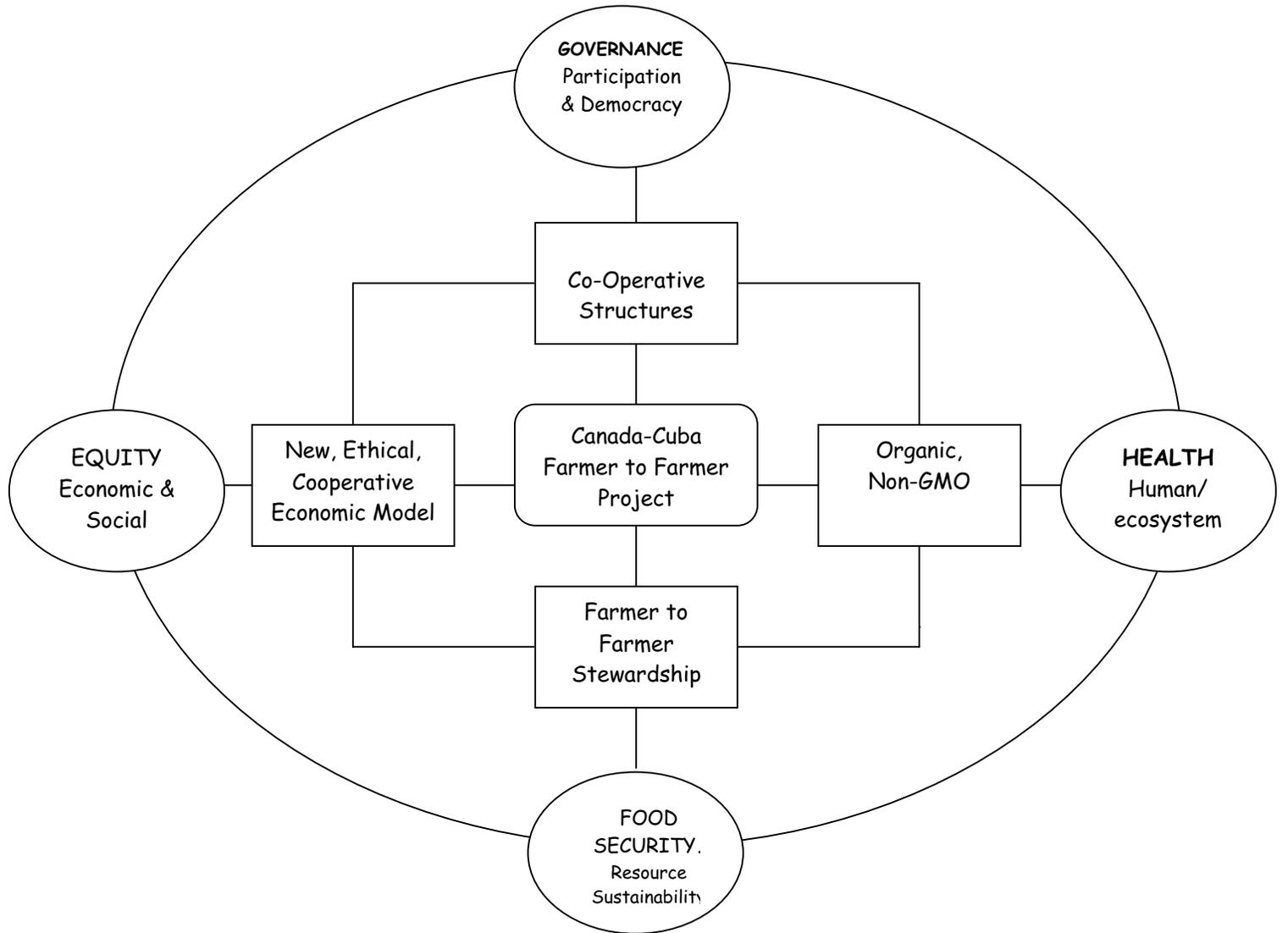
CUBAN PARTNER
ANAP

FUNDING NECESSARY

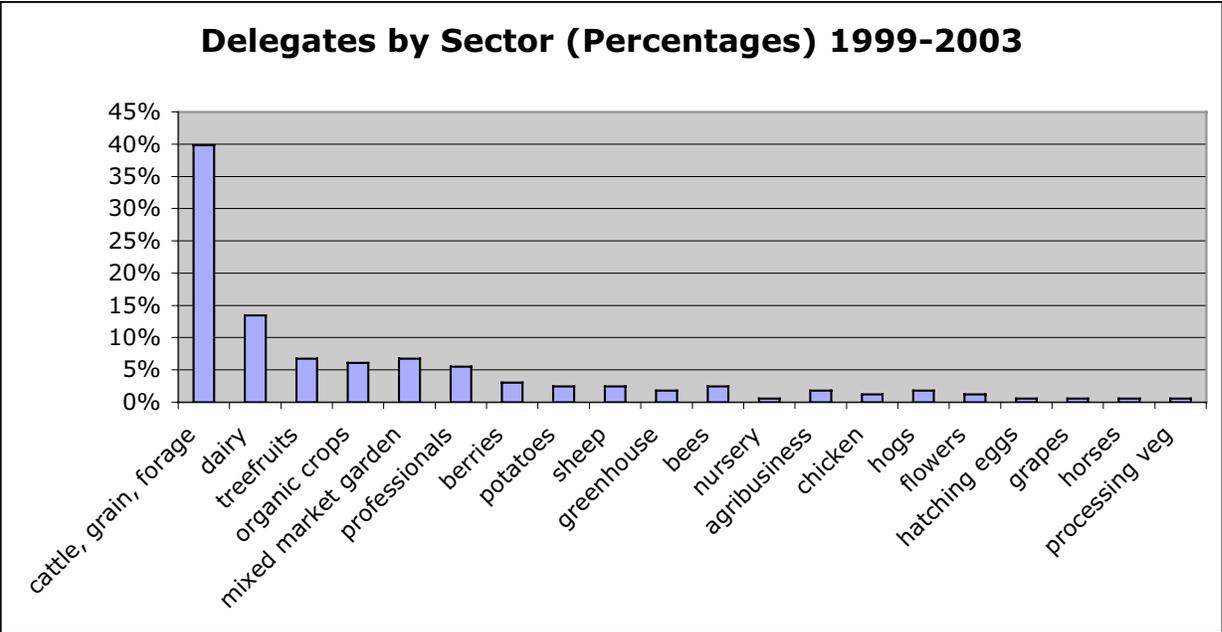
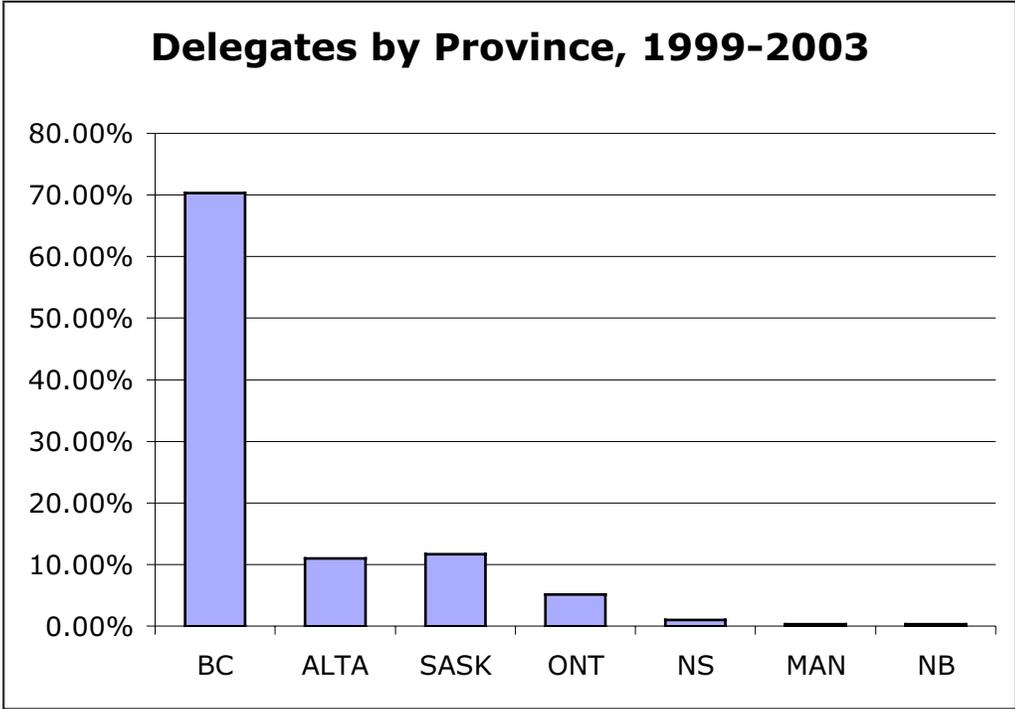
CANADA CUBA FARMER TO FARMER PROJECT



