INDIGENOUS DEVELOPMENT MODEL AS AN ALTERNATIVE TO WESTERN DEVELOPMENT MODEL: THE SIX NATIONS CASE STUDY

by

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Community Development and Counselling Psychology
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ABSTRACT

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The purpose of this dissertation is to contribute to a theoretical framework for an Indigenous development model through an exposition and analysis of the implementation of a community-based development project in the Six Nations of the Grand River Territory, Ontario, Canada. The model identified here is the legacy of Indigenous peoples and their traditional knowledge and practices.

The study focuses on the implementation of a "pilot" project entitled Community-Based Rural Development Project (CBRDP). This study analyzes the contribution of Indigenous knowledge and practices in the implementation of an alternative development model which effectively works for Indigenous communities. Furthermore, the study highlights the benefits that the project has brought to the local economy, rechannelling financial funds from unproductive federal and provincial government programs (i.e. unemployment insurance, social assistance, local industrial-oriented training) into the CBRDP whose social goals of job-creation and income-generation, bring

about social change for a more uniform (equal) distribution in quality of life, human dignity, and regained cultural pride and self-esteem.

To summarize, the study examines the hypothesis that cultural retention and survival of Indigenous (traditional) knowledge in agriculture, promotion of self-sufficiency and sustainability are feasible, no matter how destructive and intrusive the Western sciences and development system have been.

The research was accomplished through the compilation, review and evaluation of relevant literature and comparative analysis of the Western development model and development alternatives, specifically Indigenous development and sustainable development. Likewise, the example of community-based development selected for this study has unique characteristics to describe the process of Indigenous development.

The Western economic development model has shown itself inadequate to meet Indigenous peoples' needs of self-sufficiency and sustainability. It is necessary to identify the structural changes that need to be made and explore new directions in order to build healthy economies and societies. The problems are systemic, which means that they are interconnected and cannot be understood within the fragmented and limited methodologies of the academic disciplines and government agencies. Therefore, transformations are necessary en route toward self-sufficient Indigenous economies. The situation of social and economic inequality is a result of the crises (technological, economic and cultural) which humankind is fighting against in this period of our history. It is important to Indigenous peoples to try to

reclaim the best of their cultural origins (the balance of man-nature-cosmos) thus favouring the growth of a new civilization for a new era.

The CBRDP project involves Indigenous peoples and provides an innovative approach in that it looks toward Indigenous culture, knowledge and heritage in agriculture and the development and distribution of Indigenous food products as a means of identifying valuable cultural, educational and training opportunities in a number of areas. These areas include Indigenous culture recovery, traditional environmental knowledge in agricultural practices and technologies, product development, food processing, marketing and business administration.

This project is also unique in that Indigenous cultural knowledge, philosophies and technologies provide the guidelines for the proposed agricultural and business development activities while acknowledging and incorporating the experience and wisdom contributed by the project's stakeholders.

In conclusion, with the implementation of community-based development projects, like the "pilot" CBRDP project developed around Indigenous agriculture knowledge and practices, the accelerating problem of dependency and poverty in Indigenous communities can be alleviated; as well, the recovery of Indigenous traditional knowledge and self-sufficiency can be accomplished at the same time. Finally, participating community members have been instrumental in further defining the direction and planning of the CBRDP project and are primarily responsible for its implementation.

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INDIGENOUS DEVELOPMENT MODEL AS AN ALTERNATIVE TO WESTERN DEVELOPMENT MODEL: THE SIX NATIONS CASE STUDY

CHAPTER I

INTRODUCTION

Purpose of the Study

> "To remember how we Indians perceive the world you only have to remember two things. One is: Everything in the universe is alive! The other is: We're all relatives! Clearly, if we in modern society really saw the world in that holistic fashion, we would behave quite differently toward the Earth and its creatures, and we would not have the ecological and environmental dilemmas we now face."
>
> **- Vine Deloria, Indigenous American leader, in Harman, Willis W., Reclaiming Traditional Wisdom for the Needs of Modern Society.**

Recent efforts to rethink development have attempted to deconstruct the power relations embedded in the idea of development itself. In addition, emerging models have focused on the contribution of those that have been the traditional raw materials of development: Indigenous peoples, rural labour, women, children and the environment. From being nation, technocracy and bureaucracy oriented, alternative development as it is approached now focuses on local people's organizations and international non-governmental organizations as agents of transformation.

In contrast to the capitalist notion of development which has been superb at providing freedom (for capital, for individual mobility and for labour mobility within nations),

local models of development focus on identity and survival. Calling for research that emerges from local categories of reality, they focus on practices and/or policies that do not degrade the environment or increase inequality among peoples.

Western models of development believe that there is an end stage of modernity to reach. A key exponent of these theories was Walter W. Rostow, who introduced his classic study, a 'non-communist manifesto', in 1960 as a description of a series of intermediate evolutionary stages of economic growth. From the perspective of Rostow, underdevelopment becomes the original state of society: the starting point from which all change begins. The second stage occurs when the preconditions for economic "take-off" emerge. This usually happens as a result of technological diffusion, when a more developed country comes into contact with a traditional one. In Rostow's third stage, actual take-off is experienced through increased manufacturing, trade, and commerce. In the fourth stage, "the drive for maturity," modern technology is increasingly applied to the bulk of the society's resources, leading ultimately to the fifth stage of "high mass consumption," as evidenced in the leading countries of Western Europe and North America at the time of writing. As Gustavo Esteva clarifies, "Rostow recognized that modern history cannot be reduced to the limited and arbitrary classification of stages of economic growth, but he found that such generalizations may be the key for confronting the current challenges" (1992).

Alternative development models in order to be successful must be able to meet freedom and mobility needs, identify needs beyond nation and ethnicity, survival needs, and well-being

needs. And these models must be able to provide for economic growth (based on the idea of savings, hard work, distribution but not exploitation of developing countries, Indigenous peoples, women, labour or the environment) and for distributive justice (an economic floor). Furthermore, alternative development models must speak to the social, spiritual, cultural, economic, political and cosmological aspects of society. Development must be responsive to moral as well as socio-economic sensibilities (Dei, G., 1990, 1992, 1992-1993, 1993).

The purpose of this dissertation is to contribute to a theoretical framework for an Indigenous development model through an exposition and analysis of the implementation of a community-based development project in the Six Nations of the Grand River Territory, Ontario, Canada. The model identified here is the legacy of Indigenous peoples and their traditional knowledge and practices. The two major research questions are:

1. What does the Indigenous development model entail in the specific context of an Indigenous community as exemplified by the case study?

2. How has the selected community-based development project contributed to strengthening or limiting the socio-economic, cultural and spiritual bonds of the Six Nations community?

The study focuses on the implementation of a "pilot" project entitled Community-Based Rural Development Project (CBRDP). This study analyzes the contribution of Indigenous

knowledge and practices in the implementation of an alternative development model which effectively works for Indigenous communities. Furthermore, the study highlights the benefits that the project has brought to the local economy, rechannelling financial funds from unproductive federal and provincial government programs (i.e. unemployment insurance, social assistance, local industrial-oriented training) into the CBRDP whose social goals of job-creation and income-generation, bring about social change for a more uniform (equal) distribution in quality of life, human dignity, and regained cultural pride and self-esteem.

To summarize, the study examines the hypothesis that cultural retention and survival of Indigenous (traditional) knowledge in agriculture, promotion of self-sufficiency and sustainability are feasible, no matter how destructive and intrusive the Western sciences and development system have been.

For purposes of this study "community-based development" refers to a strategy based on local control which directs social, cultural and economic development for the benefit of the people in a locality or community of interest, and which takes into account its distinctive social, cultural and political needs and aspirations. Moreover, community-based development is a bottom-up approach based on the ideas of consciousness-raising and empowerment. Community-based development, originally associated with social problems and issues, emerged in the 1960s as a holistic, ecological approach to community betterment with a concentration on involvement of local residents as problem solvers. Community-based development is a useful mechanism for previously colonized peoples because the process enables

communities to sustain cultural continuity and decision-making, ensuring community cohesion. The most important characteristic of this approach is the belief that lasting progress can only be achieved through the development of local understanding, local initiative, and local self-help with broad local participation.

The research was accomplished through the compilation, review and evaluation of relevant literature and comparative analysis of the Western development model and development alternatives, specifically Indigenous development and sustainable development. Likewise, the example of community-based development selected for this study has unique characteristics to describe the development process of Indigenous development (Dei, G., 1990, 1992, 1992-1993, 1993).

In this first chapter the negative impacts of the Western development model are analyzed and the implications for Indigenous peoples' rights, cultures, environment and territories are outlined. Also, the theoretical and practical significance of Indigenous development is discussed and its applicability as an alternative development model for Indigenous communities is analyzed.

The Problem

The theme of this study has been chosen due to the author's conviction of reclaiming traditional methods of knowledge and practices for the Indigenous peoples of America in an attempt to purposefully rediscover their origins. Most important, the study marks an attempt to find an alternative development model to the

crisis that Indigenous communities are living today. Many Indigenous peoples are socially, economically and culturally affected by the current development system. The disintegration of the family, the fragmentation of traditional values, the distorted economy, the erosion of spirituality, the damage to the environment seem to have no solution.

The Western economic development model has shown itself inadequate to meet Indigenous peoples' needs of self-sufficiency and sustainability. It is necessary to identify the structural changes that need to be made and explore new directions in order to build healthy economies and societies. The problems are systemic, which means that they are interconnected and cannot be understood within the fragmented and limited methodologies of the academic disciplines and government agencies. Therefore, transformations are necessary en route toward self-sufficient Indigenous economies. The situation of social and economic inequality is a result of the crises (technological, economic and cultural) which humankind is fighting against in this period of our history. It is important to Indigenous peoples to try to reclaim the best of their cultural origins (the balance of man-nature-cosmos) thus favouring the growth of a new civilization for a new era.

On the other hand, the Western development model, as a current worldwide dominant perspective, has excluded other perspectives, perhaps unconsciously, resulting in the silence of Indigenous peoples' voices. Wherever the dominant perspective intentionally ignores or denies the legitimacy and authenticity of other perspectives, the process of communication and understanding is non-existent. The experience of Indigenous

peoples indicates that the dominant perspective assumes itself to be correct above all others. Because of this, all other perspectives are denied or minimized.

In the past, economic planning for Indigenous peoples was kept in the hands of experts and bureaucrats isolated in luxurious offices. In the future, all planning should be based on the collective input of the parties involved. Strategic planning must be viewed as something done by Indigenous communities, not for Indigenous peoples by consultants. This reflection on current Indigenous problems (exploring new paths) involves the implementation of a new vision, replacing outdated conceptual models. Indigenous peoples must develop systemic thinking with recourse to communal intelligence and creativity. They must elaborate a how-to arsenal accessible to all Indigenous communities. It is time to work on a how-to approach to the development of an entrepreneurial culture within Indigenous communities.

Some Indigenous communities in Canada have developed economic strategies, projects and institutions that are contributing to improvements in their local economy. The "pilot" CBRDP project has demonstrated the capability of the Six Nations of the Grand River community members involved in this project in the planning and implementation of a socio-economic development alternative.

The CBRDP project involves Indigenous peoples and provides an innovative approach in that it looks towards Indigenous culture, knowledge and heritage in agriculture and the development and distribution of Indigenous food products as a means of identifying valuable cultural, educational and training

opportunities in a number of areas. These areas include Indigenous culture recovery, traditional environmental knowledge in agricultural practices and technologies, product development, food processing, marketing and business administration.

This project is also unique in that Indigenous cultural knowledge, philosophies and technologies provide the guidelines for the proposed agricultural and business development activities while acknowledging and incorporating the experience and wisdom contributed by the project's stakeholders. Furthermore, the project incorporates people who traditionally and historically have been excluded from full economic participation and recognizes the value of "non-traditional" skills, abilities and experiences.

The participants involved in the project are identified by mainstream society as minorities, and underprivileged and disempowered people by socio-economic standards. Therefore, this project seeks to put an end to the myth that portrays Indigenous people as incapable of achieving their socio-cultural and economic independence. The people's involvement ensures and maintains the authenticity of community ownership and empowerment.

The CBRDP has been warmly received by the Six Nations of the Grand River because it deals with a basic necessity of life -food- through the strengthening of human resources, self-sufficiency through training, job creation and new business opportunities. It has also been rewarding to see the support and cooperation from all sectors of the Six Nations community: the traditionalists (Longhouse peoples) and non-traditionalists, different local government/leadership representations, social

service-oriented agencies, religious institutions, all working together for a common objective.

In conclusion, with the implementation of community-based development projects, like the "pilot" CBRDP project developed around Indigenous agricultural knowledge and practices, the accelerating problem of dependency and poverty in Indigenous communities can be alleviated; as well, the recovery of Indigenous traditional knowledge and self-sufficiency can be accomplished at the same time. Finally, participating community members have been instrumental in further defining the direction and planning of the CBRDP project and are primarily responsible for its implementation.

Significance of the Research

Throughout Indigenous communities the phenomenon of economic, political, and social dependence and its ensuing socioeconomic crisis have been documented again and again by Indigenous and non-Indigenous writers for decades. Statistics have been compiled and profiles drawn to support the reality faced by Indigenous peoples across Canada. Government departments and agencies have published thousands of pages of analysis, all concluding that a state of crisis exists across the Nation. And yet, the situation remains basically unchanged. Some effort has been dedicated to the matter of economic development by a number of organizations: papers have been written, studies have been financed, and resources have been

allocated through several programmes at various government levels.

Richard-Marc Lacasse (1993) describes this situation as a hopeless one. "Aboriginal communities are living in a time of crisis. Too many Aboriginal peoples are still outside the Circle. The disintegration of the family, the fragmentation of values, the distorted economy, the erosion of spirituality seem to have no remedy." For instance a November 28, 1996 editorial column (Robert Sheppard) in the Globe and Mail states: "By the time of Confederation in 1867, war, starvation and diseases such as smallpox and tuberculosis had reduced the number of Natives by more than three-quarters. It would take more than 100 years - until the early 1980s- for the Native population in Canada to climb again to what it had been when the white man first arrived. By then, 40 per cent of those on reserves would be on welfare. Similarly, a January 26, 1985 headline in the Saskatoon Star Phoenix states: "Indian Conditions Couldn't Be Worse!" The article goes on to graphically portray the continuing gravity of the overall situation gripping Indian Communities, such as family breakdown, education failures, housing and infrastructure deficiencies, unemployment, incarceration, social diseases and violent deaths. In addition, the *"Guide to the Principal Findings and Recommendations of the Final Report of The Royal Commission on Aboriginal Peoples"* indicates that: "Without consultation with those affected, Canada fundamentally altered the treaty relationships between autonomous Aboriginal peoples and the Crown at the time of Confederation with section 91(24) of the *Constitution Act (1867)* making Aboriginal people and their lands the object of unilateral federal legislation, and

followed that in 1876 with the first of various version of the *Indian Act*. These actions, over time, transformed independent Aboriginal nations into bands and individuals who were clients of a government department and wards of the state.

This report also states that: "Canada's policy for many of the intervening years sought to undermine Aboriginal institutions and life patterns and to assimilate Aboriginal people as individuals into mainstream society. The instruments to achieve that were:

1. The Indian Act
2. The removal of jurisdiction from traditional Aboriginal governments
3. The break-up of historic Aboriginal nations through the creation of "band" and "settlement" governments
4. Government control over who is recognized as an "Indian"
5. Forced attendance by several generations of Aboriginal children at residential schools
6. Relocation of scores of Aboriginal communities
7. Adoption of Aboriginal children into non-Aboriginal homes
8. loss of two-thirds of the land set aside in treaties
9. Exclusion of Aboriginal culture from processes related to education, justice, health, and family services
10. Substitution of welfare for an effective economic base.