CANADA CUBA FARMER TO FARMER PROJECT



ANNEX 4
BACKGROUND OF FARMERS WHO HAVE TRAVELLED TO CUBA IN 15
DELEGATIONS AS PART OF THE CANADA CUBA FARMER TO FARMER PROJECT,
1999 – 2004



**FARMERS WHO HAVE TRAVELLED TO CUBA IN 15 DELEGATIONS AS PART OF
THE CANADA CUBA FARMER TO FARMER PROJECT, 1999 – 2004**

BRITISH COLUMBIA	
ABMA, Bertha and John	Lifetime in dairy, 250 acres in Ladysmith, B.C.
ANDERSON, Myrtle	40 years experience cow-calf and Canadian horse breeder on 200 acres in Quesnel, BC
ANTONSEN, Harvey and Dianne	40 years in diary on 80 acres in Aldergrove, BC
BAYNES, Duncan	20 years beef ranching on 1,650 deeded and 10,000 leased acres, Hanceville, BC.
BELL, Christina	50 years background in mixed farming on 40 acres in Montney, BC
BENNEST, Lorraine	25 years experience as an orchardist, Summerland, BC
BICKFORD, Heather and Bill	35 years in grain, cattle on 5,500 acres owned + 8,000 leased, Ft St John, BC (Peace R.
BICKFORD, Ronald W.	Lifetime in fruit (logans and strawberries), cattle and grain on Vancouver Island, BC.
BOAL, Murray and ALLEN, Janet	20 years in sheep and organic market gardening, Quesnel, BC
BONGERS, Lyn, Peter, Mandy & Justin	25 years exp. in dairy, farm 200 acres in Armstrong, BC
BOUWMAN, Bill and Trudy	35 years in dairy and crop farming on 160 acres in Abbotsford, BC
BURWOOD, Martin and Barbara	12 years of experience in sheep and mixed farming in Langley.
BUSNARDO, Joe	46 years in vineyards and mixed fruit on 39 acres in Cobble Hill, BC. Also estate winery
BUTLER, Michael and Deborah	28 years in cattle (bred heifers) forage, grain, 960 acres + ctty pasture, Peace River BC
CAPTEIN, Leo and Ineke	28 years cut flower production on 28 acres in Pitt Meadows.
CARL, Brian and Brenda	26 years experience in mixed vegetable, cattle, fruit stand on 69 acres in McLure, BC.
CARTER, Claire and Don	22 years experience in cow-calf on 100 acres in Lytton, BC
CHONG, Danny	organic and conventional vegs, 400 acres, Delta, BC
CHONG, Yet Howe and Shui Chun	48 years in blueberry farming on 125 acres in Delta, BC
COLWELL, Helen and Bill Colwell (twice)	Lifetime in beef, forage, grain; 1600 acres, Sunset Prairie (Peace River), BC
COMMANDEUR, Rbt. and Raju	organic apples, peaches, pears, vegetables, 50 acres in Naramata, BC
CONAN, Gailen and Robert Bach	34 years experience in beef and sheep ranching on 160 acres in Barriere, BC.
CONWAY, Diane and Lance	30 years in dairy plus raspberries on 90 acres in Aldergrove, BC
DEAN, Michael	organic fertilizer, soil remineralization, Grand Forks, BC
DICK, Aron	8 years background in dairy and poultry on 250 acres in Chilliwack, BC
DINESEN, Tom	55 years in landscape nursery, 20 acres, Surrey, BC
ELZINGA, Nancy and Hank	30 years in beef and slaughterhouse on 157 acres in 150 Mile House (Cariboo), BC
EMBLEM, Marge and Reg	36 years in dairy on 240 acres in Port Alberni, BC
ERICKSON, Donna and Andy	30 years experience in cattle ranching on 300 acres in Clearwater, BC
FANKHAUSER, Ida and Hans	31 years dairy and (recently) hair sheep, 400 acres, Enderby, BC Transitional organic.
FEELY, Tom and Roberta	25 years in beef and farm gate veggies on 80 acres in Courtenay, Vancouver Island, BC
FILIPENKO, Norm and Cheryl	21 years orcharding in Okanagan Valley, BC also run extension service packinghouse.
FRITZEL, Al and Patricia	50 years in beef and forage on 100 acres in Salmon Arm, BC
FULKER, Iris and John	12 years exp in sheep, angora goats and llamas on 23 acres on Salt Spring Island, BC
GODWIN, Tom	31 years of experience beef on 85 acres in Richmond, BC. Retired cardiologist.
GOERTZEN, Mary	30 years in broiler (fryer) prod'n on 25 acres in Fraser Valley.
GRANT, Luke and Gale	25 years in ranching (cow/calf) on 800 acres in Lower Nicola Valley, BC.
GRAVES, Barbara and Bob	40+ years in organic farming in Ontario and BC, bee keeper for 10 years in
GRONLUND, Joyce and Dave	30 years, mixed (hay, beef, turkeys, broilers) on 46 acres in Chemainus, BC
HADLAND, Arthur and Laurel	20 years cash crop (grasses, peas and cereals) on 2200 acres in Peace River BC.
HAIGHT, Anita and Jack	50 years cattle ranching, 2500 acres, Peace River, BC
HANSEN, Lorne	Lifetime in dairy farming on 160 acres in Harrison Mills, BC
HANSEN, Wilma and Ben	35 years experience in ranching (cow-calf) on 572 acres in Taylor, BC
HARRIS, Jim	Lifetime in seed potatoes and field crops, 700 acres in Delta, BC
HOLM, Laurel	Artist.
HORVATH, Elda and Julius	22 years tree fruits on 5 acres on Osoyoos, BC
HUSCH, Carol and Russell	Lifetime orchardist and nursery, 22 acres in Winfield, BC
HYLKEMA, Lambert and Shirley	Lifetime in dairy farming on 54 acres in Chilliwack, BC.
JANSEN, Jackie and Len	50 years in dairy on 120 acres in Abbotsford, BC
JANSSENS, Frank and Wilhelmina	43 years in dairy on 500 acres in Surrey, BC
JOINER, Joan and Lawrence	45 years exp cattle ranching (Clinton, BC-15,000 ac) +cash crops (Chilliwack, 300 ac)
KEIM, Mariann and Friedrich	15 years experience in soft fruit on 4+ acres in Naramata, BC
KICEY, Nick	small fruits/vegetables, 4.5 acres, direct farm market, Armstrong, BC
KLOPPENBURG, Lorena and Bob	28 years in dairy farming on 130 acres in Armstrong, BC
KOZIER, Marion and Len	31 years of experience in hay and beef ranching on 300 acres in Terrace, BC
KRIMMER, Barbara and Rod	16 years in sheep, hay, forestry on 160 acres+1500 woodlot, William's Lake BC
LLOYD, Lisa, Jen, Fraser, J Edwards	20 acre organic farm on Saltspring Island (certified organic berries and vegetables), BC
LOISELLE, Joyce and Roger	50 years experience in grain and beef farming on 1000 acres on Peace River BC