Finally, the Report underlines that: "The results of the above government policies over several generations are seen in contemporary economic marginalization and social disintegration:

1. Low participation in the economy: the participation rate by Aboriginal people in the labour force (57%) is below that of all Canadians (65%).
2. High unemployment: rates among those in the labour force rose from 15.4% in 1981 to 24.6% in 1991 despite advances in education (the average Canadian rates were 8.5 and 10.2 respectively: Statistics Canada).
3. Poverty: earned income per employed Aboriginal individual in 1991 was $14,561 compared to $24,001 for all Canadians, and declined by $1,000 over the decade 1981 - 1991.
4. Dependency: 46% of people on reserves live on welfare.
5. Low educational attainment: 42% of Aboriginal children complete grade 12 compared to 61% in the broader population.
6. High rates of incarceration: 14% of inmates in federal penal institutions are Aboriginal rising to 49% and 72% in provincial institutions in Manitoba and Saskatchewan respectively.
7. Poor health: the incidence of tuberculosis and diabetes is 17 times and three times higher among the Aboriginal population
8. Income Losses: Canada is losing $5.8 billion annually that would be added to the GDP were Aboriginal people productively employed at rates equivalent to those in adjacent non-Aboriginal communities
9. Excessive expenditures: governments today spend 57% more on Aboriginal people than on the same number of other Canadians, largely for remedial measures and social

assistance because of poverty, though part of this additional expenditure is due to higher costs of servicing isolated communities

10. Cost to the economy: the income foregone ($5.8 billion) plus the remedial expenditures ($1.7 billion) leads to a loss of $7.5 billion annually." (Guide to the Principal Findings and Recommendations of the Final Report of the RCAP, 1996, pp. 4-5).

A number of the studies and reports, referred to earlier, have looked into the reasons underlying the inability of Indigenous communities to plan, implement, and sustain sound economic activity. And in some cases, clear statements have been issued that define the specific root causes for this reality. But such reports usually focus on one or two areas that need improvement, and often lack the macroeconomic perspective that might provide the framework for long-term strategies for success.

As was pointed out by the Royal Commission on Aboriginal Peoples (RCAP) in their report (1996): "... Policy makers and the general public have tended to assume that the economic problems of Aboriginal communities can be resolved by strategies directed to individuals thought to be in need of assistance. Thus, welfare for those out of the labour force, training for those who need to upgrade their skills, loans or grants for entrepreneurs wanting to start their own businesses, and relocation assistance for those moving to urban areas in search of jobs are often seen as necessary and sufficient policy interventions. Typically, the problem is defined as Aboriginal

individuals not having access to opportunities for employment or business development in the larger Canadian society.

This approach ignores the importance of the collectivity in Aboriginal society (the extended family, the community, the nation) and of rights, institutions and relationships that are collective in nature. It also overlooks the fact that economic development is the product of the interaction of many factors - health, education, self-worth, functioning communities, stable environments, and so on. Ultimately, measures to support economic development must reach and benefit individuals, but some of the most important steps that need to be taken involve the collectivity -for example, regaining Aboriginal control over decisions that affect their economies, regaining greater ownership and control over the traditional land and resource base, building institutions to support economic development, and having non-aboriginal society honour and respect the spirit and intent of the treaties, including their economic provisions." (RCAP, 1996: Vol. 2, p.777.)

Because of the failure of modern economics and technology, interest in the possibility of technological alternatives has also been awakened in some governments and international organizations. If, however, the answers are only external -in other words, looked at from a Western point of view- the attempt will be sterile. It is only by focusing development efforts through Indigenous peoples' worldview that the probabilities of success can become higher; they may be partial on a short-term basis but with massive repercussions on a long-term basis.

Indigenous peoples' fundamental value is sustainability, and they conduct their livelihoods in ways that sustain

resources and limit inequalities in their society. What makes Indigenous economies so radically different to Western economies are the traditional principles of sustainability versus scarcity of resources, of sharing and distribution versus accumulation, and of kinship usage rights versus individual exclusive ownership rights.

The term development has come to mean different things to different people over the years (Dei, G., 1990, 1992, 1992-1993, 1993). Development has created dependency, strengthened unequal dependency relations between societies, and also reinforced and maximized the system of control, exploitation, injustice and inequality within societies (Dei, G., Ibid.). Development has been perceived by Indigenous peoples as a very negative concept. The large scale economic and industrial development that has taken place without recognition of and respect for fundamental rights has left Indigenous peoples adamantly opposed to the whole notion of development. Capitalism dominated development has been imposed from outside without respect for land and resource rights or the right to participate in the control, implementation and benefits of development. The adverse impacts of this kind of development have untold consequences for Indigenous peoples.

The Western economic system has imposed global cultural homogenization, as it has brought environmental calamity. The fact that current economic practice actually destroys more wealth than it creates reconfirms concerns raised by Indigenous peoples and environmental groups in international fora recently. Arguably the focus on 'sustainable development' had served to direct attention away from debates over the gross inequities

between the developed and developing countries resulting primarily from exploitative global economic relations. One might wonder whether emerging concerns over the state of the global environment today in Western consciousness are not due in part to Western fears and anxieties over the consequences of global warming. There is also the concern that if the poverty issues relating to environmental abuse are not addressed there would be no end to the influx of people to the developed countries fleeing deteriorating politico-economic and ecological conditions in the developing countries (Dei, G., 1990, 1992, 1992-1993, 1993).

'Sustainable development' can mean many things, but it has one underlying message: keep the volume of extraction/emission in balance with the regenerative capacity of nature. That sounds reasonable enough, but it hides a conflict which has yet to win public attention, even though fundamental issues like power, democracy and cultural autonomy are at stake. It is evident that it is the entire earth with its physical limits which is at the centre of the debate. As long as the planet is seen as the level at which the life-supporting feedback cycles operate, the planet will be the favorite object of future planning and politics (Sachs, I., 1987).

We must view the issue of 'sustainability' from a peoples' culture, history, local skills, ethnoecology, local ecosystem and human's role in nature (Sachs, 1987; Matowanyika, 1989:10). 'Sustainable development' entails local peoples identifying their own needs and then development experts assisting them to plan and implement viable programmes and projects to meet the defined needs. The viability of these projects and programmes

could be assessed in terms of how they sustainably enhance both the habitat and the socioeconomic status of the majority of the population. This approach requires having to integrate and articulate ecological and environmental issues and problems of social, economic and political development (Dei, G., 1990, 1992, 1992-1993, 1993)

An important aspect of the concept of 'sustainable development' is the understanding that environmental degradation is not a problem of the relationships between people and their habitat, but of relationships among peoples competing for access to productive resources (Horowitz, 1988:3). The concept also requires and understanding that 'sustainability' cannot be achieved independently of, or in opposition to the interests of the Indigenous peoples and rural poor majority. Furthermore, the means of achieving 'sustainable development' have to acknowledge the contextual variability of the problem (Matowanyika, 1989:5). Most development experts and analysts agree that any development agenda that contributes to an intensification of rural poverty and a degradation of environmental resources is not sustainable development. However, not many share the conviction that 'development' that neither leads to local empowerment nor comprehensively addresses the fundamental issues of social justice and social development is not 'sustainable development'(Dei, G., 1993)

If 'sustainable development' is to be a credible approach to development then there are other human rights issues that have to be considered as part of the national development process. The discourse of 'sustainable development' must encompass the domains of human rights, participatory democracy

and local involvement and input in the decision making processes.

A justified skepticism exists among Indigenous peoples concerning the benefits of sustainable development when it is defined and articulated in terms of world capitalist economy and the associated globalization processes, at the same time that the daily needs of Indigenous peoples are not being met (Dei,. G., 1992-1993)

An important agent in the evolution of the concept of sustainable development was the World Commission on Environment and Development, which was established by the United National General Assembly in 1984 to study issues of environmental protection and development, and which published its report and recommendations featuring the theme of sustainable development in the now widely circulated document, *Our Common Future* (1987). (Also called the "Brundtland Report" after the Commission's chair, Norwegian Prime Minister Gro Harlem Brundtland).

The concept of sustainable development is reflected prominently in the concluding documents of the Rio Earth Summit of 1992, particularly the environmental program and policy statement known as Agenda 21 (U.N. Doc. A/Conf.151/26, vols. 1-3, 1992). This concept thus embraces normative elements of both the environmentalist and economic development agendas, while relying on science and the existence of objective criteria to provide its methodology. However, sustainable development is a largely theoretical concept that is only beginning to be implemented in large scale projects in the less developed world.

Large scale industrial development programs in many cases have dispossessed Indigenous groups of their ancestral lands. By

the same token, environmentalists' efforts to preserve ecosystems frequently have ignored the legitimate interests of Indigenous peoples.

Through the United Nations and other international institutions, the world community has become increasingly concerned with promoting and protecting the rights of Indigenous peoples. Indigenous peoples are now widely acknowledged to have rights to continue to live as distinct communities on their ancestral lands; to benefit from the natural resources of their lands, and generally to be in control of their own destinies. Such rights have been included in International Labour Organisation Convention No. 169 on Indigenous and Tribal Peoples (Arts. 13-19 entered into force 5 September, 1991) and arguably can be identified as part of customary international law (Anaya, J. 1996).

Indigenous peoples' rights have begun to be incorporated in the philosophy of sustainable development as manifested most notably by Chapter 26 of Agenda 21. Chapter 26 states in part:

> In view of the interrelationship between the natural environment and its sustainable development and the cultural, social, economic and physical well-being of Indigenous people, national and international efforts to implement environmentally sound and sustainable development should recognize, accommodate, promote and strengthen the role of Indigenous people and their communities.

Chapter 26, furthermore, calls for legal mechanisms to secure Indigenous peoples' access to and control over their lands, recognition of their traditional dependence on renewable resources and ecosystems, and procedures by which Indigenous

peoples are able to be active, meaningful participants in decisions concerning the development process.

Some development schemes have even included the specific objective of acculturation, with the underlying intent to eventually terminate state obligations and extinguish Indigenous rights. Indigenous populations have found themselves in the position of the conquered, the subjugated or the annihilated.

The process of assimilation was developed with the processes of proletarianization and displacement of Indigenous peoples, particularly in Central and South America. Therefore, assimilation is a social consequence of development that does not respect cultural diversity. State programs, the growing demand for natural resources by national and international markets, expansion of capitalism by transnationals caused a demand for cheap labour. The consequences for Indigenous peoples were the abandonment of their traditional homelands to the cities or peripheral areas, and to become part of an exploited labour force.

For instance, there are areas in South America where Indigenous peoples are virtually slaves through their debt-bonded labour. In such cases, people are often pressured into taking loans at very high interest rates. These debts are paid with labour, but are usually managed in such a way that the debt can never be paid off, resulting in permanent indentured labour. Any attempt to evade repayment can result in imprisonment, and in extreme situations, debtors are murdered and their killers rarely prosecuted.

Moreover, loggers, miners, commercial fishers, small farmers, plantation growers, dam builders, oil drillers -all

come into Indigenous peoples' territories to seek their fortunes. Governments that equate progress with export earnings aid them, and military establishments bent on controlling far-flung territories back them. Similarly, the expansion of oil and gas enterprises and of "modern" mineral production, as well as expansion of the military activities of the state have led to further land deprivation, to pollution and to destruction of the animal and vegetable species upon which Indigenous peoples depend for their survival.

The situation of Indigenous peoples in Canada is often likened to developing countries' poverty, in terms of both socio-economic and cultural deprivation. The introduction of family allowance payments, of old age pensions and other cash benefits to assumed male heads of individual families elevated the nuclear family as the self-sufficient unit of production and, thus, undermined the traditional role of the local Indigenous communities. Furthermore, welfare payments served to individualize poverty and in this way conspired against the traditional responsibility of the Indigenous community to ensure equal distribution of wealth.

The orientation of development strategies has been largely related to economic growth and financial considerations. The term development is always defined by the economic politics of the user. In recent history we have seen two major tendencies that defined development, the capitalist and the socialist. These two definitions struggled with each other intensely but always converged in the seemingly inherent need for industrial expansion, for urbanization and for the globalization of

structures to govern people, natural resources and the environment.

In terms of social organization, both socialism and capitalism tend to generate highly centralized, materialistic, homocentric societies, the main difference being that the socialist state has the function of redistributing wealth, while the capitalist one has only the responsibility of ensuring its generation. Moreover, both systems are expansionist and neither is concerned with the fact that the earth's resources are finite. Therefore, both systems, whether capitalist or socialist clash with the decentralized, spiritual, cosmocentric nature of the Indigenous way of life.

Increasingly, national economies are giving way to the global economy. While this is often considered a relatively recent phenomenon, the roots of globalization go back to the first contact between Europeans and Indigenous peoples in various and diverse parts of the world. From the time of first contact, Indigenous peoples' economies were integrated into the production of commodities for the global market. This was the case whether the commodities were furs, tropical agriculture, precious metals, cotton or rum. While Indigenous peoples have become largely irrelevant to the productive process, in many parts of the world Indigenous peoples continue to be impoverished through the production of coffee, coca and other cash crops for the global economy.

Globalization is the expansion of capital worldwide and in pursuit of profit. It takes the form of the growth of international trade, of international investment and lending and the international migration of people. The form of globalization

changed from the merchant to the industrial capital as the "new world" attracted interest for its forest, mineral, and other natural resources. These activities did nothing positive for Indigenous peoples, who do not own or cannot even find jobs in these industries, but rather displaced them from their land and denuded or polluted their environment.

The global transformation can be understood by analyzing the role of the nation-state, which claims hegemony over the whole world. The nation-state is the mechanism by which groups mobilize force for the purpose of concentrating wealth in the hands of a few people, namely those who control the force.

Most non-industrialized countries have been colonized economically and culturally. Not only do they depend on their trade with industrialized countries, but also on the way of life considered desirable by the elites in power, as well as their political culture, which is very similar to the political culture of the elites of the Western countries. In many non-industrialized countries that have gone through de-colonization processes, cultural alienation has not been overcome. The ideas of comfort, of industrial speed and efficiency are, despite their risks, the paradigm that guides their intellectuals and rulers.

Some Indigenous peoples have not known "modernity", they have only known its by-product for export: "modernization". This is nothing else than the compulsive process of imposing a way of life which is typical of a certain culture, which claims to be universal, on other cultures which are considered backwards and underdeveloped. The result of this practice has not brought any well-being to the Indigenous populations of

developing countries; similar outcomes took place in Indigenous communities of the Northern "developed countries". The more modernization there is, the more poverty there is for Indigenous communities. Most of the infrastructure that has been produced by modernization, remains, despite its short history, as a useless trace of a certain way of imposing the culture of development. It is development in the name of the progress of the few at the expense of the dominance of the others.

Western society's perceptions of Indigenous societies, through stereotypes and images of Indigenous life, are clouded by three images: the Indigenous way of life as harsh, primitive and dying. Marshall Sahlins clearly demonstrated in his work *Stone Age Economics* that the egalitarian life is not "nasty, brutish, and short", but, is highly efficient from economic and ecological perspectives. It is also a very social way of life.

One of the most serious threats to the survival and well-being of Indigenous economies and way of life are public policies that do not comprehend the traditional Indigenous way of life. To understand this issue we can examine past economic development policies of the World Bank related to tribal peoples. The official policy statement of the World Bank on Tribal Peoples was prepared by Robert Goodland in 1982 (Bodley 1988). The policy is based on some very questionable assumptions, which by omission are at the core of Canadian economic development policy:

1. All tribes will inevitably be developed;
2. Development will benefit tribal peoples;

3. Tribes will be allowed a choice; and

4. Tribes must become ethnic minorities.

Bodley in his paper "The World Bank Tribal Policy: Criticisms and Recommendations" (1983) clearly refutes all the false assumptions which form contemporary economic development and World Bank policy.

National development policies weaken tribal autonomy and reduce tribal control over their resources leading, as Bodley puts it, to detribalization. Bodley recommends that "the World Bank should not fund projects that would disturb or displace isolated, fully traditional tribal groups."

The 1982 World Bank Tribal Policy states that tribes have a choice, but the policy does not insure freedom of choice for tribal peoples. Bodley recommends that full discussion is necessary for "how the choice process can be implemented for partly integrated tribal peoples". There must be a process whereby tribal peoples can reject economic development projects.

This World Bank policy is directed at making "citizens" or ethnic minorities of tribal peoples. It has been conclusively shown that the process results in social disruption, disease, loss of subsistence economy, and loss of identity for tribal peoples. Bodley recommends that the World Bank refuse funding for projects where tribes have no voice in national development projects affecting them and their lands. Finally, Bodley advocates that "the World Bank policy should be subject to critical review by a panel of tribal political leaders" and other authorities to ensure a wide range of perspectives.

Indigenous organizations, NGOs and other groups have expressed criticism of the World Bank for financing projects that threaten or destroy their environment. If more influenced by the actions of these grassroots organizations, the World Bank's Indigenous policy may help reduce the negative impact of these planning. As result of this criticism, the World Bank has revised its original policy toward Indigenous peoples, bringing it more in line with current thinking on the role of Indigenous peoples as active participants in and beneficiaries of development projects. The Bank adopted its first policy toward Indigenous peoples in 1982, partly in response to violent Indigenous opposition to a World Bank-funded dam project in the Philippines.

Until the late 1970s, it was standard World Bank practice to assume that all rural populations in developing countries were essentially alike (i.e., economically underdeveloped and poor) and that there was no need to make special provisions in project design for ethnically or culturally distinct populations. In 1986, the World Bank's Office of Environmental and Scientific Affairs conducted a desk review of their experience in implementing the policy directives contained in the Bank's Indigenous peoples policy (Operational Manual Statement, OMS 2.34). A 1987 review, indicated that several Bank-financed projects experienced unnecessary delays and conflicts, because inadequate attention was being given to the unique ethnic and cultural characteristics of affected populations. After two years of discussion within the Bank, and some consultation with outside organizations and experts, in

1991, the Bank issued a revised Operational Directive (OD 4.20) on "Indigenous Peoples."

This 1991 Bank policy recognizes the rights of Indigenous peoples to natural and economic resources, and urges their "informed participation" in Bank activities that affect them. The Bank, it suggests, should assist borrowing governments "in establishing legal recognition of the customary or traditional land-tenure systems of Indigenous peoples." When a proposed investment might harm Indigenous concerns, borrowing governments should develop and "Indigenous Peoples Development Plan" that would commit resources for health care, productive infrastructure, education, or "entitlement to natural resources." The policy includes mechanisms for the participation of Indigenous peoples in developing such a plan, but Indigenous communities cannot veto Bank projects. There is, however, a provision for stopping or postponing projects where "adverse mitigation plans have not been developed." At the current time, it is difficult to tell whether this new policy will be any more successful than the Bank's earlier one concerning Indigenous peoples in Bank-financed projects. There are some indications, however, that the Bank has learned from the experience of the past decade and has a much stronger institutional commitment and capacity to ensure the implementation of its current policy framework than it did in the past. Much of the Bank's current work with Indigenous peoples must be seen within this broader framework of the search for alternative strategies or models of development in which the rights and aspirations of local populations are taken into account (Shihata, Ibrahim F.I., Spring 1992).

Classical models of economic development have shown themselves inadequate to meet the current crises in Indigenous communities in Canada. Reasons for these communities' poverty are multiple and complex, but one factor is fundamental: Indigenous people have not been allowed to control their own resources or to craft their own development strategies within the values of their culture. For the most part, Indigenous knowledge systems have been under attack for being "backward" and a "hindrance" to modernization. Western concepts of "objectivity" and "control" have discredited Indigenous innovators whose contribution to technology development has traditionally been undervalued and undermined the capacity of Indigenous knowledge systems to evolve, adapt and contribute in innovative ways to all society.

There is no single economic answer to the problems confronting Indigenous people. While there are numerous solutions and answers to these problems, they lie in the hands of the very people they affect. Given the opportunity, Indigenous communities can and will create unique, culturally-relevant and sustainable economic development strategies and programs. Community organizing for economic development requires a community to take stock of its people resources, or "human capital", to assess the capacity of individuals in order to effectively define their own development.

Development can neither be transferred, nor carried out by others. This implies that people organize themselves to determine their own needs and agenda, in a manner that is culturally, economically, politically, and ecologically sustainable over the long term. The value of living resides in

the living, not in the possession of goods that destroy the environment and alienate others.

When socio-economic strategic planning takes place in Indigenous communities, it must be based on an ever-present set of values which includes the preservation of traditional knowledge and practices, language, culture and spirituality. A principle of Indigenous spiritual traditions teaches that Earth is a Mother to be nourished, celebrated and respected. Future Indigenous socio-economic development must be congruent with this precept.

The overall mandate regarding socio-economic development of Indigenous communities should be to establish a strategic plan that will revive the traditional sense of dignity, pride and spirit in Indigenous communities.

The methodology should be flexible, creative and culturally relevant. The preparation of a socio-economic strategic plan requires eclectic research-action techniques: documentary research (historical research on past stories, participatory research), communal participation (community consultations, public forums, press conferences), and workshops on future vision of the community (elders, women, youth) etc. These approaches empower the community to release an enormous quantity of human energy not available when Indigenous peoples are constrained to act as passive recipients of expertise and supervision. The community must be the local arena in which change is implemented.

By identifying the underlying factors that inhibit growth in Indigenous economies, concrete strategies can be developed to address them. It is of the utmost importance, however, that

these strategies be designed within a global perspective that will benefit Indigenous societies as a whole. Care and attention must be maintained toward the overall goals and objectives of building strong, productive, sustainable development. Effective leadership: local professional and/or technical talent is essential to ensure that cultural values are respected, that minimum standards are established, that clear goals and objectives are defined, and that monitoring procedures are maintained throughout the process of implementing these strategies.

Indigenous peoples can help to change the long-established view of development and re-define development in order to remove the negative connotation. Indigenous peoples can help to de-corrupt the corrupt. The Indigenous dimension of development must be provided if the human right to development is to become a reality for all peoples. Indigenous peoples, as distinct members of the world community, should also be beneficiaries of the human right to development. Indigenous peoples must take advantage of the "subjective" nature of the human right to development. If Indigenous peoples fail to be involved in this re-definition of the human right to development, development will always adversely affect them, their lands, their basic human rights and fundamental freedoms. In other words, if cultural values, beliefs and practices are ignored in development, social experiments and economic development will fail.

As indicated earlier, this study will focus on the implementation of a "pilot" project entitled Community-Based Rural Development Project (CBRDP). This study analyzes the

contribution of Indigenous knowledge and practices in the implementation of an alternative development model which effectively works for Indigenous communities. Furthermore, the study highlights the benefits that the project has brought to the local economy, rechannelling financial funds from unproductive federal and provincial government programs (i.e. unemployment insurance, social assistance, local industrial-oriented training) into the CBRDP whose social goals of job-creation and income-generation, bring about social change for a more uniform (equal) distribution in quality of life, human dignity, and regained cultural pride and self-esteem. To summarize, the study examines the hypothesis that cultural retention and survival of Indigenous (traditional) knowledge in agriculture, promotion of self-sufficiency and sustainability are feasible, no matter how destructive and intrusive the Western sciences and development system have been.

The presentation of the case study, the pilot CBRDP project, is discussed in the next two chapters. Chapter 2 provides the historical background of Six Nations of the Grand River Community and it analyzes the socio-cultural and economic aspects, with special emphasis on the agricultural sector because of the important historical role it played in the economy and cultural life of the community. In addition, it describes the historical evolution of Indigenous peoples' agricultural system and food production. Chapter three details the implementation of the CBRDP as an alternative to the Western development model and its repercussions. Chapter four defines the theoretical framework of the Indigenous Development Model.

CHAPTER II

THE SIX NATIONS OF THE GRAND RIVER TERRITORY: A HISTORICAL BACKGROUND

Iroquois League of the Six Nations (Haudenosaunee)

The Iroquois League is a union of Iroquoian-speaking North American Indigenous peoples, originally composed of the Seneca, Cayuga, Onondaga, Oneida, and Mohawk nations. The Tuscarora became the "sixth nation" of the league in the early 18th century. The Iroquois Confederacy occupied a territory comprising what is now New York's Mohawk Valley and Finger Lakes region, bordered on the north by Lake Ontario and the Adirondacks and on the south by the Catskills and what today approximates the New York-Pennsylvania state line.

Formation of the League

Although the precise date of the league's founding is unknown, some historians suggest that the confederacy was probably formed by the early 16th century. Traditionalists believe that the Confederacy is perhaps 1,000 years old.

According to an anthropological account, the alliance between the five Iroquoian Nations was struck sometime between 1400-1600 AD. The motive for the union of the Haudenosaunee appears in the literature in one of two ways. First, some

authors have elected to discuss the union in a utilitarian context, highlighting its importance as a means of deterring armed conflict between Iroquoian people or, "to resist the pressure of contiguous nations."

The second manner for discussing the creation of the league involves a recounting of what the Iroquois termed "the Great Peace". In his essay, "Structure, Continuity and Change" Iroquoian Ethnologist William Fenton outlines the Iroquoian account of the peacemaker, an Iroquoian prophet, who brought to the Iroquoian people a message of peace and urged the Iroquois to unite as one. Through this union, argues Fenton, the Iroquois created a body of relatives who, through a consensual style of governance, spoke with one voice. The formation of the League of the Iroquois provided member nations with a greater share of power and influence throughout the country. The archaeological record offers another possible motive for the union of the Iroquoian nations, suggesting that it was linked to their desire to acquire more European trade goods.

According to Iroquois oral history, the league was founded by a Peacemaker, a leader of divine status, who persuaded the original Five Nations to give up intertribal warfare marked by international wars. Historians of Indigenous culture view its formation as a defensive response to conflicts with neighboring Huron and other Algonquin-speaking tribes. Hiawatha, the Peacemaker's earthly spokesman, doggedly traveled among the five nations in an attempt to unify them. His persistence succeeded, and the tribes united in what proved to be a nearly invulnerable political alliance until its eventual decline, but not collapse, during the American Revolution.

Initially, conquest and the gaining of economic and political advantages were of secondary importance. Eventually, however, in dealings with the British and French and, later, the British and the colonists, the league skillfully played off opposing parties against one another and dominated neighboring groups for economic and developmental gains. Before the late 18th century, the Iroquois League had access to lands and resources as far west as the Mississippi River.

At its inception, the league was modeled after already existing family, clan, and community organizations; its aim was not only to unite its members through symbolic kinship relationships but to maintain the autonomy of individual tribal members. The league's Grand Council consisted of 50 life-appointed male sachems, or peace chiefs, who were nominated by the headwoman of certain sachem-producing lineage in each clan. The Onondaga had 14 sachems, the Cayuga 10, the Oneida and Mohawk 9 each, and the Seneca 8. After lengthy ratification procedures, the council members became responsible for keeping the internal peace, representing the body of tribes to outsiders, and coordinating tribal activities in unified warfare against non-members.

Major decisions were reached through unanimity, compensating for otherwise unequal tribal representation. An individual sachem could be deposed through impeachment proceedings initiated by his lineage's headwoman. Some historians claim that the highly democratic political organization of the Iroquois League may have served as a model for the compilers of the United States Constitution.

Alliances

The arrival of Europeans in Iroquoia had reportedly stimulated the construction of alliances on two fronts: Indigenous nations allying with other Indigenous nations and secondly, Indigenous nations allying with colonial powers. Both types of alliances are significant since it signifies the Confederacy's full participation in not only mutual defense pacts but also inter-societal commerce.

The practice of establishing economic alliances with those outside of the Confederacy begins in 1643 with the Iroquois agreeing to exchange beaver skins to secure Dutch trade goods. This marks not only the beginning of a commercial relationship with Europeans that continues in various forms for 350 years but as well, provides Indigenous entrepreneurs with numerous opportunities. In one sense these opportunities can be viewed narrowly, such that wage labouring (guides, hired hands, trappers) is the defined limit of opportunity within the new commercial relationship. On the other hand, opportunity can be interpreted broadly, such as the case where the Iroquois attempt to become "middlemen" or brokers in the trade.

Literature dealing with the commercial/economic/military relationships struck between members of the Confederacy and Europeans show that each party came to the negotiation sessions with a defined self interest and refused to compromise their position as autonomous nations. Moreover, it is apparent that the treaties and alliances that were constructed were, in fact,

fashioned in an Iroquoian context. Fenton convincingly illustrates how outsiders were effectively "adopted" into the Iroquoian system of kinship, being referred to as "Brother" by Iroquoian negotiators. Yet adopted-kin-through-treaty were forgetful of their kinship responsibilities and reciprocal obligations, thus forcing the Iroquois to take the initiative to remind Europeans of the nature of their Covenant with the members of the Confederacy. The noted Mohawk chief, Joseph Brant, furnished the British Crown with a reminder in 1783 when he addressed Sir Fredrick Haldimand on the issue of a land grant in Upper Canada for members of the Six Nation Confederacy. Having supported the Crown during its ill-fated attempt to quash the American War of Independence, some members of the Confederacy now sought refuge in Upper Canada and restitution for their loses:

"Brother, we, the Mohawks, were the first Indian Nation that took you by the hand like friends and brothers, and invited you to live amongst us, treating you with kindness upon your debarkation in small parties... we assisted you in conquering all Canada, and then again, for joining you so firmly and faithfully, you renewed your assurances of protecting and defending ourselves, lands, and possessions against any encroachment whatsoever..." (Johnson, 1964:39).

The Move to the Grand River Reserve

Members of the Confederacy assumed an active role during the American War of Independence, siding with the Crown in its

battle against the rebelling colonists. The Confederacy was left virtually homeless due to a rebel military campaign waged in 1779, which forced the Iroquois out of their ancestral homelands. Now refugees, some members of the Confederacy elected to make a treaty with the new American government and accept a resettlement in western New York. Fearing retribution, others decided to emigrate to upper Canada and settle on a land reserve set aside by Sir Fredrick Haldimand to show the Crown's appreciation of the Confederacy's loyalty during the war. Known as the Haldimand Grant, the 570,000 acres of land situated in the Grand River Valley was allotted by Proclamation on October 25, 1784, for members of the Confederacy who moved north to resettle in British North America. The Six Nations were granted six miles on either side of the Grand River. Today the Reserve is located in four townships in Southern Ontario, with a population of over 17,000 people, 8,326 of whom live on the community,

In their examination of economic development on Indigenous reservations in the United States, Stephen Cornell and Joseph Kalt argued that sovereignty and the presence of effective institutions of self governance were the key elements which enabled Indigenous reserve-communities to develop an active and prosperous economy. A review of the documentary record and several secondary sources suggests that the Confederacy transported both these elements to the Grand River Valley community, therefore explaining (in part) why the settlement grew into a thriving and prosperous reserve-community in less than a century.

A central theme in the history of the community is the struggle to protect its sovereignty despite attempts by the Crown to place restraints on the authority of local Indigenous government. One of the first instances where the community exercised its political sovereignty was in its rejection of the government of Upper Canada's attempt to control the sale of reserve lands. Through the sale of over 300,000 acres of land, the Confederacy had, in effect, created a community development fund, described as "a fund by (land) sales as an annuity for their comfort..." Confederacy Chiefs would also write a formal protest to Sir John A. MacDonald regarding the passage of the 1876 Indian Act; legislation which provided the Superintendent of Indian Affairs with broad, discretionary powers to intervene in the local affairs of any reserve-community.

The Confederacy proposed that they be exempted from the legislation and be guided, instead, by "...[our] own laws, rules and regulations suitable for our advancement as well as our welfare..." Correspondence from the files of the Department of Indian Affairs (DIA) reveals, however, the desire among government officials to undermine the sovereignty of the community, with suggestions of instituting elected Band councils (as the Indian Act required) in place of the system of governance by a council of hereditary chiefs. Though the system of governance at Six Nations has since changed from one that was exclusively the domain of the hereditary council to an elective system of local government as stipulated by the Indian Act, members of the community, past and present, have continually rejected the notion that they have compromised their

sovereignty. "We are the allies of the Queen," remarked one informant," and "not a conquered people."