LUTHER, Marv	20 years in greenhouse veg (long English cukes) on 4.5 acres in Abbotsford, BC
LUTZ, Jeannie and Walter	37 years experience in beef and grain farming.
MALENSTYN, Maureen and John	vegetable crops for processing, hay, cow silage on 240 acres in Delta, BC
MALM, Aggie and Arnold	20 years of experience in mixed farming (market garden) on 25 acres in Lillooet, BC
MANARIN, Anne and Dave	tree fruits, 12.5 acres, Winfield, BC
MARSHALL, Fred	Agrologist, 30 years beef, commercial cow-calf (organic) on 1771 acres in Midway, BC
MATTSON, Emily and Larry	30 years beef cattle ranching on 1,400 + acres in Rolla, BC
McEWAN, Tonette	15 yrs in strawberries, raspberries, beef cattle, vegs, 150 acres in Pemberton Valley, BC
MCLEOD, Heather and Ken	7 years experience in organic vegetable market gardening on 25 acres in Branchton, Ontario.
MCNEIL, Carol and Glen	30+ years experience in beef cattle on 750 acres in Clearwater, BC
PARKER, Gail and Doug	23 years of experience in grain, oilseed and forage seed farming on 2500 acres in Cecil Lake, BC
PARTINGTON, Jean and John	41 years experience in dairy farming on 250 acres in Creston. BC (+10 acres of cherries)
PELTER, Al	51 years of experience in grain farming on 354 acres in Humboldt, Saskatchewan
PENDRAY, Linda and Dave	Lifetime in dairy, 225 acres on Saanich Peninsula, Vancouver Island, BC
PINKERTON, Lyn and HOARE, Ti	Assoc. Prof, Res. & Environ. Mgm't, Simon Fraser Univ. BC; cattle, 1100 acres
POOLE, Hubert and Edna	50 years in beef cattle on 4500 acres, Vanderhoof, BC
PORTER, Anne and Charlie	Lifetime in dairy, 200 acres in Chemainus, Vancouver Island, BC
PORTER, Karen and Don	40 years in dairy, 300 acres in Chemainus, Vancouver Island, BC
PURDEN, Helen and George	Lifetime in seed potatoes and cattle, 75 acres in Pemberton Valley, BC
QUERIN, Barbara and John	40+ years grain and oilseed prod'n and 25 years in cow/calf on 3,500 acres in Rolla, BC
RALPH, Norma and Bud	35 years exp. grain farm, 1700 acres Peace River, BC
REDEKOP, Elizabeth	40+ yrs in poultry prod'n (broilers, turkeys) on Fraser Valley.
REIGER, Verna and Victor	30 years in broiler hatching eggs, Abbotsford, BC
ROBERTS, Mary and Danny	40 years in tree fruit production on 22 acres in Oliver, BC
ROBSON, Michael P.Ag.	Agrologist, 40 years mixed farming background in fruits and veg. Fraser Valley. BC
ROSS, Bonnie and Sandy	23 years of experience in fruit farming (raspberries, soft fruits) on 4 acres in Penticton, B
RYALL, Sandra and Jane	30+ years of experience in greenhouse tomato production on 18 acres in Delta, BC.
SAMSOM, Nick and Hazel	45 years in tree farming, shrubs and turf on 160 acres in Courtenay, BC
SEWELL, Linda and Rich	28 years forage seed, leafcutter bees, some grain on 1000 acres in Ft. St. John, BC
SIEBERT, Reta and Karl	35 years in cattle ranching on 1,100 acres in Williams Lake, BC
STEIDLE, Susan, Walter & Melissa	Beef cattle, cow-calf, calf backgrounding, 800 acre ranch, Prince George, BC
STIEFVATER, Lucas and Annemarie	11 years background in flowers and vegetables on 6 acres in Courtenay, BC,
STRONG, Curtis	16 years farming experience, hay, grain, beef on 200 acres in Saanichton, BC
SWAN, Brodie	30 years exp. cow/calf, 330 acres + leases, Kootenay, BC
THOLA, Larry and Sharon	40 year background in farming, feeder cattle operation, Dawson Creek, BC
TOWES, Alice and John	24 years in broiler chicken production on 18 acres in Abbotsford, BC
TRAICHEL, Sandra	Professional (soil scientist).
TRESCHER, Siegfried	ifetime experience in ranching on 1200 acres in Brisco, BC
TROTTER, Bill and Shirley	26 years in beef and hay ranching, managed forest on 113 acres in Courtenay, BC
VAN BELLE, Bill, and Grace	30 years in intensive ornamental horticulture on 60 acres in Abbotsford.
Van den TILAART Susan, Tony, Devon	20 years exp. in dairy, 2 farms, 200-230 cows milked on 600-800 acres, Enderby, BC
VanLOON, Nell and Tony	43 years seed potatoes, 160 acres, Pemberton (previously beef/grain Prairies).
VANMARREYK, Jane and Albert	33 years exp in greenhouse vegetable production on 31 acres in Pitt Meadows, BC
VanRYSWYK, Al and Alwenda	Professional Agrologist, Kamloops, BC
VELDHUISEN, Tom and HEILKE	26 years in dairy on 410 acres in Armstrong, BC
VRAIN, Thierry	Research Scientist, Agriculture and Agri Food Canada, Summerland, BC
WADLEGGER, Hazel and Josef	40 years experience in cow calf production on 500 acres in Clearwater, BC
WATT, John and Mary	30+ years in cattle and beef on 100 acres in Langley, BC
WEAVER, Marjorie and Don	66 years in beef and forage production on 1600 acres in Vanderhoof, BC
WHYTE, Betty and Norman	Lifetime in cow-calf on 320 acres in Williams Lake, BC
WILLIAMS, Laureen and Ted	Cow calf operation in Williams Lake, BC
WITZKE, Dorothy and Brian	35 acre apple orchard, Kelowna, BC
WOODROW, Michelle and Danny	Lifetime in potato production, Comox Valley, BC
ALBERTA	
BEATTIE, Bruce, Valerie and Alexander	30 years dairy farming, also beef, on 350 acres in Sundre, Alberta
CRAIG, Joyce and Don	35 years in hay, grain, cattle, 1120 acres owned, 800 acres leased, Valleyview, Alberta
FALZ, Anna and Hans	7 years in grain and beef cattle on 1,700 acres in Caroline, Alberta.
FREDLAND, Paul and Ruth	35 years experience in grain and cattle farming on 500 acres in Grand Prairie, AB
HEIKEN, Shirley and John	50 years in canola, peas, barley and wheat on 1200 acres in LaGlance, Alberta
HELBIG, Heike and Hermann	25 years of experience in market gardening on 160 acres in Calmar, Alberta
LAHTI, Irene and Wes	40 years experience in grain farming on 1800 acres in Humboldt, Saskatchewan.
MAJEAU, Angeline and Oscar	44 years in cereal grains, hogs, hog abattoir 3,300 acres. Riviere Que Barre, Alberta

NORGAARD, Rudolph and Heather	Raise quarter horses, lease 160 acres to a cow-calf operation.
OE, Doreen and Ralph	50 years experience in mixed farming on 480 acres in Abee, Alberta.
SCHEERSHCHMIDT, Doug and Elaine	36 years experience in cattle and grain farming on 3200 acres in Stettler, Alberta
SCOTT, Evelyn and Harvey	20 years exp cow-calf, cattle, draft horses and hay/feed on 480 acres Athabasca, Alberta
SEBASTIAN, Tony and Gudrun	55 years in grain farming on 900 acres in Wembley, Alberta.
ST ARNAUD, Paul and Jeannie	45 years in grain, cereal, oil seed and grasses on 2400 acres in Girouxville, Alberta
STEMO, Kenneth	21 yrs mixed farming (beef, forage, pasture, poultry, honey) 160 acres, Rimbey, Alberta
YAWORSKI, Hap and Kathleen	Cattle farming on 640 acres in Alberta
SASKATCHEWAN	
AST, Dolores	32 years as a public health nurse, Regina, Saskatchewan
BEATTIE, Jim and DOWDESWELL, Beryl	60 years in grain and pulse crops on 500 acres in Swift Current, Saskatchewan
BURTON, Marian and George	40 years in grain farming on 6000 acres in LaPorte, Saskatchewan
COOPER, Leah and Raymond	52 years experience in grain and cattle ranching on 5,400 acres in LaPorte, Saskatchewan
DYCK, Ruby and Richard	28 years in dairy on 2,500 acres in Warman, Saskatchewan.
FOWLER, Sandra and AITKEN, John	31 years in cow/calf ranching on 3 sections of land in Eyebrow, Saskatchewan
HIRSCHKORN, Norbert and Loretta	25 years in mixed farming on 800 acres in Duck Lake, Saskatchewan.
IVERSON, Clarence and Nancy	40 years mixed grain and cow/calf, 280 owned + leased land, Saskatoon, Sask
KUNTZ, Pius and Gladys	35 years in mixed farming (grain) on 1200 acres in Grayson, Saskatchewan
MARTIN, Belva and Jim	40 years in grain farming on 6000 acres in LaPorte, Saskatchewan
MARTIN, Ilse and Dieter	25 years in nursery greenhouse, wheat, hay on 70 acres in Langham, Saskatchewan
PHILLIPS, Ann	41 years experience in grain farming in Stoughton, Saskatchewan
POSSBERG, Rosemary and Herman	Agrologist soils specialist.
REID, Jeannette and Blaine	36 years of experience in hogs and grain farming on 2000 acres in Evesham, Saskatchewan.
RITCHIE, Eleanor	Retired public health nurse, Saskatoon, Saskatchewan
THOMPSON, Donna and Ron	30 years in zero till grain, feeder cattle on 960 acres in Indian Head, Saskatchewan
TOMILIN, Robert	20+ yrs exp organic grains, oilseeds, pulses, legumes, hay on 960 acres Kamsack, Sask
WIELGOZ, Andrew and Florence	48 years in grain farming on 760 acres in Bank End, Saskatchewan
WILLIAMS, Sara	Horticulture specialist, extension division, Univ. of Saskatchewan.
ZOLLER, Anna	Horticulture and strawberries, university student
MANITOBA	
GREEN, Mel	33 years experience in mixed grain, livestock farming on 2000 acres in Ashville, Manitob
ONTARIO	
CREIGHTON, David	12 years in organic farming, Ottawa, Ont.
deSALABERRY, Nic	Planner, Bruce County, Ontario.
GRANT, Dale and Fay	30 years in beef cow calf-finishing, custom organic grain on 800 acres in Stirling, Ontario
HUITEMA, Pete	25 yrs exp in crops, corn, soybeans, wheat, hogs on 300 acres in Sebringville, Ontario.
LLOYD, Richard	beef cow/calf early 1980's, farm feed/supply store mgr, NFU member, Douglas, Ont.
MARISSETT, Ken	50 years in organic grain farming, Picton, Ontario
MCQUAIL, Anthony and Fran	32 years experience in mixed farming (apples, crops, livestock), 25 of which are organic
MILLSON, Jim and Gladys	25 years in dairy farming and cash crops, 430 acres in Enniskillen, Ontario
MOLZAN, Ed	Lifetime in cash crop farming on 250 acres in Thedford, Ontario
PARKER, Doug	5 years in organic vegetable production on 20 acres in Milford, Ontario
VAN NIEKERK, Andy	8 years in finish hogs, cow-calf and seed sales on 200 acres in Stayner, Ontario.
VENTURELLI, Alvaro	41 years of experience in grain and cattle farming on 1760 acres in Bonanza, Alberta.
NEW BRUNSWICK	
TAYLOR, Richard	22 years experience in blueberry farming on 220 acres in Second Falls, New Brunswick.
NOVA SCOTIA	
EMBREE, Blair and Carol	30 years in apples, strawberry, other crops on 300 acres, Port Williams, Nova Scotia
FRITH, Jeremy	30+ years in vegetable farming, currently farming in Baddeck, Nova Scotia.

ANNEX 5

Cuba's Organic Revolution

by Ken Stemo

As printed in Common Ground Magazine, May 2002 and Union Farmer, Spring 2002

How would you like to farm where: Your net income is higher than the national average. You have a guaranteed price for the commodity you produce and a bonus if you overproduce. You will get a pension at age 60 if you are male and age 55 if you are female. Taxes are 5% of net income. All education for your children including university and college are free. Your hospital and medical costs are free. Agriculture extension works directly with the farmer using farmer-directed technology for plant and animal protection and improvement. Your kids can get into farming without incurring any debt.

Sounds idyllic? This is what farming in Cuba is like. Yes, high school students are expected to help on the farms. Those who receive a degree are expected to work for two years at low pay in an area where their education and talents are required. Farmers must give some of their produce to hospitals, seniors' homes and schools. However, these are all positive features in my opinion, for they strengthen the connection between the farmer and the consumer, and directly link agriculture to the community.

"Castro" and "Communism" are the words that come to mind when we think of Cuba. When applied to agriculture, these terms might make one think of large, inefficient, state-owned farms. This is not the case. State-owned farms have been turned over to families who operate them, receiving the benefits from the farming in return for a low-interest payment to the state. There are also independent farmers who retain control of their land but form associations to avail themselves of technology and infrastructure. Most of the land in Cuba is farmed by CPAs. A CPA is formed when a group of farmers with small holdings chooses to pool their land and farm cooperatively. I visited one CPA begun by 28 farmers in 1977. Initially it was formed to access electricity, improve housing and improve farming technology. Now it has 245 members, creating a village of about 1,000 people with its own school and doctor. The main crop produced on this farm is bananas. As well, the farm has citrus fruits, cattle and 23 tractors to harvest sugar cane. What is amazing is that it also has a \$1.2 million laboratory that produces biological sprays. These effective, non-polluting sprays, made from native microorganisms, are produced by the farmers themselves and cost a fraction of their chemical counterparts.

These organic sprays, along with bio-fertilizers made from waste products in the manufacture of sugar, plus worm-composting organic waste material, are also used extensively in and around cities in raised-bed gardens called *organoponicos*. One two-hectare organoponico I visited is supplying seven markets with vegetables and fruits. It is irrigated using efficient, water-saving microjet technology. Since it is located in a densely populated area, transportation costs for incoming organic material used in composting and outgoing produce are kept to a minimum.

Cuba has not become a world leader in large-scale organic food production by choice. Before the Soviet Union collapsed in 1990, Cuba was the most industrialized nation in Latin America, producing mainly sugar, importing 60% of its food and relying heavily on subsidies of food, oil and technology from the Soviet Union. With its purchasing power falling from \$8.1 billion in 1989 to \$2.2 billion in 1992, and the USA increasing trade sanctions under the Torricelli Act, Cuba had to develop food self-sufficiency to feed its 11,000,000 people. Fortunately, Cuba had well-educated farmers who were organized and supported in many ways by their government. Through their agricultural extension programs, the government has helped farmers by fostering urban agriculture, and by supporting farmer-directed technology in the areas of plant and animal improvement, inter-cropping, bio-fertilizers and biological sprays. As a result, Cuban farmers, using oxen, hoes and old Russian tractors, are making great strides towards food self-sufficiency that is economically and environmentally sustainable. Wendy Holm is an agronomist who has taken eleven groups of Canadian farmers to Cuba as part of the Canada-Cuba Farmer to Farmer Project. She says, "New ideas with old equipment are better than new equipment with old ideas."

Ken Stemo is a farmer in Rimbey, Alberta who recently returned from a Canada-Cuba Farmer to Farmer Project delegation. Info: www.farmertofarmer.ca.

Annex 5 (cont'd)

BC Simmental News (British Columbia)
Fall 2002, Vol 22, No 2. September, 2002

Low-input Sustainable Agriculture in Cuba

John and I were privileged to join 20 interesting people from across Canada on the Farmer to Farmer tour to Cuba last March. We knew little about agriculture in Cuba and did not realize the effect of the US embargo on the people of Cuba. What we saw was the result of a modern revolution, the continuing resolution of a situation caused by outside factors that brought Cuba to its knees. The situation is being resolved with spirit and hard work by its people. Cuba still has some tough problems to confront in regard to social justice but what we saw and the determination of the people will be with us forever. This is my impression of the country. Mary Watt

Low input sustainable agriculture is a dream of Canadian farmers. Because of necessity the farmers of Cuba have become the world leaders in low-input sustainability in agriculture and the world model in organic farming.

History

After the revolution of 1959, the land was confiscated, the wealthy land owners and businessmen fled for the most part to the USA and especially to Florida. The land (sugar plantations and cattle ranches) was turned over to the state.