The manner in which the Confederacy dispensed money from their annuity fund further illustrates how the community exercised their autonomy. Minutes of the Confederacy Council meetings reveal that the chiefs assessed local needs and allotted funds as was deemed necessary. Moreover, the documentary record suggests that the local Indian Agent generally complied with the chiefs' decisions. The actions of the council of hereditary chiefs demonstrates also that an effective mechanism for governance within the community had been established at the Grand River settlement. A cursory examination of the Council minutes from 1876 to 1924 finds the Council dealing with a wide range of issues including reserve lands, band membership, social welfare and finance -including loans to local entrepreneurs and students, debt payment and investments.

Given the nature of Canadian policy on Indigenous people during the late nineteenth and early twentieth centuries, it would be difficult to believe that officials at the Department of Indian Affairs recognized the Six Nations community as a sovereign, self-governing entity. Instead it might be suggested that, initially, cost conscious government officials merely tolerated the Council and its activities. Indeed, the community was essentially self-supporting and so would not place any strain on the Department's coffers. This tolerance was perhaps pushed to its limits when several chiefs sought to have the Canadian government recognize their community as a sovereign entity during the early 1920s.

The Replacement of Traditional Government at the Six Nations of the Grand River Reserve

The documentary record gives some indication of the escalation of tension between the Hereditary chiefs and the Department of Indian Affairs by the 1920s. Discontent over the service rendered by the local Indian Agent led the Council to call for the appointment of one of the members of the community to replace the Agent, a motion which was not well received by the Department who felt that the Council was "exceeding its authority."

A year later, the Six Nations Warrior Association addressed the Council with a complaint regarding the growth of Canadian government intervention in the affairs of the community. While such concerns were quickly dismissed by the local Indian Agent, it was clear that these complaints were well founded: the Department of Indian Affairs had thwarted the community's attempts to gain full control over their education system during the early years of the new century, placed local agriculture under regulation during the period of the First World War, and had ordered the community to participate in the gathering of statistical data for the national census.

These measures were an encroachment upon the community's sovereignty, leading some chiefs to call for formal recognition of the community's special status as a sovereign entity by the government of Canada. In the end, attempts to earn such recognition were unsuccessful and seemed to add to the growing

chasm between members of the community who supported efforts to earn recognition of their "special status and those who viewed the heredity chief system of governance as anachronistic and ineffectual when compared with Euro-Canadian municipal governments which surround the Grand River reserve.

The chasm would grow larger as the Confederacy chief, Deskaheh, pursued the issue of special status for the Six Nations community abroad, lobbying members of the League of Nations for recognition of Iroquoian sovereignty. Deskaheh's quest created even greater tension between the Canadian Government and the Confederacy.

Consequently, the Department of Indian Affairs turned its attention to the Six Nations community and, in 1923, launched an investigation into the nature of governance on the reserve. The investigation focused on the division within the community and implied that governing by hereditary chieftainship was exclusionary and thus, undemocratic.

The investigation and its report formed the basis for an Order-in-Council, passed in September of 1924, which called for a change in the system of governance at Six Nations. On October 7, 1924, members of the Royal Canadian Mounted Police and officials of the Department of Indian Affairs oversaw the takeover of the Council House where the confederacy chiefs met and, in accordance with the Order-in-Council, and elected system of governance was implemented.

It is difficult to gauge how an abrupt transition in governments effected the socio-economic life of the community. On the one hand, statistics published annually by the Department which offer a glimpse of the reserve-community's economy fail to

show any significant decrease in the income earned by people in the community. Yet testimony by some members of the Six Nations community at the 1947 hearings to revise the Indian Act noted that "there was considerable discord when the system was introduced" and that "Our reserve during the last twenty-five years has gone backward rather than forward."

There is a strong indication that the transition in local government at the reserve had arrested economic development. Additional testimony during the proceedings suggests that local agricultural activities had atrophied between 1924 and 1947 and that the change to an elected system of governance had placed serious restrictions on the band council's ability to loan funds for improvements or to provide seed capital for new businesses in the community.

The restrictions on loans, a diminished agricultural economy and the absence of any industrial development meant that few on-reserve employment opportunities existed for members of the Six Nations community as they entered the 1960s. Residents would have to wait another two decades before the local economy experienced any significant growth.

The Six Nations community has served as the focus for numerous journal articles and as the subject for as many books. The majority of these sources have devoted little attention to the nature and scope of the Iroquoian economy. The discussion has centered largely on the amalgamation of the five Iroquoian nations that inhabited upstate New York - the Mohawk, Oneida, Onondaga, Cayuga, and Seneca peoples, and the inclusion of the Tuscarora by 1772 as a sixth member - and often examined in detail the political culture that emerged within the confederacy

known as the Haudenosaunee. While the latter discussion has overshadowed the examination of issues and ideas relating to Iroquoian economic history, it does help explain the economic strategies which the New York State Iroquois, and their relations who, in 1784, migrated north to Upper Canada and settled in the Grand River valley, chose to follow. Members of the Confederacy were able to undertake certain economic activities and capitalize on specific opportunities by virtue of their membership in an alliance like the Haudenosaunee which wielded a considerable amount of influence throughout North America.

Six Nations Economic Profile

There has been a deliberate and focused effort to develop the economy on the reserve over the past century. Council records prior to 1924 indicate that the Council made investments off the reserve with a view towards increasing the value of their holdings. These holdings were viewed as a source of community wealth to be used both for economic and social purposes.

The present entrepreneurial activity is consistent with Iroquois economic history. Since first contact, Iroquois people have engaged in trade and have sought out economic opportunity with their neighbours, both other Indigenous groups and European settlers. There appears to be a long history of economic opportunism and entrepreneurial behaviour which appears to the foundation for current economic activity.

The Six Nations economy is primarily a wage economy, i.e. most people work for others for wages: of a 1987 labour force of 2,687 people, 27% were unemployed, 73% were employed. Of those employed, 8% were employed by the public sector on the reserve; 17% were employed in the on reserve private sector and 75% were employed off reserve. The unemployment rate fluctuates seasonally, primarily due to agriculture and tourism. Government employment programs are utilized to smooth out the fluctuations.

The private sector appears to have grown considerably since the 1960's. From less than 20 businesses in the mid 1960's, there are (1991) more than 200 businesses of all types on the reserve. The industrial profile of these businesses generally reflects that of the mainstream, i.e. primarily service sector. approximately 500 members are employed in this sector.

Consistent with the development of organizations in the mainstream, Six Nations has become a society of organizations. The last decade has seen the development of a secondary and tertiary social network. The secondary network consists of the cultural, religious or recreational organizations such as the Veterans Association, Agricultural Society, Women's Institutes, etc. which reflect traditional causes. The tertiary network consists of a social services organizations which have been established in response to community needs.

The Six Nations economy is integrated with the surrounding local economies: until recently, most of the purchases of consumer and capital goods, financial services, and recreation were made off the reserve. The establishment of supermarkets, video outlets, lumber supply stores, office supply stores, craft supply stores has made it possible for residents to purchase on

reserve. A recent study (1990) estimated that the reserve contributed $125m per annum to the local economies. While Six Nations is well aware of its regional contributions, it is clear that its neighbours are also aware of their significance.

While the labour force is relatively young and less well educated than the Canadian mainstream, the level of participation in educational activities is extremely high: The community plan indicates that 44% of all adults between the ages of 5 and 39 engage in some form of training and education. This indicates a population which is extremely interested in development and advance.

Over the past decade, access to sources of capital has been greatly improved. Entrepreneurs and local business people can now access varying levels of capital through a variety of sources including Touch the Sky, Six Nations Development Corporation, Lender Loan Programs of major banks, Six Nations branch of the Royal Bank of Canada, Bank of Montreal, Six Nations Circle Fund.

The community has correctly identified and taken advantage of a number of strengths which have greatly assisted economic development efforts:

-Six Nations is located in one of the most densely populated regions of the country. The location provides one day trucking access to :

85% of the total Canadian population

48% of the total U.S. population

65% of total North American personal incom

60% of all manufacturing establishments in North America market area of approximately 130 million people

54% of total retail sales in North America

10 of the top 12 U.S. industrial markets;

-Its relatively large landbase of 45,000 acres;

-Its human resource base which is relatively well trained and motivated

-Large on-reserve population who work off reserve and who wish to spend its disposable income on the reserve if possible

-A critical mass of consumers necessary to support small businesses.

-Six Nations of the Grand River is located about:

96 km (60 miles) East of London

48 km (30 miles) Southeast of Brantford

112 km (70 miles) Southwest of Toronto

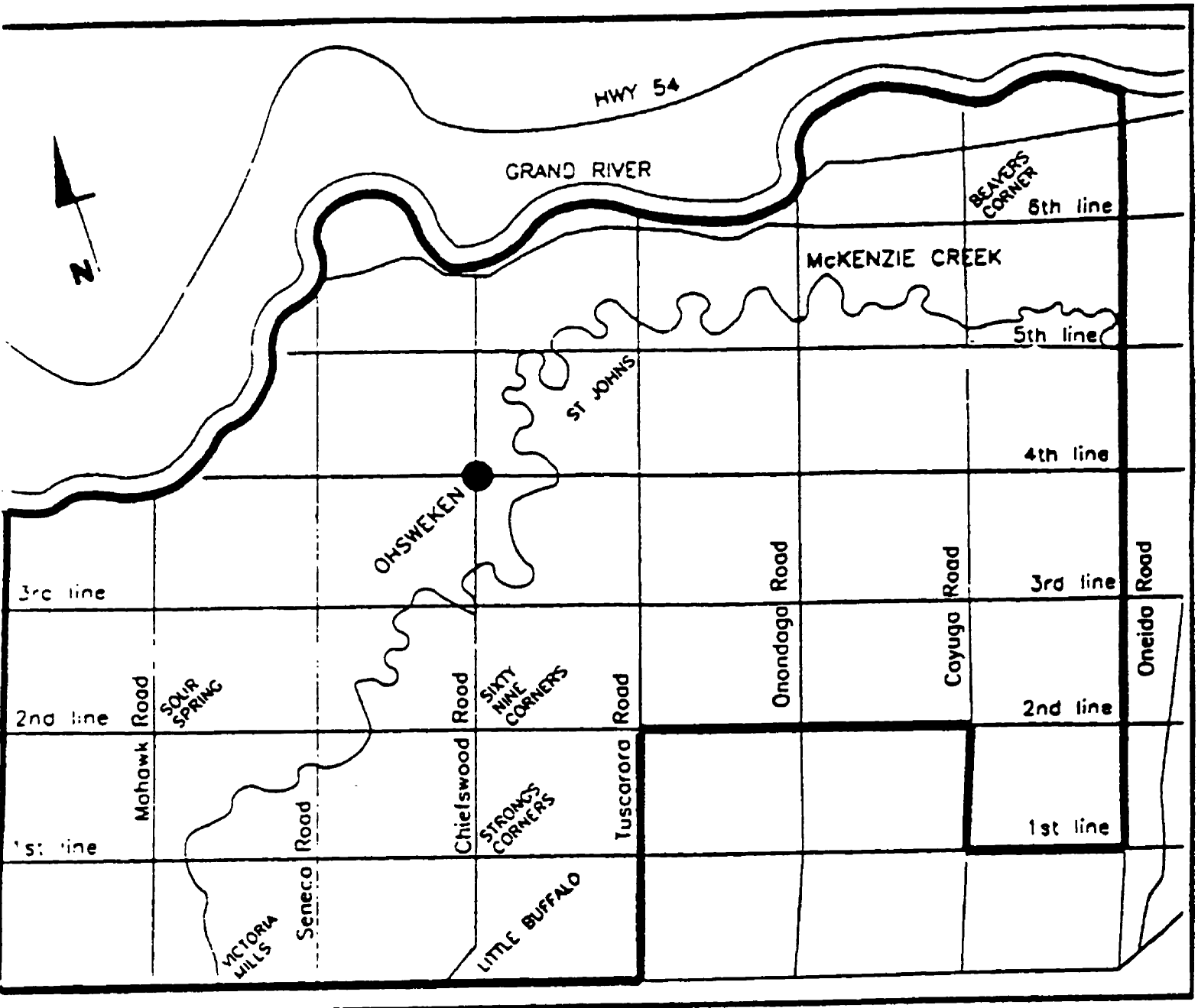
96 km (60 miles) West of Niagara Falls

48 km (30 miles) South of Hamilton

112 km (70 miles) West of the U.S./Canada Border

Members of the community have continually expressed a desire to develop their community goals but strategies have not been generally agreed upon and no clear process exists for obtaining consensus. There is a consensus that the economy needs to be developed and that the basis for this development is business development.

The community seems to have implicitly decided upon an economic development strategy of "guided capitalism". This is a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BEAVERS CORNER
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McKENZIE CREEK
5th line
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OHSWEKEN
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1st line
Mohawk Road
SOUR SPRING
Chiefswood Road
SIXTY NINE CORNERS
Tuscarora Road
Onondaga Road
Cayuga Road
Oneida Road
STRONGS CORNERS
Seneca Road
VICTORIA HILLS
LITTLE BUFFALO

Reserve Map

form of capitalism in which there is respect for individual sovereignty and in which the role of the government is to assist or guide the individual into the proper choices through a series of interventions such as access to capital, training and other forms of support.

At the time when the Six Nations Community Profile 1991 was conducted, the reserve unemployment rate was indicated at 29.5 percent, nearly three times the Canadian national average. From a total reserve population of 8,040 the total work force population (ages 16 to 64) was 5,260. Workers considered employable numbered 4,087, while 1,206 were considered unemployed. Even when accounting for the dramatic increase in job creation fostered by the retail sector's accelerated growth in the past year, unemployment remains high. Further, the needs for skills development through formal training and on-the-job experience has not changed.

Economic indicators stated in the August 1993 Community Futures Re-Selection Proposal for both Six Nations and New Credit report slightly different numbers. Out of a total population reported at 9,810, the working age population is 6,160. In demographic age grouping, the working age population is 2,420 for ages 15 to 29 (the largest workforce); 2,210 for ages 30 to 40; and 1,530 for ages 45 to 65. The percentage of population reporting unemployment insurance remains high at 27.6 percent (usually double that of the Brantford community according to employment officer Roger Anderson). The percentage of those reporting welfare and family benefits is 24.5 percent. Although the economic data is incomplete, due to cultural/political inhibitors resulting in a lack of

participation in the census, the following conclusions can be established (from the Community Futures Selection Proposal):

- A significant increase in the on-reserve population was documented. Much of this is due to the passing of Bill C31 in 1986, resulting in the return of Indigenous (Native) status to many people. They and others, have relocated back to the community.

- The recession had a particularly strong impact on this Indigenous community. Welfare rates tripled from 246 reported clients in 1990 to 950 reported clients in July 1992. Persons claiming Family Benefits totaled 350, also in July 1992.

- Existing employment, housing, health and education programs have been challenged to meet these basic needs.

- There was an 11 percent drop is the workforce participation rate while the dependency ratio increased by at least 11 percent.

Six Nations/New Credit workers are considered to be among the working poor. The average wage is from $6.35 to $10.00 per hour, while the average reserve income is estimated at $16,800 per year, well below the provincial average estimated at $25,000.

In response to the high levels of unemployment, employment training and job creation programs have focused on trades/construction, public sector administrative and service/retail sectors, even though agriculture and farming account for 27 community businesses -- which as an employer ranks low, but as a business is positioned only behind trades and now retail outlets. Such data suggests that developments in the agricultural sector can provide for additional income generation, job creation and business development. Agriculture has been an employment sector that has been traditionally overlooked by employment programs. Yet it is important to build upon and strengthen its potential through appropriate community initiatives.