The U.S. trade embargo directed trade to other socialist countries, particularly the Soviet Bloc (who gave very favourable terms for Cuba,s sugar and in return the Cubans imported petroleum, domestic goods, agricultural supplies etc). Cuba increased the large-scale production of sugar. Three times as much land was devoted to sugar as to crops. The economic state of Cuba depended on the export of sugar because it was cheaper to import food stuff than it was to grow it.

A higher standard of living developed rapidly along with a high degree of modernization. The social well being of life was the highest in Latin America and one of the highest in the world (by 1988 adult literacy was 92.4% and infant mortality was 13.6/1000 births while the US was 10/1000 births). In fact Cuba ranked higher (11) than the US (15), in the Overseas Development Council,s Physical Quality of Life Index which measures infant mortality, literacy and life expectancy.

Change

This ideal relationship was about to change because of two factors; the Soviet bloc collapsed in 1989-90 and in 1993 the US tightened the trade embargo.

With the collapse of the Soviet bloc, trade with Cuba abruptly stopped. There was a glut of sugar on the world market resulting in a low commodity price. Cuba was left with her agriculture dependent on expensive agrochemical and petroleum imports, low world prices for sugar, a land base converted to a monoculture, and little income. Modern farms, with little means for operating, needed to double food production to feed the people. On top of this the United States with its "100% blockade" was trying to convince the world to starve this socialist country out. As U.S. Senators Jesse Helms stated when the Helms-Burton Act was passed, "I don,t care whether Fidel leaves vertically or horizontally, but he's leaving."

This "special period" was very hard on the Cuban people. Food became scarce and rationing of food was tightened. Malnutrition and hunger, unheard of in the post-revolution era, were seen because the caloric and protein intake of the population decreased by 30%. By 1991, only children seven years and under were guaranteed a litre of milk a day while it was removed from the ration card of adults and older children. There was also a lack of any other animal protein. When the lack of imported grain needed for modern dairy cows, and chickens became scarce, pork production became a priority of the government as pigs were easily converted to alternative food sources like municipal garbage and sugar cane by-products.

A new model for agriculture

Fortunately, because free education has been a priority since the revolution, Cuba had an infrastructure of scientists in biotechnology, health sciences and engineering. In the early 1990s the agricultural department rapidly set a course using the knowledge of these researchers to become self sufficient in food production.

Young scientists influenced by the ecology movement began developing agricultural models away from dependence on imported agrochemicals and towards alternatives such as the development of biological control of insect pests, and worm composting methods. The Cuban peasant became a resource for the knowledge of traditional farming practices and were encouraged to return to the land. In 1993, in order to increase productivity and efficiency the government gave land to the farmers who worked on state enterprises. They were allowed to buy machinery and equipment to work the land. In mountain areas the land was turned over to farmers for tobacco and coffee production. Small portions of unused land were given for personal use. The following year farm markets were opened to allow farmers to sell some surplus products and to allow the Cuban people to purchase food outside the ration system. Urban gardens were encouraged.

Today except for sugar and bananas, organic farming is the rule. Large areas of land, close to urban centres have been converted to organoponicos to feed the population. Raised beds irrigated by micro drip systems are filled with worm compost and grow huge yields of vegetables and fruit. Pests are monitored by simply trapping insects in a little honey water placed in tins. These are examined by agro extension scientists based in biolabs in the provinces. The biolabs are responsible for developing biopesticides (parasitic and predatory insects) and microbial antagonists to combat plant disease. CREE,s (Centres for the Reproduction of Entomophages and Entomopathogens) located on agricultural co-ops and state farms produce these products for local use.

Established vermicompost centres across Cuba produce tons of natural compost a year for the organoponicos. Crop rotation, intercropping, soil conservation and green manuring are common. The system is labour intensive due to the lack of tractors and fuel and a shift to animal power (oxen and horses) is commonplace. To provide the extra manpower needed, high school students are expected to work part of the day in agriculture and urban populations are encouraged to move back on the land. All of Cuba,s private farmers, including those organized into private co-operatives, are members of ANAP (National Small Farmers Association) and have elected members who speak for farmers in the national council.

The land base is managed in four different ways:

- Independents** - farmers work and sell independently without association with other farmers
- UBPC,s** - former state farms, about 20% of the land. Workers get a basic salary and receive bonuses for over production.
- CPA,s** - Co-op. Farmers that have sold their land to the co-op but own a share in the whole farm. They are ruled by an elected board of co-op members. Salaried workers get bonuses for overproduction, and members get their share of the profits monthly and yearly.
- SCC** - A credit and service co-op. The farms are still owned by farmers but they work co-operatively to receive technical assistance, knowledge and bank credit.

Farmers pay up to 15% tax depending on their proximity to large urban centres. The closer the farm the smaller the tax.

These organizations can contract with the state for production, guaranteed prices, crop insurance. Overproduction can be sold privately only after child care facilities, old peoples homes and other local needs are satisfied. The price of goods when sold in the markets is higher than the state price. Farmers are amongst the highest paid in Cuba; however by Canadian standards wages are very low. It is difficult to

compare the actual value of wages because of free housing, education, medical care etc. Food prices and goods (which are scarce) are subsidized by the government and are in the peso, stores and markets. Cubans are registered at one outlet for their rationed supplies and goods are sold at very low prices. However additional food may be purchased at peso, markets and the price is slightly higher, being the over production of the farmers. Those Cubans who work in the cash cow, tourist trade or have relatives in USA and have access to the American dollar can buy goods at dollar stores (Cuban dollars and American dollars are the same value). Here the selection is relatively good but the prices are high.

The national debt of Cuba is two million dollars because if there is no money nothing is bought. For example last November the hurricane destroyed a large part of the banana crop. The profits from the crop were to go to buy grain for chicken feed with the result there was no grain bought and the chicken houses were empty.

The Cuban experiment

„In the rest of the world an alternative model of agriculture exists in theory, but in practice it remains a dream. If the Cuban people have been shown to be anything during the past three decades it is audacious. Today, in the midst of the most severe crisis in their history, they are making a bold attempt to change the rules of the game. Though it is impossible to say if they will ultimately be successful, what they have already achieved under conditions of extreme adversity is impressive. We are left with images of the daughters and sons of peasant farmers producing cutting edge biotechnology, literally on the farm, and supplying their parents and neighbors with organic substitutes for toxic pesticides and chemical fertilizers. We remember the enthusiasm of young agricultural scientists and their determination, to quote Fidel Castro, to achieve miracles with intelligence and sweat. , And we can only hope that they do achieve miracles - not just for their population, but for all of us whose countries also face a crisis in agriculture. The Cuban experiment is the largest attempt at conversion from conventional agriculture to organic or semi-organic farming in human history. We must watch alertly for the lessons we can learn from Cuban successes as well as from Cuban errors. And it behooves us to support this experiment, which is so potentially important for all of us%o. 1

1 From The Greening of the Revolution, edited by Peter and Medea Benjamin, first printed 1994 as a result of an International Scientific Delegation and Fact Finding Mission on low-input sustainable agriculture in Cuba.

Article from B.C. Simmental News Fall 2002 Vol. 22 No. 2

ANNEX 6

Sustainable Cities

February 9, 2004

Husein E. Jeewanjee
Senior Program Manager
Projects and Innovation
Canadian Partnership Branch
Fax: 819-953-6357

Dear M. Jeewanjee,

Enclosed, please find our proposal, *Enhancing Sustainable Dairy Production Capacity in Cuba*, which we submit for your consideration in response to The Projects and Innovations Unit, Canadian Partnership Branch's December 2003 call for Agriculture Proposals. Our proposal submission is to the Environment and Sustainable Development Program (ESDP).

OVERVIEW

This is a proposal for funding a demonstration project in Havana Province, Cuba, whereby Canadian dairy farmers would share their experience in herd management with Cuban dairy farmers to increase milk production.

As you are aware, this project has been developed in close association with our Southern Partner (ANAP - Cuban Association of Small Farmers) and has received the formal approval of the Cuban Ministry for Economic Cooperation (MINVEC). It is also strongly supported by the Cuban Embassy in Ottawa.

The Proposal supports CIDA's funding criteria for agriculture projects as set forth in Promoting Sustainable Rural Development through Agriculture.

Building on the success of Cuba's sustainable legume/pasture systems, the project will boost Cuban agricultural productivity by sharing Canadian farm management skills to enhance the production of milk for the Cuban people, particularly children. This will have the effect of raising rural incomes, supporting environmentally sound, sustainable, pasture-based dairy production, and through the production of a teaching video, contribute to agricultural education and extension.

Specifically, the CIDA priorities we feel this proposal addresses are:

1. Enhancing food security, agricultural productivity and income, agricultural education and extension, and agricultural development.
2. Strengthening national capacity (farmer to farmer capacity links).
3. Creating and using traditional and new knowledge for development (combining Cuba's low-input grass/legume pasture system with Canadian know-how in animal management).

An integral part of this project involves capacity building through North-South exchanges and training (seminars, etc). As a result, a large part of the proposed budget has been allocated to salaries and fees associated with providing the South with Canadian expertise and project management.

BACKGROUND ON ICSC

The International Centre for Sustainable Cities' (ICSC) mission is to catalyse action for urban sustainability in Canada and internationally. For the past ten years it has done so mainly through practical demonstration projects using Canadian technology and expertise. ICSC believes that long-term development requires the pursuit of positive change that is socially just, economically vibrant, environmentally sound and politically accountable.

Since 1994, ICSC has worked on projects in Asia, Eastern Europe, and Canada that focus on sustainable development. CIDA has funded several of ICSC's projects. In 2002, ICSC's CIDA-funded South East Asia Solid Waste Improvement Project (SEALSWIP) was selected as an Ambassador Project by the Stockholm Partnership for Urban Sustainability Awards and was recently selected for a site visit by the Global Development Awards. ICSC has undergone CIDA reviews including full project audits. We were told that in a recent review by the CIDA Partnership Branch we were evaluated us as among the top three out of forty organisations reviewed. Please see our website (www.icsc.ca) for a more complete description of who we are, how we operate, where we work, and our philosophical approach to development work.

ICSC AND THE CANADA CUBA FARMER TO FARMER PROJECT

ICSC and Wendy Holm have been in consultation for the last two years regarding the Canada-Cuba Farmer-to-Farmer Project (CCFFP). As the Farmer-to-Farmer Project focuses more on rural development, ICSC had been reluctant to become involved. We did recognise that cities are dependant on their hinterlands, and that a project that involved increasing the capacity of rural Cuba to feed urban Cuba in a sustainable manner, avoiding the pitfalls of heavy dependence on imports of food and agricultural inputs, is with our mandate of promoting urban sustainability and sustainable development in general.

Furthermore, for the last 4 years, ICSC has been involved in urban greening and urban agricultural projects, first in Thailand and currently in Sri Lanka. This Project is similar to the CCFFP in that it involves peer exchanges. For example, in the Sri Lanka Program, exchanges are taking place between Sri Lankan, Thai and Canadian partners. We now see the possibilities for increasing synergy between projects and partners and promoting South-South collaboration by becoming involved in the Cuba-Canada Farmer-to-Farmer Project. Our expertise in public participation and using demonstration projects to influence policy will add value to the project. ICSC will be able to offer the institutional support to take the CCFFP to the implementation phase.

THIS PROJECT PROPOSAL: ENHANCING SUSTAINABLE DAIRY PRODUCTION CAPACITY IN CUBA

We believe that this exploratory work, *Enhancing Sustainable Dairy Production Capacity in Cuba*, for which we are currently seeking funding, is an extremely valuable project that has great potential for poverty reduction, economic development and sustainable agriculture practices. We also believe that it is in line with CIDA's social development policies, particularly health and nutrition and protecting children in that it will contribute to Cuba's goal of providing 1 litre of milk per child per day.

However, we see this project as a stepping-stone to a more extensive project in economic development and sustainability. In her preamble to CIDA's Policy Statement on Strengthening Aid Effectiveness (September 2002), the then-Minister responsible for CIDA, the Honourable Susan Whelan, stated rural development and agriculture should be emphasised 'not just for food security, but as an engine for economic growth.'" There is enormous potential to develop the value-added market in Cuba for dairy products and organic produce that would contribute considerably not just to self-sufficiency in food production, but to rural economic development, employment growth, and value-added (foreign currency earning) exports. For example, currently fruit growers in Cuba ship unprocessed organic fruit concentrate abroad to be processed into fruit juice and baby food. Cuba is unique in having such large-scale organic farming and with the development of the processing facilities and marketing skills would be in a far better position to take advantage of this

extraordinary resource. Furthermore, rural economic development can be an excellent strategy for managing urban growth. Rural to urban migration is one of the most prominent global trends of the last few decades and shows no signs of abating. However, prosperous small towns and rural areas can help slow the rush to cities so that urban areas have more time to adjust and absorb migrant influxes.

Unfortunately, too often in development work, the first phase of a demonstration project or exploratory mission will go forward, only to end abruptly when funds are withdrawn after the initial start-up phase. As such, it is our hope that this project, *Enhancing Sustainable Dairy Production Capacity in Cuba*, is viewed by the Governments of Canada and Cuba as being in line with country priorities and likely to be funded for substantive scaling up of the project if the criteria of the initial phase are met.

Next steps are still to be determined, but would involve the scaling out of the dairy management techniques and educational tools developed in this initial project, as well as expanding into the development of value-added agricultural products. We do not feel that it is in any of the stakeholders' interest to hold another one-off demonstration project or training session. Our strategic priorities are to scale up demonstrations and exploratory work from individual projects to more comprehensive programs. We feel that this serves all stakeholders better, allowing for substantive development and best use of resources.

For these reasons, ICSC is pleased to serve as the Canadian project partner, using Ms. Holm as the Project Manager.

With many thanks for considering this proposal, I look forward to hearing from you.

Dr. Nola-Kate Seymoar
President and CEO

cc:

Ambassador Carlos Fernandez deCossio, Embassy of the Republic of Cuba, Ottawa
Guillermo E. Rishchynski, Vice President, Americas Branch, CIDA
Lise Filiatrault, Conseillere (Cooperation), Embassy of Canada, La Habana
Catherine Ribas, Cooperation Officer, Embassy of Canada, La Habana
Marysse Hebert, Director, NGO Project Facility, CIDA
Ruben Ramos Arrieta Director de America del Norte, MINVEC (Ministerio Para la Inversion Extranjera y la Colaboracion Economica)
Lic. Mario La O Sosa, Director Relaciones Internacionales y Cooperacion, ANAP (Asociacion Nacional de Agricultores Pequeños)

ANNEX 7

CANADA CUBA FARMER TO FARMER PROJECT Preliminary Discussion of Phase Three Economic Research Potential

Wendy R. Holm, P.Ag.
Fall 2002

The Canada Cuba Farmer to Farmer Project is comprised of three components:

PHASE ONE (an ongoing component of the Project) are the farmer delegations, through which farmers from across Canada are exposed to the Cuban experience, causing a paradigm shift with important consequences in Canada. The farmer delegations also provide the seedbed for collaborative, bilateral projects that find their footing and emerge through Phase Two of the work. . (For example, Project One arose from discussions between Canadian and Cuban farmers in Camaguay and Holguin provinces.)

PHASE TWO consists of specific collaborative projects which emerge from the exposure of the farmer tours and serve to enhance the capacity of farmers in each country. (For example, under Project One, Canadian dairy farmers will spend several weeks twice a year for three years working with farmers at a cooperative in Camaguay province to upgrade farm management skills with the objective of increasing milk production. The second stage of the work will assist in extentioning this experience out to a cooperative in Holguin. In return, Canada will ask for access to a team of Cuban experts in commercial organic and urban agriculture to similarly access Cuba's expertise and experience in this area.

PHASE THREE, the economic research component of the work — reflects my professional concern with the effect of market concentration on economic, community and environmental sustainability and my vision that the Canada Cuba Farmer to Farmer Project can significantly contribute to the development of a new economic model for cooperative, ethical engagement. A Canada-Cuba led model that could be of use in many regions of the world. A model that makes economic sense to farmers.

This paper is intended to provide some preliminary thinking on Phase Three: the economic research component of the Canada-Cuba Farmer to Farmer Project.