The top three employers are trades/construction at 30 percent, public sector/administrative at 28 percent and service/retail at 20 percent. As an indicator of employment creation the average retail/service business employs 2.5 persons. The complete employment sector distribution percentage looks as follows:

- Trades 30
- Hospitality/Retail 20
- Band Council 10
- Other/Unknown 10
- Education/Training 8
- Family/Social Service 5
- Health and Welfare 5
- Manufacturing/Industry 5

- Agriculture 3
- Natural resource/energy 2
- Transportation 2

Of particular note, the manufacturing/industrial sector employs 5 percent of the active on-reserve workforce while agriculture accounts for 3 percent. Little success has been achieved in the development of manufacturing and industrial initiatives, due largely to the community's reluctance to support activities that may damage the environment.

Overlooked in the area of industrial developments -that may lead to more substantial job creation, that may be more acceptable to community environmental ethics and that may facilitate community self-reliance- are food manufacturing, processing and packaging industries. If developed appropriately, the combined agriculture and manufacturing employment sectors could become a significant employment factor at Six Nations/New Credit. Such a factor should tap into existing demands of an $11 million community grocery market.

When merged with an analysis of the Six Nations Land Base, the potential for sustainable utilization of the reserve's primary resource, agricultural land, is high -- and may in fact provide the catalyst for economic development in light to moderate food manufacturing and processing industries.

Six Nations is in a more advantageous economic position than most Indigenous territories in Canada. Six Nations of the Grand River is located near three main shopping areas including the City of Brantford, and the towns of Caledonia and

Hagersville. The close proximity to employment opportunities has raised the average income on Six Nations to $28,000, midway between the non-Indigenous provincial average income of $58,000 per year and the national Indigenous average income of $16,550 per year (Department of Indian Affairs/Statistics Canada).

The workforce from Six Nations has been estimated at 5,200 persons (see attached tables). There is and on-reserve workforce of 650 persons, leaving 4,550 working in the non-Indigenous community. This total workforce is responsible for generating $145.6-million income, mostly spent in neighbouring communities. These figures also do not include pensioners, socially assisted incomes, and undeclared incomes.

It is estimated that the taxable off-reserve workforce is paying $53.5 million in taxes, based on earnings of $127.4-million. Also, an unknown amount is derived from the Indigenous community in hidden taxes or taxes transferred to the consumer. This would apply to the on-reserve workforce as well. (Exemption from PST on-reserve, and also land taxes gives the Indigenous worker a 20 per cent lower tax bill.)

Calculated at an average of $105.00 per week per the 2001 households on Six Nations, nearly $11-million is spent in the outside community on groceries. There are confectioneries, and a small grocery store in the village of Ohsweken, but these are used by the community as 'convenience' stores and are not part of the shopping routine of Six Nations residents.

Up until 1993 little of that money has returned to the community. The Canadian federal government returns $44-million for education, health and infrastructure funding. Contributions collected from Indigenous workers and the community's overall

SIX NATIONS COMMUNITY PROFILE 1991

Six Nations of the Grand River Employment Statistics

Employment Statistics are based on figures for 1991 - 92

Total Population on Reserve: 8,040

Total Labour Force Population (Ages 16 - 64) = 5,260

Children (0 -15) = 2,269

Seniors (65+) = 511

Full-time Students

Ages 16 --> 64

Highschool full-time	-->	397
College full-time	-->	234
University full-time	-->	204
Technical full-time	-->	18
Total		853

Total receiving Unemployment Insurance Benefits --> 495

Total receiving Family Benefits --> 375
(assistance for sole support parents and disability)

Total receiving Welfare Benefits --> 456

Total number of Disabled --> 200

Population Considered = 5,260 - (853+495+375+456+200)
Employed = 5,260 - 2,379
= 2,881

Total Employables = 5,260 - (Full-time Students + Disabled + Welfare; unemployable)
= 5,260 - (853+240+80)
= 5,260 - 1,173
= 4,087

Total considered able to work out of the currently unemployed.

Recipients of Unemployment Insurance	-->	495
Recipients of Welfare (employable)	-->	376
Recipients of Family Benefits (employable)	-->	335
Total		1,206

SIX NATIONS COMMUNITY PROFILE 1991

Population

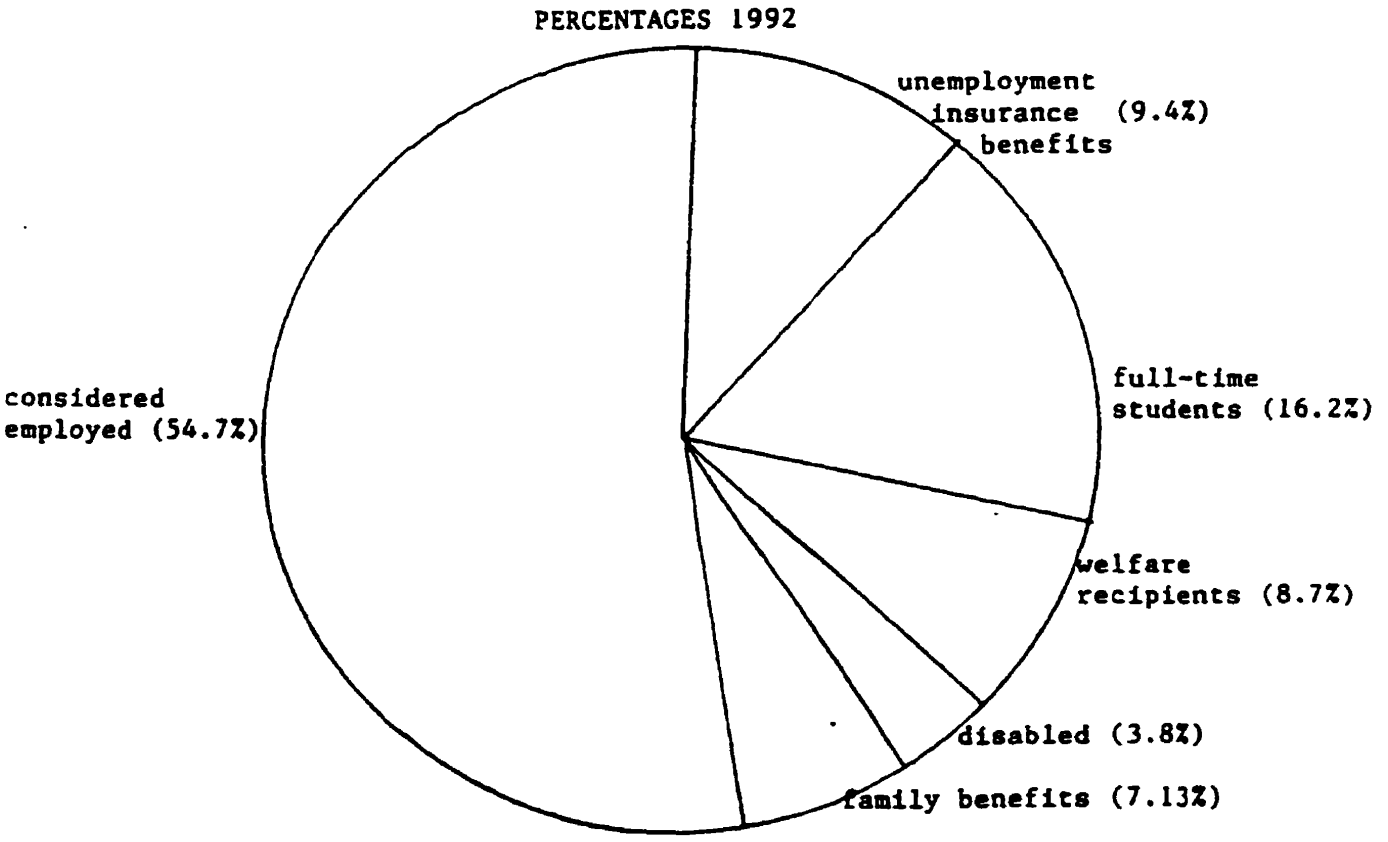
POPULATION 1991 (DIAND) (16492)

AGE GROUP	ON RESERVE MALE	ON RESERVE FEMALE	TOTAL ON RESERVE	TOTAL OFF RESERVE	TOTAL POPULATION
0-4	258	228	486	234	720
5-9	448	367	815	449	1264
10-14	416	401	817	541	1358
15-19	365	337	702	597	1299
20-24	356	311	667	750	1417
25-29	439	441	880	829	1709
30-34	399	439	838	805	1643
35-39	336	371	707	782	1489
40-44	254	258	512	706	1218
45-49	169	183	352	618	970
50-54	144	174	318	449	767
55-59	126	121	247	424	671
60-64	88	100	188	327	515
65-69	63	98	161	266	427
70-74	49	80	129	214	343
75-79	45	59	104	140	244
80-84	35	32	67	100	167
85+	19	31	50	221	271
	4,009	4,031	8,040	8,452	16,492

(see Figure 1:13, 1:13i and 1:15)

SIX NATIONS COMMUNITY PROFILE 1991

Six Nations of the Grand River Employment Statistics



Unemployment Rate = 1,206 - 4,087 x 100%
= 29.5%

Source: Brantford Southern District, Education Program INAC

Canada Employment Information Services

Ministry of Community and Social Services

Six Nations Special Services for Special People

Six Nations Welfare

economic impact far exceeds the returned Canadian federal revenue.

Recently, the rise of tobacco and petroleum product outlets on Six Nations has underscored the lack of an economic base for the community. Social and political issues have served to cloud this issue--there are few economic alternatives available at the present time to harness this entrepreneurial drive.

The Six Nations people import almost everything they use in their daily lives. They import transportation, electricity, fuel oil and propane, building materials, groceries, furniture, electronic supplies, appliances, even landscaping products. Except for the arts and crafts industry, today loosely organized around several shops and a seasonal festival tourist trade (pow wows), the balance of trade is geared toward imports.

In conclusion, the shopping and buying habits of Six Nations people could be altered relatively quickly. First, the social atmosphere of a farmer's market should appeal immediately to an older 'visit' oriented generation. Secondly, the product must be of consistently high quality, reasonably priced by comparison to the off- reserve competition. Thirdly, buying 'Indigenous made' or 'Indigenous grown' must be synonymous with quality, chemical free, and carefully grown and harvested.

The next two sections of this chapter focus on the role played by corn in the life of Indigenous peoples. The first section provides valuable information of the origins and significance of corn in the Indigenous peoples' culture and spirituality, throughout North, Central and South America. The second section analyzes agricultural practices that Iroquoian agriculturalists use to grow corn and set the historical

background information of this traditional knowledge, an important and relevant one, for the CBRDP project in Six Nations of the Grand River community.

Maize As Organizing Principle

By about 9,000 years ago certain Indigenous peoples in the Americas had begun to domesticate plants to supplement food that was foraged. By the time of European contact maize, beans, and squash, supplemented locally by manioc, potatoes, and highland grains such as quinoa, were in wide use in areas where they could be grown. Simple slash-and-burn cultivation of such crops without the use of irrigation or other more-advanced techniques was usually undertaken on small patches of land. Vegetation had to be cleared and burned before the seeds were planted by means of either a digging stick or a hoe, the two basic Indigenous horticultural tools.

Archaeological and geological excavations, and measures of radioactive decay of old ears of corn found in caves, indicate that a type of primitive corn was used as a food in Mexico at least 7,000 years ago. No wild forms of corn have been found, and the origin of domesticated corn is a speculative and controversial issue.

In its present form, the corn plant is highly specialized, and is unsuited for efficient, natural reproduction. Although the ear is specially constructed for producing high seed yields, the plant has no mechanism for broadcasting its seeds without human intervention. The processes of mutation, natural

selection, and mass selection by Indigenous peoples in the Americas gradually transformed certain varieties of wild corn into the cultivated plant called maize--a cultigen, or a product of human culture.

Corn was unknown outside the New World before 1492, but the plant was extensively cultivated, in all its present forms, by Indigenous peoples of North and South America. Seed grains of maize, brought to Europe and Africa by 16th-century explorers, were planted and eventually thrived throughout most of the world. Since the 1930s, the development of hybrid varieties of corn has resulted in greatly increased yields and improved quality. Today, corn is considerably larger in cob size and in the number and weight of the kernels than the corn grown by Indigenous peoples.

In many Indigenous cultures in North and South America, corn has a vital role in both religion and nutrition. Another important aspect of corn is its function as the main pivot in an ecologically-sound agricultural system. What the Europeans found in the Americas was not a plant, it was a cultural invention, the product of the initiative of millions of people for thousands of years that produced a treasury of genetic knowledge.

When we speak of maize (or corn) in the Americas we have to drown out the idea of maize as a mono-cultigen. Maize was always found in combination with some other plants; maize almost never grew alone in the field. It was part of a technological tradition that used diversity against specialization. Diversity was its strength; it was the way to confront difficult and sometimes hostile natural environments. Diversity was the way

to live in harmony with the natural environment and not to fight with it as with specialization. In no place has nature established only one plant; nature always combines different plants in the same area. Only humans, through specialization, have introduced only one plant in the soil, in the land. But this was not the tradition in ancient America.

From the Andes, up through Mesoamerica, throughout Mexico, into the American Southwest, through the Caribbean, into the Southeast, and Eastern Woodlands, corn made the higher cultures possible by permitting concentrations of population to remain in one place.

In many parts of the Americas, maize was the basic plant, the basic staple and also the basic force that organized space - selecting where people could plant, where people could move under the itinerant systems of cultivation, where the people could establish their town to be near the maize fields. Space was organized in the mountains according to altitude in such a way that maize could combine with some other plants in different stages in this vertical organization of the land. Time was also organized by maize: by the seasons of planting, by the seasons of cultivating, by the seasons of growth. Maize had an organizing force in Indigenous America.

The Iroquois Sustainers:
Practices of a Longterm Agriculture

Maize was the most important of the crops in the New World, but beans and squash were almost as common and a large variety

of grains, fruits, legumes, roots, stimulants, and fibres were also cultivated.

Certain fundamental characteristics of Indigenous agriculture reflected the exclusive use of hand implements, in particular, the practice of mixed cropping and of caring for individual plants. The "hill" methods of planting was widespread and weeding was thorough.

In the areas most intensively farmed, men did most of the work, but where agricultural produce was a secondary source of subsistence, women did the most, although men helped to clear and harvest. They didn't use plows and they didn't broadcast seed. Instead, Indigenous people were planting corn in distinct rows in geometric patterns without tilling their land. This involves planting corn in three to four kernels. A small hole is dug, three to four kernels of corn are placed in that hole and then loosely covered with an inch or two of soil. As the corn germinates and then begins to grow, the small seedling comes up above the ground surface.

These traditional agriculturists would return periodically to weed those young seedlings, removing all the weeds that were near those young corn plants. As they weeded, they would hill up the soil around those young corn plants. Now the hills were not just randomly or haphazardly put down, but instead they were arranged in fairly uniform rows. The distance between the rows of hills would be approximately three feet and the distance between the hills in each row was also approximately three feet.

In addition to this hill planting system, the Iroquois took great advantage of interplanting. Usually two to three weeks after the corn had been planted, the farmers would return and in

the same hills, they would plant two or three bean seeds. The bean seeds are able to fix nitrogen, meaning that they take atmospheric nitrogen and turn it into a form that's available to plants. The beans contribute nitrogen to the system that would otherwise not be there. The corn plant, in turn, provides an advantage to the bean in that it offers support so that as the bean plant grows, it grows around that corn plant. But in addition to the corn and beans, in the area between the rows, many Indigenous people would also plant a low growing crop such as pumpkins or squash that would cover the ground area between the rows and between the hills. The advantage of the pumpkin or squash seems to be primarily weed control because it's a low growing and close growing crop; it covers the soil, and is able to choke out any emerging weed seedlings.

The combination of the hill system and the interplanting provided the Indigenous farmers with a basic agricultural system that controlled plant population effectively, provided a uniform stand of corn, provided a means of contributing nitrogen to the system, controlled weeds, and also provided more than a single crop. With the corn and beans and squash, they had a varied diet.

Indigenous farmers were also aware of the importance of soil management; in particular, of the role of soil in providing the nutrients that corn plants need to make good growth. The fields they used for their most intensive corn appear to be the rich bottom land soils which we know to be most fertile. Many of these fields were used continuously for several years and they continued to yield quite well despite the fact that Indigenous people did not have access to many organic sources of fertilizer

and of course they had no inorganic sources of plant nutrients (Mt. Pleasant, J., 1989).