EXAMPLE ONE - COOPERATIVE JOINT VENTURES

The process of "discovery" is a costly one when it comes to the development of international joint venture opportunities, and consequently the pursuit of such opportunities is often beyond the ability of farmer cooperatives. The main players in the joint venture arena are large, concentrated multinational corporations who hold tremendous market power; power used to leverage maximum economic advantage in trade negotiations. The economic concentration of such market players puts the sector they are negotiating with at a relative disadvantage. Often, this means the farming communities do not get their fair share of the economic pie.

If this happens - if the major share of the profits associated with the sustainable production of food is not returned to the communities and the land that produces that food - sustainability and communities suffer.

Creating a "new roadmap" that allows ethically-based Canadian farmer cooperatives with access to capital to easily identify and pursue joint venture arrangements with farmers in other countries (in Cuba's case, in partnership with the Government) is an important step to begin to address economic imbalances and achieve equity for all participants.

How This Might Work In Practice

What might such a system look like? Well, possibly this: Let's say three years from now a farmer cooperative in Canada (this could be a traditional cooperative or a farmer investment cooperative) sits down

at a computer terminal and signs onto the Canada-Cuba Farmer to Farmer Project. They enter several “keywords” that identify the areas of Cuban agriculture they are most interested in. For example: “citrus”, “herbs”, “honey”. They might also enter several keywords that identify their areas of farming expertise in Canada, for example “peas”, “pork”, and “seed potatoes”.

The model would then present to them the next three Cuban farmer cooperatives that match their interests and whose turn it is to be “exposed” to the model. The Cuban government would manage the list - e.g. which coops in Cuba are eligible to be “introduced” to Canadian farmer groups and whose turn it was next.

If interested in any of the opportunities presented, the Canadian farmers would then arrange, through the Canada Cuba Farmer to Farmer Project Office (a joint Canadian-Cuban entity), to go to Cuba and meet with the leaders of the three farmer coops. If it was determined that there was a “fit” between the interests of the Canadian farmers, the interests of the Cuban farmers, and the interests of the Cuban government, a draft plan for working together would be crafted. Such a plan would be jointly prepared by both sides (under the authority and direction of MINAG) and would follow clear rules and guidelines set forth by the Cuban Government with respect to all aspects of Canadian involvement.

Research would be undertaken by the potential Canadian and Cuban partners to validate the hypothesis presented in the plan (e.g. the economics). Providing such research was supported by further analysis and assuming the final collaboration plan is approved by the Cuban Government, the Canadian partners would work with the Canada-Cuba Farmer to Farmer Project Coordination Office to begin to implement their joint initiative.

EXAMPLE TWO - BUILDING A COOPERATIVE “TRADE BOX”

Canadian farmers have many products they would like to sell to Cuba. For example, specialty wines, cheeses, meats and vegetables for Cuba’s exclusive tourist resorts; grains and legumes; dairy cattle embryos.

Cuba has many products they would like to sell to Canada. For example, organic honey, fruits, juices, herbs, coffee to name a few.

When such trade transactions are undertaken by the private sector, profit-taking naturally - and appropriately - occurs. The size of the profit-taking and the relative equity of the transaction are commensurate with the degree of concentration (lack of competition) in the purchasing sector. Such transactions will of course continue. But other options suggest themselves... For example, are there benefits to be had from the creation of a cooperative “barter box” where credits are accumulated for exports and re-paid by imports? Where the “middleman” is eliminated and profits again recaptured by the primary players (Canadian farmers and Cuban society through the Cuban government)? Would there be anything to be learned from building a “test box” to demonstrate such a trade model? If successful, such a model (a “cooperative trade organization” or CTO, an ethical antidote to the World Trade Organization) could provide a high profile showcase for Canadian and Cuban leadership...

PROJECTS OF MUTUAL SUPPORT

Our proposed PROJECT ONE – a bilateral capacity building initiative to improve milk production in Holguin and Camaguiy provinces and share with Canada Cuba’s expertise in large scale organic methods - is a good example of projects of mutual support. Canadian farmers, world leaders in dairy production, are interested (because of the exposure they have gained through the farmer exchange) in using their skills to help Cuba’s dairy sector. In turn, our farmers would like to receive some assistance from Cuban farmers and scientists on commercial organic production.

Such mutually supportive projects, while having no “direct” commercial economic component (e.g. we are trading expertise, not goods) of course have very real economic benefits to both sides. And through the Project, we can apply for and get funding to support such ventures.

WHY CANADA IS INTERESTED IN CUBA

Canadian farmers face many concerns:

- Globalization
- Elimination of subsidies/supports
- Dilution of crop disaster mechanisms
- Increased import competition from monoculture, factory farms
- Reduction in Trade Protection (CITT)
- Increasing land and environmental compliance costs
- Cooperatives undermined
- Supply management under attack
- Highly concentrated suppliers/buyers; withdrawal of local processing capacity
- Fundamental changes in market structure (large food conglomerates take over from independent processors, distributors, and retailers)
- Multinational contract integration of farm sector
- Dramatic fall in farm income (decapitalization)
- Dramatic increase in farm debt
- Loss of independence of Canada's farmers

One way for farmers to capture the “positive externalities” of sustainable agriculture is to “ramp up” to organic. Because Cuba’s farmers are world leaders at organic agriculture, forming cooperative strategic linkages with Cuba gives us an unparalleled competitive advantage in that regard.

But its not just about learning how to do it organically in Canada. It’s also about strategic collaboration. Producing high-valued organic products in co-operative arrangements with Cuban farmers (with liaisons through the Cuban Government) and co-processing, co-packing and co-marketing/distributing them to a waiting world.

Sharing profits equitably and ethically between farmers in Canada and Cuba. Capturing back the margins from multinationals. Understanding sustainability.

Hitching together Canada’s capital, processing, packaging, international sales, marketing and distribution capacity with Cuba’s vast organic production capacity, rich soils, ample water and beneficent climate is a strategic way for Canadian farmers to work with Cuban farmers - through the Cuban Government - to capture international markets (and margins) for fresh and processed organic products. Why should farmer collaboration be restricted by geographics? Such new hybrid market competitors (multinational co-ops) can run rings around existing players because they are lighter and faster and can go where many of the multinationals cannot.

Presently, legislation in many Canadian provinces is changing to allow non-members to invest in cooperatives. Often, such venture capital investments do not work to the enduring benefit of the farmer. Properly harnessed, however, non-member capital can be an important source of funds. “Properly harnessed” means ensuring farmers remain in the driver’s seat and capital remains in the background (getting a decent return but not running the show). The Canada Cuba Farmer to Farmer Project will accomplish this.

Wendy Holm is a Canadian Agrologist, economist and journalist. She was named BC Agrologist of the Year 2000 for her leadership of the Canada-Cuba Farmer to Farmer Project.

ANNEX 8

Multinational cooperative capacity building – The Canada Cuba Farmer to Farmer Project
World Organic Congress in Victoria, Canada August 2002

Wendy R. Holm, P.Ag.

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Keywords: economics, sustainability, cooperatives, ethics, organic markets, trade, empowerment

Introduction

When concentrated market structures allow the capture of profit margins that should legitimately accrue to farm stewardship, then economic, environmental and community sustainability suffers. In 1999, Cuba received the prestigious Right Livelihood Award of the Swedish Parliament for global excellence in organic farming practices. The objective of this Project is to develop linkages between farmers in Canada and Cuba in support of sustainable agriculture and, in the process, create a new economic model for ethical international engagement. If multinational concentration is the cancer of the market system, multinational cooperatives are the antidote.

Description of Approach

In January of 1999, the Canada-Cuba Farmer to Farmer Project began with 20 farmers from British Columbia visiting sustainable farm cooperatives, research stations and processing facilities in Cuba. In August of that year, 27 Cuban farmers and scientists spent three weeks visiting farms, research stations and processing facilities in British Columbia. Now, three and one half years later, 207 farmers from across Canada have traveled to Cuba under this unique project. By allowing farmers to "stand on each other's land" and observe common stewardship practices, the farmer delegations lay the seed bed for Project success: relationship building and respect.