Shifting cultivation is a traditional agricultural system in which temporary clearings are cropped for a few years and then they are allowed to remain fallow. Shifting cultivation is usually closely linked to crop rotation. Usually a patch of forest or plain land is cleared of vegetation and burned. Sometimes the cleared vegetation is used as mulch instead of burning. Then, the soil is scraped into the hill with a hoe. Several yearly crops (roots, corn, beans, squash) are planted in this hill. The topsoil is completely disturbed in the process of removing plant roots, mounding and ridging. Weeding is a very serious problem. After the first year the hills are destroyed and other crops (corn, beans, peanut, millet) are planted in narrow ridges. The land is then abandoned to the regrowth of several coarse grasses or rapid forest regrowth. After 4 to 20 years the cycle is repeated (Quintana, J., 1989).

Shifting cultivation is considered an ecologically sound system. Nutrients are gradually accumulated during the fallow period and provide an alternative to fertilization. The amount of nutrients accumulated by forest fallow may be very high.

When a cultivated plot is abandoned due to fertility depletion, seedlings and regrowth from the original vegetation quickly form a canopy that reduces soil temperatures and stops erosion. The litter additions are rapidly decomposed adding nutrients to the soil which are not leached away because of their fast use by the roots of the new vegetation. The amounts of nutrients increase with added litter fall. Growth rates may be faster in soils with higher base status. However, if the

cropping period is extended for too long, the forest will not regrow and coarse grasses take its place. Tropical forests accumulate nutrients at a faster rate than temperate forests, particularly nitrogen.

Crop yield declines gradually under shifting cultivation and it is the main reason why the cultivation shifts. There are several reasons why yields decrease. Usually, soil fertility is depleted and there is a decrease in soil acidification. Also, there is increased weed infestation. The amount of labour needed to control weeds during the second crop is often twice as much as for the first crop. When labour input for weeding exceeds that for clearing a new patch of land, the cultivation shifts. Another factor is increased incidence of pests and diseases. Continuous monoculture normally intensifies pest and disease attacks. The traditional shifting cultivator minimizes these problems by using intercropped sequences and often planting several crop varieties that have different tolerance. One advantage of crop rotation is the avoidance of pest buildup common in continuous cropping (Quintana, J., 1989).

The hill system was important not only in terms of the weed control and the maintenance of a uniform plant population. In many cases, the Indigenous people of the Six nations used the same hills year after year. In other words, they would return to the same field and the hills they had created in the previous year, and use that same hill to plant their corn once again. When they weeded, and when they returned any crop residues (typically these traditional farmers used primarily the grain, they didn't use the rest of the corn stalk) they would return all of the plant residues, from both weeds and the corn plant,

to that hill. They were returning a large amount of organic matter to a restricted area. Rather than scattering crop residues uniformly across their field, they restricted where they put these crop residues -they placed them directly in the hill where they were going to plant their corn crop.

The agricultural system of the Iroquois included knowing when to plant, using specific plants as a "medicine" to soak the seeds before planting, using fertilizer, hill planting, and intercropping along with ceremonial practices. The cultural, agricultural, and social dimensions of the Six Nations society were intricately interconnected and intertwined in a complex whole which made infinite sense for them (Cornelius, C. A., 1992).

CHAPTER III

THE COMMUNITY-BASED RURAL DEVELOPMENT PROJECT: TOWARDS AN INDIGENOUS DEVELOPMENT MODEL

Introduction

The state of deterioration of the environment in vast regions of the world and the steady increase of human population force us to look for ways to maintain adequate production levels of food and other crops while, at the same time, preserving the integrity of the environment. Most 'high-input' agriculture practices presently used in extended regions of the world are highly disruptive of the natural ecological balance, which in turn originate and intensify the contamination and pollution of the environment and lead to the degradation of agricultural soils and the extinction of valuable plant and animal species. Practices which maintain and improve the productivity of the soil and preserve the environment can be adapted or developed in order to reduce environmental degradation.

Indigenous agricultural knowledge and practices, regarded for several centuries as obsolete and without scientific basis, are now recognized to have been strongly ecologically oriented and closely adapted to the characteristics of specific environments. By mimicking natural ecological processes, they evolved complex agroecosystems, the sustainability of which has stood the test of time. Traditional agricultural systems vary as

a result of many structural and functional features including the fact that they:

- contain a high number of plant species,
- exploit the full range of micro-environments differing in characteristics such as soil, water, temperature, altitude, slope, fertility, whether within a single field or a region,
- rely on complete biological interdependencies resulting in some degree of biological pest suppression,
- rely on local resources plus human and animal energy which utilize low levels of input technology,
- rely on local varieties of crops and the use of wild plants and animal.

A large part of this knowledge has been lost but there is still a sizable amount of fragmented information and genetic material that can be recovered. This could provide the foundation to initiate realistic improvements in systems of agricultural production and ecological preservation. As important as recovering these traditional practices and Indigenous crops is the dissemination of the generated information. It has to be transmitted to individuals (scientists, technicians, students, members of Indigenous communities, small farmers in rural areas) that will serve as agents for the spreading of their application and use.

There is an immediate and urgent need of trained people on several aspects of appropriate agricultural production in

Indigenous communities; specially those where the environment has deteriorated.

Based on such a premise, the Community-Based Rural Development Project (CBRDP) at the Iroquois Six Nations of the Grand River community seeks the empowering of Indigenous communities to take control of their socio-economic development.

Agriculture production was, and in many countries still is, the main economic activity of most Indigenous populations in America. Because of the very nature of Indigenous social and economic systems, Indigenous populations did not, and many still do not, overexploit natural resources for the sake of pure monetary profits. In fact, traditional production systems are oriented toward the preservation of the ecological balance in their own region.

Since Central and Regional Governments usually do not have the cultural background to implement programmes on the conservation and management of natural resources in Indigenous lands, traditional leadership of Indigenous communities and/or nations should be provided with the economic and technical capacity to:

- Conduct planning of local and regional strategies and implementation of policies related to preservation and rational management of local natural resources.
- Recover, study, evaluate and adapt local traditional production systems.

- Organize training activities for members of communities and the general public and provide technical assistance for the application of improved traditional practices.

Initial actions to be implemented in order to reach the above goals include:

a) Upgrade the administrative and operative capacity of local community organizations and strengthen the mechanisms to involve local people in all aspects of planning, implementation and evaluation of the activities.
b) Identify, study and assess the properties of wild plant and animal species, from forest and aquatic biological systems, used by the local people for food, medicinal and craft purposes.
c) Determine the best ecologically-sound procedures for the use, gathering and reproduction of such species based on local traditional methods.
d) Define habitat-compatible production techniques for the local agriculture and husbandry, forestry, and identify potential sites for development of local ecotourism industry.
e) Promote national and local public awareness on current problems (global, regional and local) on environmental degradation, destruction of ecological habitats, survival and preservation of endangered plant and animal species, and of their effect on their own survival as Indigenous people.

It is expected that the implementation of the above listed actions would result in the inventory of resources (i.e. identification, classification, location and quantities of animal and plant species, areas) that exist in local Indigenous peoples' communities/territories, as well as several locations of known fragile ecosystems; and would accelerate the recovery and adaptation of local traditional techniques for the use and management of such natural resources. The CBRDP aims to reach such goals.

CBRDP Project History

During the latter part of 1989, the Community-Based Rural Development Project (CBRDP) conceived by the author of this thesis was introduced and discussed with community members of the Six Nations of the Grand River community (Ohsweken, Ontario) and agricultural specialists from the University of Guelph. Their feedback was positive, but no action was taken at that time because of the absence of a documented plan to implement the project.

As a response to the need for developing a plan of action for the project, a discussion paper was prepared in mid-1990. The original premises of the idea were re-evaluated and re-analyzed. This updated version was introduced to an ad hoc committee, formed by some residents of the above mentioned Indigenous community for their support and further action.

In the Fall of 1990 an informal meeting was held between some members of the ad hoc committee with an identified federal

funding agency to ascertain the possibilities of financial support for the project. A positive comment was received after the presentation. This agency suggested finding a sponsor organization with an outstanding record to formalize a grant application. In order to introduce the CBRDP for grant application purposes, the ad hoc committee requested that Plenty Canada, a Canadian international development agency, be the official sponsor based on its international development expertise record and cultural sensitivity in working with Indigenous communities around the world.

In late Fall 1991, Plenty Canada accepted taking the responsibility to carry on with the project. They formalized the presentation of the proposal to Employment and Immigration Canada: Canadian Job Strategy, and Grand River Employment and Training with additional support from Jobs Ontario Training (Six Nations of the Grand River office).

On October 26, 1992 Plenty Canada was successfully awarded the financial support for the project whose goals were to identify and assess training needs and to evaluate and determine economic development opportunities of the Six Nations community and to develop the CBRDP accordingly, to address the needs of the above target population and the potential of Indigenous and culturally-oriented business/educational developments.

A final report of the CBRDP project was completed on November 5, 1993. This report provides thematic information, findings and recommendations for developing culturally appropriate training and job opportunities for members of the Six Nations of the Grand River community (Canada's largest

Indigenous reserve in terms of population). This report has served as the proposal for the CBRDP First Phase.

The CBRDP aims to develop a new approach in job training and agricultural and economic development for the improvement of living conditions of the Six Nations population, as an optimum alternative to reduce unemployment and welfare. Its success will be translated into an approach that would help break the cycle of economic dependency which has brought social frustration and loss of self-esteem for this Indigenous population.

As was mentioned before, the CBRDP project involves Indigenous peoples and provides an innovative approach in that it looks towards Indigenous culture, knowledge and heritage in agriculture and the development and distribution of Indigenous food products as a means of identifying valuable cultural, educational and training opportunities in a number of areas. These areas include Indigenous culture recovery, traditional environmental knowledge in agricultural practices and technologies, product development, food processing, marketing and business administration.

This project is also unique in that Indigenous cultural knowledge, philosophies and technologies provide the guidelines for the proposed agricultural and business development activities while acknowledging and incorporating the experience and wisdom contributed by the project's stakeholders. Furthermore, the project incorporates people who traditionally and historically have been excluded from full economic participation and recognizes the value of "non-traditional" skills, abilities and experiences.

The participants involved in the project are identified by mainstream society as minorities, and underprivileged and disempowered people by socio-economic standards. Therefore, this project seeks to put an end to the myth that portrays Indigenous people as incapable of achieving their socio-cultural and economic independence. These people's involvement assures and maintains the authenticity of community ownership and empowerment.

The CBRDP has been warmly received by the Six Nations of the Grand River because it deals with a basic necessity of life -food- through the strengthening of human resources, self-sufficiency through training, job creation and new business opportunities. It has also been rewarding to see the support and cooperation from all sectors of the Six Nations community: the traditionalists (Longhouse peoples) and non-traditionalists, different local government/leadership representations, social service-oriented agencies, religious institutions, all working together for a common objective.

Through the pilot CBRDP project, cultural retention and survival of traditional knowledge in agriculture, promotion of self-sufficiency and sustainability are feasible, no matter how destructive and intrusive the Western sciences and development system have been. With the implementation of CBRDP, developed around Indigenous agriculture knowledge and practices, the accelerating problem of dependency and poverty can be alleviated; as well the recovery of Indigenous traditional knowledge and the attainment of self-sufficiency can be accomplished at the same time.

Participating community members are instrumental in further defining the details of the CBRDP project and are primarily responsible for implementation. People's participation as envisaged here takes place within the framework of a community-based development model. The model is a bottom-up approach based on the ideas of consciousness-raising and empowerment, community participation, local control and management of development, training and development, and consensus decision-making.

The evolution of the CBRDP project has passed by the following phases:

- First Phase (1993): Needs Assessment (research/strategic plan).

- Second Phase (1994): Training in Indigenous agriculture.

- Third Phase (1995):
  A. Training in rabbit, poultry and earthworm farming, and entrepreneurship (in addition to the Indigenous agriculture training).
  B. IFAC's Institutional Development
  C. Implementation of a feasibility study to evaluate the designing, constructing and operating of the proposed Farmer's Market and an educational/resource centre. Both facilities together will be identified as the Integrated Indigenous Agricultural Food Centre in Six Nations community.

Description of the Development Phases of the CBRDP

1. First Phase: Needs Assessment (Research/Strategic Plan)

The research/strategic plan provides thematic information, findings and recommendations for developing appropriate agricultural training and job opportunities for the Indigenous population at Six Nations of the Grand River (Canada's largest Indigenous reserve in terms of population). In addition, the research/strategic plan outlines the potential of agricultural-oriented business developments. The corresponding finding and recommendations for the CBRDP in agriculture, marketing, business development are described bellow:

1.1 AGRICULTURAL REPORT

Introduction

From an agricultural perspective, the overall objective of this project was to experiment with different crops to examine how well they were suited to the Six Nations of the Grand River territory's climate and soil types. This experimentation would include evaluation of crop yields, and barriers to high production. Eventually successful crops would have to be selected according to their potential market value.

In this endeavour, the 1993 experimental garden plots at Six Nations were a success. The following sections will

illustrate this success, beginning with an examination of the 4 plots on the Six Nations, followed by a description of each crop's potential. This section on agriculture will end with a brief outline of garden plots outside the immediate project which will provide valuable examples of garden techniques and product ideas which could be employed in the future stages of this project.

Six Nations Land Base

Of the Six Nations Reserve's total land area of approximately 45,000 acres, 62 percent remains viable agricultural land, which is the sum of productive farmland (33 percent) and abandoned farmland (29 percent). Twenty-seven percent consists of forest lands while only four percent is identified as barren lands (see figure next page: Current Land Use chart for the reserve; Six Nations Ecocenter). Even though the focus of various community development activities is in the small business retail and service sectors, Six Nations remains predominantly a rural community with substantial land resources available for agricultural development.

Section 1: Testing Sites At Six Nations

In the spring of 1993, 4 test plots were chosen at the Six Nations for crop trials. A soil sample was taken for each site to measure nutrient and organic matter levels, as well as soil type. All gardens received cattle manure in late spring.

Plot 1

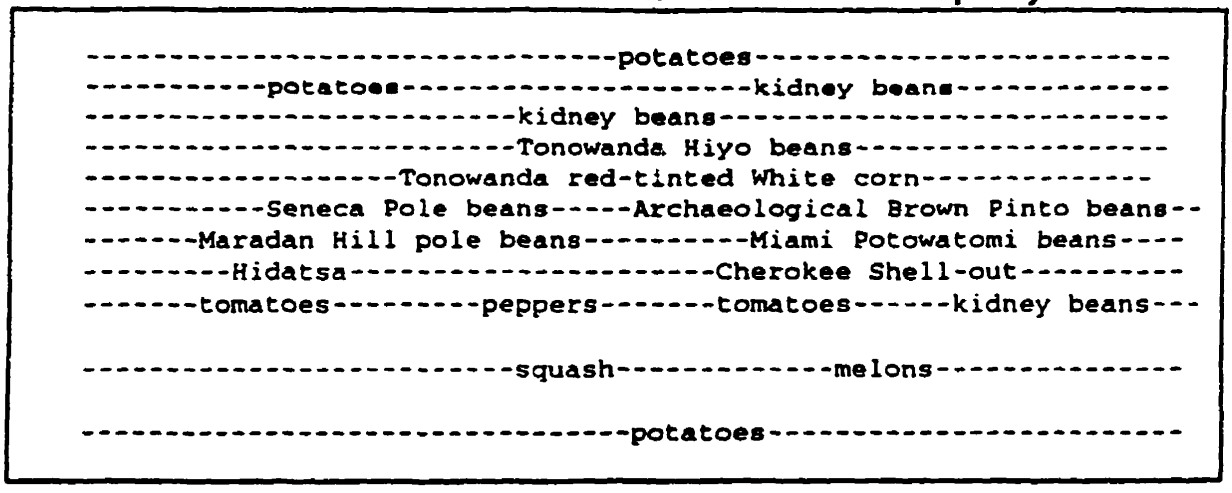
Plot 1 was situated on Lehman Gibson's property on Sour Springs Road. The soil on this property is a loam which becomes quite sandy in some areas. (See Soil Sample 1 on next page). Crops planted here produced well, with the exception of one variety of field beans called Miami Potowatomi whose seeds may have been defective. Map 1 outlines the crops grown in this garden. Reasons for choosing these crops will be explained in Section 3.