The next step is the development of a number of cooperative, capacity-building projects. For example, in Project One, Canadian dairy farmers will work for three years to help Cuban farmers increase milk production at cooperatives in Camaguay and Holguin provinces. In return, Cuba will help Canada develop centres of excellence in large-scale commercial organic practices and urban agriculture.

In the longer term, the objective is the creation of a new economic model for international cooperative joint venture opportunities. Cuban farmers have a comparative advantage in organic production of citrus, tropical fruits, coffee, vegetables and specialty crops. Canadian farmers have access to capital and expertise in processing, packaging, labeling, marketing and international sales. What is needed is an economic option that combines these strengths to maximize value-added and ensure that sustainable, ethical returns accrue to farmers – not concentrated market players. The result will be a new economic quarterback that can run rings around concentrated multinationals.

The Canadian advisory board is comprised of professionals in the fields of agriculture, environment, cooperatives, ethics and health; five voices essential to the dialogue if we are to understand and approach sustainability. We are in the process of constructing a parallel board in Cuba and, from that, a 10-member youth team will be struck (university students from each discipline in each country) to provide ongoing support and direction to the work.

<u>Dean Moura Quayle</u>	Faculty of Agriculture Sciences, Univ. of British Columbia;
<u>Dr. Evelyn Pinkerton</u>	School of Resource. & Environmental. Management, Simon Fraser Univ.
<u>Dr. Ian MacPherson</u>	Head, BC Inst. for Co-Operative Studies, University of Victoria;
<u>Dr. Susan Babbitt</u>	Department of Philosophy, Queens University;
<u>Dr. Warren Bell</u>	President, Canadian Assoc. of Physicians for the Environment

Acknowledgement

This work would be fully impossible without the support of Canada's farmers, the Cuban Ministry of Agriculture and our wonderful Cuban partners ANAP (Asociación Nacional de Agricultores Pequeños) and ICAP (Instituto Cubano de Amistad con los Pueblos).

ANNEX 8 (cont'd)

Intervención en el 14 Congreso Internacional de IFOAM

para

Jorge Ayala and Armando Perez,
INISAV, Sancti Spiritus Province, Cuba

VERSION EN ESPAÑOL

Primero que todo, nosotros queremos agradecer a Wendy Holm por darnos la oportunidad de hablar en este congreso y a la Dr. Deborah Henderson quién nos invitó a venir a la Columbia Británica.

Nosotros trabajamos en el Servicio Estatal de Protección de Plantas de Sancti Spiritus, una provincia central de Cuba.

Junto al servicio estatal de protección de plantas que nosotros damos a las granjas estatales, cooperativas y privadas, nosotros tenemos las mayores instalaciones de la provincia para producir organismos de control biológico, tales como:

Trichogramma
Telenomus
Bacillus thuringiensis
Verticillium lecanii
Metarhizium anisopliae
Beauveria bassiana y
Trichoderma harsianum

Este es parte del arsenal de soluciones para el manejo integrado y agroecológico de plagas desarrollados en Cuba en los últimos años.

El proyecto Canadá-Cuba Campesino a Campesino, desarrollado por el Grupo de Wendy, nos ha permitido identificar intereses comunes. El proyecto actual entre E.S.Cropconsult Ltd y la Protección de Plantas en Cuba es un ejemplo de ello.

La idea de vender *Trichogramma* a precios aceptables a los agricultores de arándano agrio en la Columbia Británica, llevó a la Dra. Henderson a Cuba in enero de este año y reunirse con nosotros en la Habana.

El proyecto ha ido avanzando y esperamos producir *T. sibericum* para ser enviado el año próximo en una escala experimental.

Una frase o una idea de nuestro héroe nacional José Martí, libremente traducida por mi podría ser útil ahora.

“El que sabe tiene que enseñar, el que no sabe tiene que aprender”.

Yo creo que en agricultura orgánica todo el mundo tiene algo que enseñar y algo que aprender y nosotros estamos abiertos en ambos sentidos.

ANNEX 8 (cont'd)

INISAV PRESENTATION TO IFOAM CONFERENCE IN VICTORIA, BC CANADA, AUGUST 2002

by

Jorge Ayala and Armando Perez,
INISAV, Sancti Spiritus Province, Cuba

VERSION EN INGLES

First of all we want to thank Wendy Holm for giving us the opportunity to speak in this Congress and to Dr. Deborah Henderson who invited us to come to British Columbia.

We work in Plant Protection State Service of Sancti Spiritus, a central province of Cuba.

Aside from the plant protection services we give to state, cooperative and private farms, we have the biggest facilities of the province to produce biological control organisms like:

Trichogramma
Telenomus
Bacillus thuringiensis
Verticillium lecanii
Metarhizium anisopliae
Beauveria bassiana y
Trichoderma harsianum

This is part of the arsenal of solutions to integrated and agroecological pest management developed in Cuba in the last years.

The project Canada-Cuba Farmer to Farmer developed by Wendy Group has allowed us to identify common interests. The current project between E.S. Cropconsult and Cuban Plant Protection in an example.

The ideas to sale *Trichogramma* at acceptable prices for the cranberry farmers in British Columbia brought Dr Deborah Henderson to Cuba in January of this year and meet us in Havana.

The project has been working and we hope to produce *T. sibiricum* to be sent the next year on experimental scale.

A phrase or an idea of our national hero José Martí, freely translate by me could be useful now.

“He who knows has to teach, he who doesn't know has to learn”.

I believe that in organic agriculture everybody has something to teach and something to learn and we are open in both sides.

ANNEX 8 (cont'd)

CANADA: CUBA Projeto Agricultor a Agricultor
Seminario Para Onde vai a Agro-Ecologia?
Goiania, Brazil, 6e8 novembro de 2003

Wendy R. Holm, P.Ag. The Holm Team, Bowen Island, B.C. Canada V0N 1G0
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Agricultura no Canadá: Questões setoriais

- Globalização;
- Eliminação dos subsídios/ajudas;
- Diluição de mecanismos de destruição de colheita;
- Aumento da concorrência das importações da monocultura das granjas industriais;
- Redução na Proteção Comercial(CITT), compensações e alegações de Dunping feitas por interesses dos USA.
- Aumento na complacência dos custos da terra e do meio ambiente;
- Cooperativas arruinadas;
- Gestão de ofertas atacadas;
- Alta concentração dos fornecedores e compradores; retirada da capacidade de processamento local;
- Cambios fundamentais nas estruturas do mercado (grandes conglomerados de alimentação tomam o lugar de atacadistas, distribuidores e beneficiadores independentes);
- Integração de contrato no setor da agricultura pelas multinacionais;
- Queda dramática na renda dos agricultores (descapitalização);
- Aumento dramático das dívidas dos agricultores;
- Perda da independência dos agricultores canadences;

Análise

Se a concentração das multinacionais é o câncer do sistema demercado, então as cooperativas multinacionais são o antídoto.

Objetivo

Criação de um modelo ético de compromisso internacional entre cooperativas agrícolas do Canadá e de Cuba, servem para construir elos sustentáveis entre agricultura, saúde, cooperação, meio ambiente, nutrição, éticas e comunidades.

Mandato

Desenvolver um modelo através do qual, agricultores canadences e cubanos, possam trabalhar em cooperação para construir uma capacidade na produção e marketing, que vão melhorar a situação econômica da agricultura, o meio ambiente, assim como melhorar a sustentabilidade ecológica e nutricional da terra e das suas comunidades.

Objetivos Específicos do Projeto

- Apoiar as práticas sustentáveis da agricultura no Canadá e em Cuba.
- Criar um novo modelo internacional (joint venture) de cooperativas dos próprios agricultores para a produção, processament e marketing de produtos orgânicos não transgênicos, destinados para a União Européia, Japão e Canadá.
- Um modelo com aplicações globais.
- Reverter os lucros econômicos da elite financeira para os agricultores dos dois países.
- Fazer a conexão entre a sustentabilidade da saúde dos nossos corpos, da nossa terra, das nossas comunidades e do nosso eco-sistemas.
- Demonstrar a verdadeira liderança canadence na procura ética de:
 - Governancia: Participação e Democracia
 - Equidade: Justiça econômica e social
 - Saúde: Humana e do Eco-sistema
 - Sustentabilidade: Segurança alimentar e melhorar recursos