MAP 1 - See next page

Plot 2

The second test plot was on the property of Karen Hill, located on the Third Line. This garden was situated on a hill, with poor drainage at the bottom. The soil was a heavy clay (see Soil Test 2). A variety of crops were grown here as well, some however did not fair well. The field beans in particular suffered. The poor production performance of the field beans could have been the result of proximity to a tree line, which may have robbed moisture from the field bean plants. Also some corn was lost or stunted due to water logging in the Spring. In the Six Nations this may be a common problem since no tile drainage is present, only natural ditches are used to carry excess water away. Planting practices will have to take this problem into account.

MAP 1 "Garden Plot 1: Leaman Gibson's Property"



Pole Bean Varieties
140 Tonowanda Hiyo
180 Seneca Pole
220 Maradan Hill
230 Miami Potowatomi
240 Hidatsa
250 Cherokee Shell-out

Bush Bean Varieties
150 Archaeological Brown Pinto
kidney beans

Squash/Melon Crops
Hubbard
Table Ace
Spaghetti
Vegetable Marrow
Cantaloupe
Watermelon

Tomato Varieties
Sweet 100
Campbell
Burpee Big Boy
Roma V.F.

Corn Varieties
110 Tonowanda red-tinted white

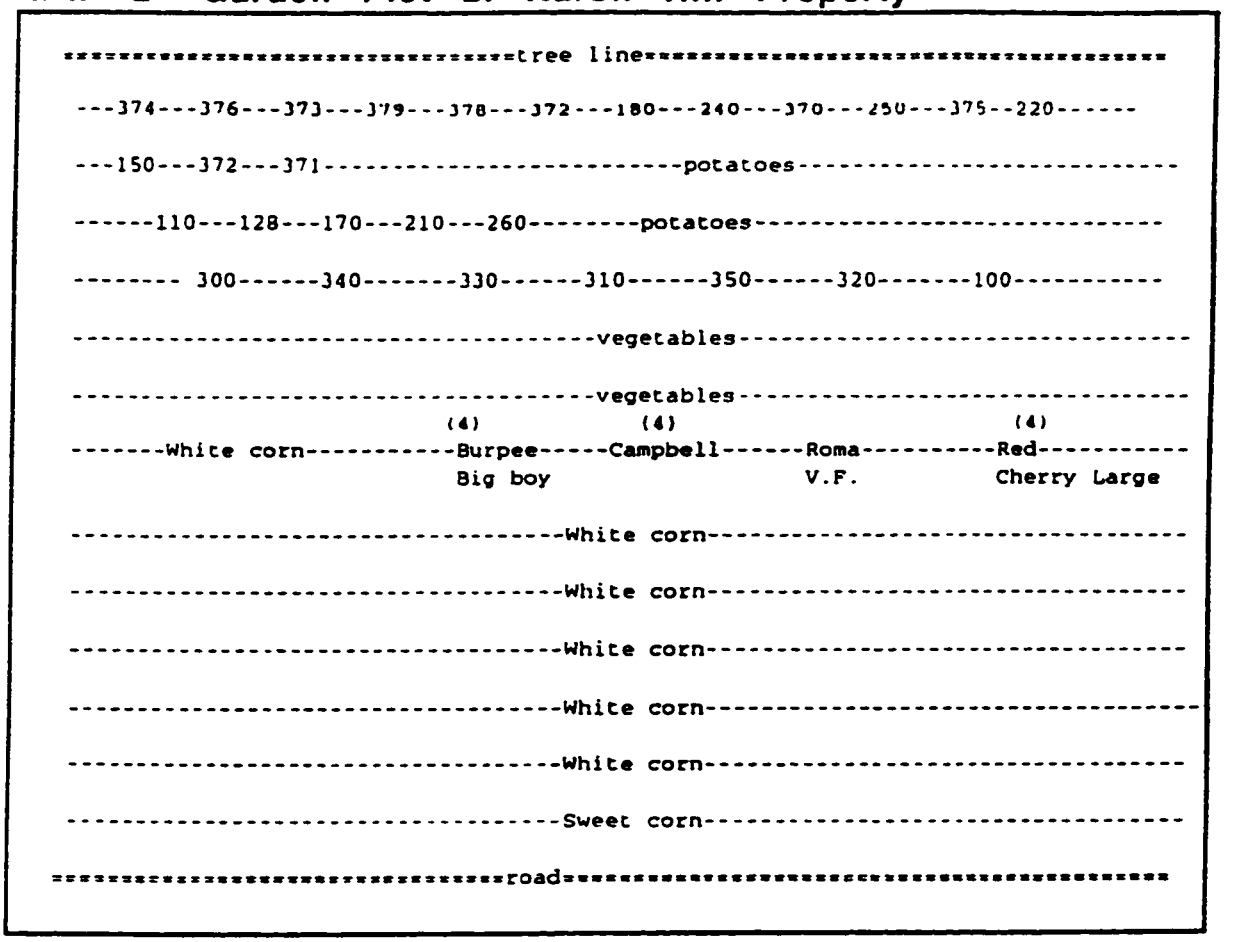
MAP 2 - See next page

Plot 3

The third test plot was situated on Iowne Anderson's property. This land was chosen for its difficult cultivation properties. The soil in this garden, located on the Tuscarora Road is composed of an extremely heavy clay. As a result the crops planted here had difficulty emerging during the Spring due to compaction, and continued to suffer during the summer months when drought turned the soil to a concrete consistency. Only the tomatoes produced well here. Another retarding factor at this location was the presence of walnut trees. The toxins emitted by the roots of Black Walnut trees have been found to inhibit plant growth, especially vegetable growth. The walnut trees along a fence row beside the garden plot may have stunted the plants closest to the trees. However the most devastating factor at this site was a lack of rainfall, a problem that did not occur on the South-west section of the Reserve (where Plots 1 and 2 were located).

One of the results of this drought was that bean varieties produced smaller yields and matured more quickly than the bean trials at the other three plots, therefore, on Table 1 there were more results obtained at this plot than on plots 1, 2 or 4 due to a late harvest for these latter sites. What comparisons that can be made between these crops and Plot 9 (at Plenty Canada, to be described later), reflect the reduction of yield levels due to growing conditions.

MAP 2 "Garden Plot 2: Karen Hill Property"



CORN VARIETIES

100 Tonowanda white
110 Tonowanda red tinted-white
128 Grandfather Delaware x southwest calico
170 Hamilton white
210 Strawberry popcorn
260 Akwesasne short-season
300 14 row red long kernel 3 3/4" cob
310 12 row white-purple-yellow tint
320 12 row yellow 8 1/2" long cob
330 10 row yellow cream
340 Yellow Vedda from Sri Lanka
350 14 row short kernel 6" cob
360 White

BUSH BEANS

150 Archaeological brown-pinto
371 Potato beans
372 Corn bread bush
373 Coco bush
374 Tendergreen
376 Pink

POLE BEAN VARIETIES

180 Seneca Pole
220 Maradan Hill
230 Miami Potowatomi
240 Hidatsa
250 Cherokee Shell-out
370 Wild Goose Cornplanter
375 Cherokee Trail of Tears
378 Gramma Walter
379 Cranberry Pole

Many of the corn varieties planted at Plot 3 found the growing conditions highly stressful. This was manifested in the harvest height and the number of cobs produced for each variety, compared with Plots 1, 2 and 9 (See Table 2). Corn varieties 360, 128 and 100 appeared to function the best under these severe conditions.

MAP 3 - See next page

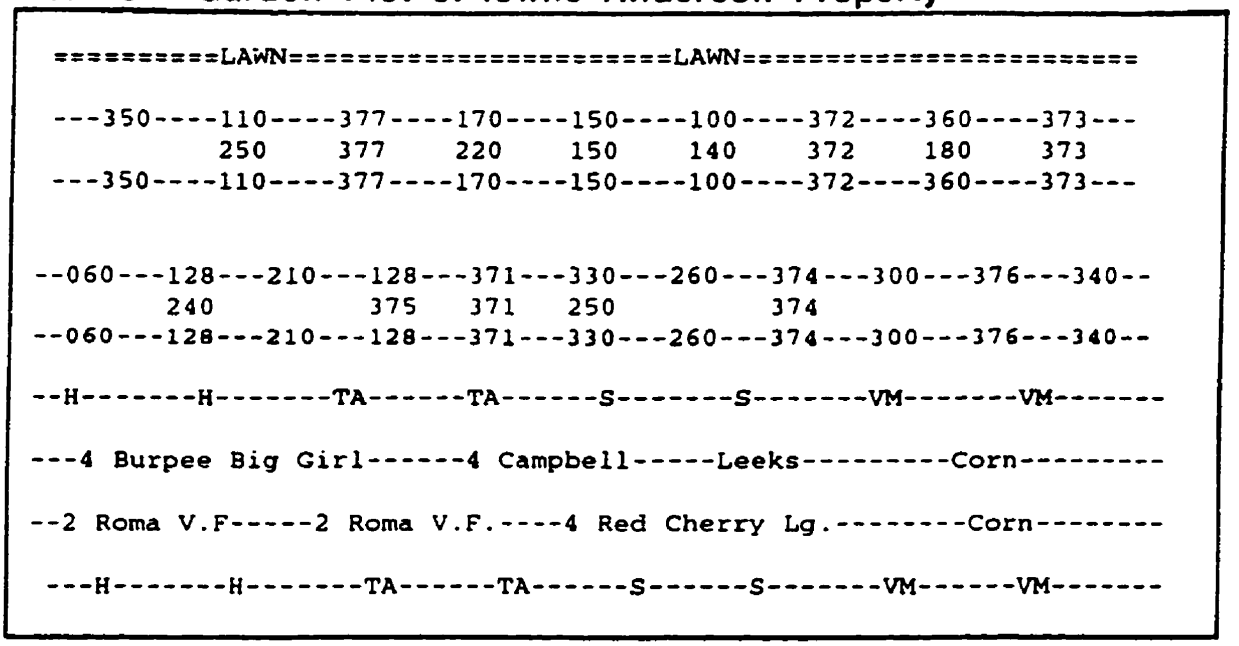
Plot 4

Plot 4 was planted on Tim Johnson's property on Highway 54. This land was fallow for the previous 4 years, before that it was farmed for cash crops. This land also has a high percentage of clay. Crops listed on Map 4 were planted late and were therefore subjected to dry summer heat during their germination and initial growth. Production was low for the squash and potatoes, however this can easily be attributed to the planting period and condition of seeds, and not the condition of the soil. The field beans appeared to produce well despite the late planting date.

The rest of Plot 4 was treated as fallow. Weeds were periodically tilled into the soil before seeding, as a green manure.

MAP 4 - See next page

MAP 3 "Garden Plot 3: Iowne Anderson Property"



Corn Varieties

060 Southwest Calico
100 Tonowanda White
110 Tonowanda red-tinted white
128 Grandfather Delaware x Southwest Calico
170 Hamilton White
210 Strawberry Popcorn
260 Akwesasne short season
300 14 Row red long kernel 3 3/4 cob
330 10 Row Yellow Cream
340 Yellow Vedda from Sri Lanka
350 14 Row short kernel
360 White

Squash

H - Hubbard
TA - Table Ace
S - Spaghetti
VM - Vegetable Marrow

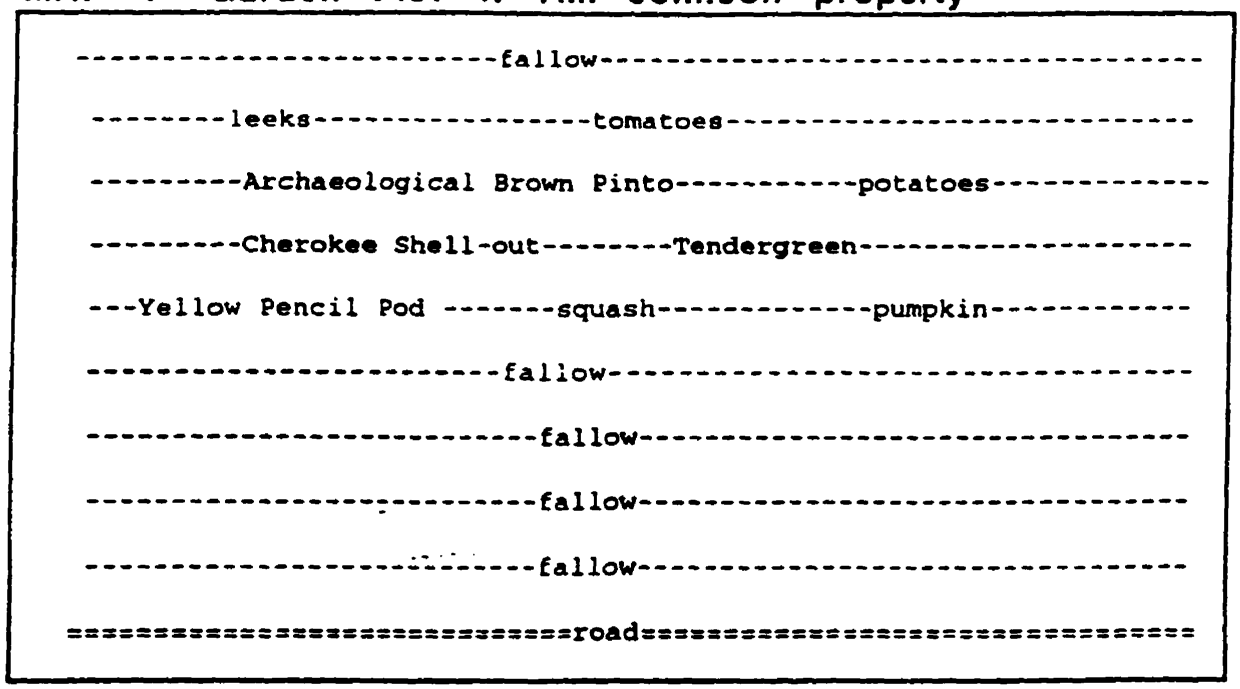
Pole Bean Varieties

140 Tonowanda Hiyo
375 Cherokee Trail of Tears
180 Seneca Pole
220 Maradan hill
240 Hidatsa
250 Cherokee Shell-Out

Bush Bean Varieties

372 Corn bread bush
373 Coco bush
374 Tendergreen
150 Archaeological Brown Pinto
376 Pink beans
377 Yellow Pencil Pod
371 Potato beans

MAP 4 "Garden Plot 4: Tim Johnson property"



Section 2: Additional Garden Plots

Plot 5

Iowne Anderson's garden at Six Nations covers more than 50 acres. Within this area she grows several types of sweet and hot peppers, leeks, onions, peas, squash, beans, corn, tomatoes, potatoes, strawberries, red currants, raspberries and plums. She also has acreage set aside for a community garden; this is planted in corn and field beans. Many of the varieties grown on this garden are the old Indigenous varieties.

Of particular interest were the strawberries which Iowne grew. She cultivated two kinds, an annual ever-bearing plant that produces fruit in August and the standard early bearing variety which usually produces well for 3 years. These strawberries could produce jam, a product which is easily marketable, especially if there are few or no pesticides used. The same could be said of raspberry and currant bushes. The peppers and tomatoes, which she have obtained from a large green house operation in the Niagara Region, could be used for a salsa, a product whose popularity has soared in the last 5 years.

Plot 6

The main garden at Lehman Gibson's on the Six Nations is situated on a hilly, well prepared loam that becomes increasingly sandy towards the back of his property. He has maintained a collection of fruit trees including pears, apples

(many of them brought from the wild). He also has cultivated a wide variety of fruit including strawberries, raspberries and grapes, and has attempted to grow blueberries in 1993. Lehman also has grown potatoes, tomatoes, beans, corn, onions, asparagus, squash, peppers and even an old variety of tobacco.

Lehman Gibson's garden is an excellent example of a garden which has been in cultivation for several years, having achieved an excellent balance of soil nutrients, organic content, and high productivity.

Plot 7

Norton Rickard's garden is located on the Tuscarora Indigenous community in Upper New York State. Within his garden several experiments were carried out this year, all involving foods developed in the Americas. Rickard cultivated the rare Seneca Blue Horn, an all-blue potato which is reputed to grow well in poor conditions.

He also carried out an experiment using the Three Sisters. Four rows of corn were planted in May. Within the rows 2 corn seeds were planted every foot. A row of squash was planted between rows 5 and 6. Approximately 2 weeks later climbing field beans were planted at each corn hill, It was hoped that the pole beans would climb the corn; the latter was given a head start so that beans would not engulf the slower growing corn plants. The squash was encouraged to fill rows 5 and 6 and then grow into the corn rows. Most varieties used by Rickard for this project were obtained from Indigenous farmers.

The corn was a white kenneled corn, with short cob and a round tip (the kernels cover the entire tip). Beans used included the Scarlet Runner (also known as Seneca Pole), the Wild Duck (or Wild Goose Cornplanter), and the Cranberry Pole (also called Cherokee Shell-out). These beans produced very well in Rickard's field. The corn also produced well, however raccoons generated extensive damage to the site, the beans proved too heavy for the variety of corn used in the Three Sisters plot, and many stocks broke. In following years a taller corn with a heavier stalk would be more useful, i.e.. Grandfather Delaware. There were two varieties of squash, the first was Blue Hubbard, a commercially bred variety, and the second was the Boston Marrow, an old variety which has a bright orange colour. According to Rickard the Boston Marrow out-produced the Blue Hubbard 3-1, utilizing half as much space.

Norton Rickard also cultivated other varieties of corn, including Hominy, a multi-coloured corn, and White Tuscarora corn which is particularly good for cooking.

One other experiment Rickard attempted the summer of 1993 was the use of fish as fertilizer. He planted fish under a row of corn, as old Indigenous legends suggest, however Rickard saw little difference between the fish row and the other rows.

Finally Rickard also discovered that by planting a row or two of corn among several rows of squash, for example pumpkins grown for a Halloween market, the corn acts as an important stabilizer and windbreak, lessening vine damage caused by wind moving the fragile pumpkin plants.

Plot 8

Crows Hill Farm, Ithaca, New York. Jane Mount Pleasant, John Todd and Jose Barreiro contacts/coordinators.

Over the last few years the Indian Agricultural Program at Cornell University, and the IPNC (Indigenous Preservation Networking Center) have been cultivating Indigenous varieties of White corn. They have selected seed from only the best plants. In 1993 they expanded their program, when experimentation on mound planting was carried out. Over 2000 mounds were hilled. In each mound 5 corn seeds were planted, later the seedlings were thinned to three. A corn starter chemical fertilizer was added to each hill. Approximately 1-2 weeks later beans were planted (one or two plants per hill). Shortly after this two squash (pumpkins) were planted on the other side of mound. Later one of the squash plants was removed due to crowding.

When a visit to the site took place on August 26, 1993 the plots appeared to be thriving. Due to a great growing season at that time pumpkins were already orange, and the corn and beans were able to produce mature seeds (both were at the immature stage i.e. milky). There was only moderate disease and insect damage.

Todd and Mount Pleasant designed several different methods of mound plantings to test. These methods included many different combinations of the Three Sisters. and several plots of mono-cropping for comparison. Biomass readings were taken from each plot for each plant. At harvest weight measurements were taken to compare yield results between the planting methods. A soil test was taken at the beginning of the project

to measure the nitrogen fixing ability of the field beans. This method of using beans to fix nitrogen in a corn field could be applied at Six Nations.

The entire field was weeded at least once. Further weedings were carried out on only some of the plots; this was done to examine the effect of competition, and ability of squash and field beans to act as a weed retarding mulch. Allowing weeds to remain could also yield a difference in insect populations. This method could also be utilized on selected agricultural projects at Six Nations.

Plot 9

The Plenty Canada garden, located in Eastern Ontario, was the main seed producer for this project. In this garden, 8 varieties of corn were harvested in September 1993, along with 16 varieties of field beans.

This garden also featured a Three Sisters plot which combined the cultivation of squash, corn and beans, planted in a pattern similar to what was found in Norton Rickard's garden.

Plot 10

Jan Longboat's garden on the Six Nations Reserve was an excellent example of commercial gardening. She utilized her knowledge of medicinal herbs, both from Iroquois traditions and Oriental/Western uses. Within her herb garden was a collection of valuable plants, many of which modern agriculture would classify as weeds or flower garden flowers. Instead they were

used to cure ailments. Longboat mixes the herbs to produce all kinds of medicines, selling them for a profit. Many of the herbs are in great demand even in an unprepared state. This high level of demand is due to the apparent scarcity of fresh herbs (medicinal and culinary) in surrounding areas. Some of these herbs are Yarrow, Cone Flower, Evening Primrose, and Mullen.

Longboat also cultivated indigenous varieties of corn and field beans. The beans include: Joney Chase, Trout Dry Bush, Anasazi, Appaloosa, Tonowanda Seneca and Oneida Yellow Eye. The corn varieties were: White Rice Popcorn, Blue Flint, Red Clay, White and Grandfather. Longboat also cultivated 5 old squash varieties.

Also of interest at Jan Longboat's was her greenhouse. It is a 6 by 10 foot structure, covered by plastic and sheltered by cedar trees. Longboat produces an amazing number of plants in the structure each year, some of which she sells. The success of this simple, inexpensive and productive shelter could easily be utilized in the Six Nations project.

Section 3: Crop Selection

Each crop grown in this project, either in the first four plots already described, or in the descriptions of Plots outside Six Nations detailed in Section 2, have a distinct market potential and unique link to Indigenous culture in the Americas. The learning experience gained from cultivating these crops during 1993 has given us valuable insight into their practical market potential. The examination of other types of cultivation, such as the Three Sisters plots and herbal cultivation has

provided the project with an expanded knowledge of organic growing methods, Indigenous cultural practices and an even wider range of products to choose from.

Crops that the Six Nations project was particularly interested in were: corn, field beans, squash, strawberries, red currants, potatoes, tomatoes and peppers.

Most, if not all of these plants are "New World" in origin. The first people to cultivate and improve these crops were the Indigenous peoples of North and South America. This strong link between these crops and First Nations people has made the choice of these crops as test market products particularly applicable given the setting in which they will be grown.

The first of these crops/products was corn. One of the key sources of starch for human diets, this crop is easily cultivated in Six Nations' rich soils and "Corn-belt" climate. When one combines this crop with its traditional companions, squash and field beans the result is three-fold: First, the cultivation of these three crops together lessens wind and water erosion, pest damage, and results in nitrogen fixation. Second, the continued use of Indigenous agricultural techniques will help preserve Native culture and help promote self sufficiency within the Six Nation community through an increased awareness of Indigenous agricultural legacy. Third, the combination of these three crops into a roasted snack food should produce a tasty alternative snack. The apparent success of "Corn-Nuts" has shown that there is a market for this product. If one marketed this product as a "Three Sisters Snack Food" it could capture a fairly large Indigenous market.

The two fruits which were chosen as test crops are strawberries and red currants. It is planned that jam/jelly will be produced from these two fruits. Fruit spreads have been a popular private entrepreneurial commodity in the last decade. Both fruits are well suited to the Six Nation's climate and soil type. Strawberries and red currants have been grown in local gardens for several years. Strawberries are an extremely versatile crop, producing only in the Spring, or all summer long. Irrigation would have to be considered if production is to increase. Strawberries should require no pesticides if they are destined for jams. The same cannot be said for red currants. These bushes would be treated with organic pesticides at specific times throughout the year in order to ensure a harvest.

Also of interest was a particular variety of potato which could be converted into a favourite North American snack food, the potato chip. Potatoes originated in South America, again the link with Indigenous culture and accomplishments is apparent. What is special about this particular potato, the Seneca Blue Horn, is that it is all blue. The "All Blue" Potato Chip could find its own trendy food niche when one considers the public's current interest in unique and unusual foodstuffs. The Seneca Blue Horn would grow well in some of the more sandy soils found within the Six Nations Reserve.

Finally, also along the same line of new trendy foods is the explosion in popularity of salsa. Hence the project's interest in the cultivation of tomatoes and peppers. Again both these food stuffs are "American" in origin. Both tomatoes and peppers were first cultivated in Central America, and the same ties to Indigenous culture can be made. Both crops have an

excellent production record at Six Nations. Investment in greenhouse technology would be an important consideration in deciding to cultivate these two crops on a large scale, due to their early planting requirements.

Section 4: Crop Production/Yield Estimates

Future Crop Production:

Listed below are actual and estimated yields:

Fruit:

Blueberries (highbush)	1458.95 quarts/acre (1991)
Blueberries (lowbush)	2000.00 quarts/acre (1991)
Strawberries	4676.00 quarts/acre (1991)

Vegetables:

Beans (dry)	***see Table 3 (next page)**
Sweet Corn (cob)	800.00 dozen/acre (1990)**
Garlic/Leeks	2900.00 pounds/acre (1990)
Onions (dry/fresh)	29,700.00 pounds/acre (1990)
Peppers (fresh)	9300.00 pounds/acre (1990)
Potatoes (fresh)	22,000.00 pounds/acre (1990)
Pumpkins and Squash	10,000.00 pounds/acre (1991)
Tomatoes (fresh)	17,500.00 pounds/acre (1990)

(OMAF, "Seasonal Fruit and Vegetable Report 1992)

** Another estimate for sweet corn given by OMAF stated that from 225 grams of seed, a 30 metre row would produce 100 cobs (late varieties of sweet corn, which would be more related to the original indigenous varieties) (OMAF, "Garden Vegetable Requirements," 1990.)

Conclusion

From the results of this Summer garden project, an expanded agricultural plan has been designed that would utilize much of the vacant, unused land present at Six Nations, as well as provide education, employment and economic opportunities for all participants involved. Eventually the project's influence would be felt throughout the Six Nations community. This would be accomplished through a number of factors including: 1. cultural preservation (use of some Indigenous agricultural techniques), 2. the development of a local farmers market in the Six Nations region, and 3. through an increase in self sufficiency developed by employment and training opportunities.

As in most experiments, learning is generated by failure, more than success. Perhaps the most valuable garden plots in the Summer Project of 1993 were Plots 2, 3, and 4 due to the number of problems which arose, and the adjustments which would have to be made in order to improve results during the implementation of the Six Nations Project. A summary of some of the key problems include: 1. Special treatment of clay soils to avoid compaction and drought difficulties, 2. The effect of nearby trees, 3. The handling of moisture deficiency and excesses, 4. The availability of dependable and appropriate mechanical equipment.

CORN VARIETIES

100 Tonowanda White
110 Tonowanda red-tinted white
128 Grandfather Delaware x Southwest Calico
170 Hamilton White
210 Strawberry Popcorn
260 Akwesasne short season
300 14 Row red long kernel 3 3/4" cob
310 12 Row white-purple-yellow tint
320 12 Row yellow 8 1/2" long cob
330 10 Row yellow cream
340 Yellow Vedda from Sri Lanka
350 14 row short kernel 6" cob
360 White

BUSH BEANS

150 Archaeological brown-pinto
371 Potato beans
372 Corn bread bush
373 Coco bush
374 Tendergreen

POLE BEANS

180 Seneca Pole
220 Maradan Hill
230 Miami Potowatomi
240 Hidatsa
250 Cherokee Shell-Out
370 Wild Goose - Corn Planter
375 Cherokee Trail of Tears
376 Pink beans
378 Gramma Walter
379 Cranberry Pole

TABLE 1
FIELD BEAN YIELDS, 1993
(measured in ounces: yield per plant)

PLOT 1: LEAMAN GIBSON
PLOT 2: KAREN HILL
PLOT 3: IOWNE ANDERSON
PLOT 9: PLENTY CANADA

	PLOT 1	PLOT 2	PLOT 3	PLOT 9
140				2.1
150	1.38		0.69	1.1
180				7.25
220				1.4
230				
240	0.6	0.75	0.5	2.75
250	1.75	1.5	1.13	2.0
370		1.25		2.6
371			0.56	4.25
372			0.63	1.63
373			0.38	1.92
374			0.35	2.38
375		0.38	0.4	1.2
376				4.25
377			0.35	1.5
378		0.6		0.7
379				2.0

TABLE 2
Corn Production in Plots 1, 2, 3 and 9

	HARVEST HEIGHT (inches)					NUMBER OF COBS			
	PLOT 1	PLOT 2	PLOT 3	PLOT 9		PLOT 1	PLOT 2	PLOT 3	PLOT 9
060	n/a	n/a	48	54		n/a	n/a	1	1
100	n/a	36	48	60		n/a	2	1	2
110	65	53	31	65		2	2	1	2
128	n/a	54	40	80		n/a	2	1	2
170	n/a	51	36	68		n/a	1	1	2
260	n/a	47	38	65		n/a	2	1	2
360	n/a	45	45	85		n/a	2	2	2

n/a - not available

Table 3

Yield of Field Beans in Current Project:
(Number of kilograms. per 30 metres)

	Cornbread Bush (kilograms/30m)	Archaeological Pinto Brown (bush) (kilograms/30m)
High Density Planting (10 plants / 1 metre)	142.5 kilograms	120 kilograms
Low Density Plant (7.5 plants / 1 metre)	106.9 kilograms	90 kilograms

TABLE 4
Field Bean Variety Characteristics, 1993

VARIETY /TYPE	FLOWER COLOUR	BEAN POD COLOUR	SEED COLOUR	SEED SIZE*
140/POLE	White-lilac	green with purple marks	White with purple markings	Medium,
150/BUSH	Pink-lilac	Green	Brown with beige spots	Medium
180/POLE	Scarlet	Green	Black with light purple markings	Large
220/POLE	Lilac	Yellow	Black	Medium
230/POLE	Lilac	Green	Light brown with dark brown markings	Medium
240/POLE	White	Green	Burgundy	Small
250/POLE	Lilac	Green with purple markings	Burgundy with beige markings	Large
370/POLE		Green	Ivory with a brown circle in centre	Medium
371/BUSH		n/a	White	Medium
372/BUSH		n/a	Burgundy with beige markings	Large
373/BUSH		n/a	Black	Medium

374/BUSH		Green	Brown with beige spots	Medium
375/POLE		Dark Purple	Black	Small
376/POLE		Green	Pale pink	Small
377/BUSH		Yellow	Black	Medium
378/POLE		n/a	Off-white with burgundy markings	Medium
379/POLE		Green	Cranberry	Medium

* SEED SIZE CATEGORIES: Large - more than 1.5 cm., Medium - 1.0 cm.-1.5 cm., Small - less than 1.0 cm.

TABLE 5A
Corn Variety Characteristics, 1993

VARIETY	KERNEL COLOUR	COB LENGTH	NUMBER OF ROWS ON COB	AVERAGE # OF COBS
060	Multi	9 inches	14 or 12	2
100	White	8 inches	8	2
110	White, slight red tint	8 inches	8	2
128	Orange	9 inches	8 or 12	2
170	White	8 inches	8 or 12	2
210	Red	not applicable	not applicable	3
260	White / multi	7.5 inches	8	2
360	White	9	not available	2

TABLE 5B
Corn Variety Characteristics, 1993 (continued)

VARIETY	# OF TILLERS	% LODGING	HARVEST HEIGHT
060	2	5	85 inches
100	3	2	55 inches
110	3	3	50 inches
128	2	0	70 inches
170			60 inches
210	3	7	not available
260	3	15	55 inches
360	not available	not available	65 inches

Finally, crops that this project was particularly interested in were: corn, field beans, squash, strawberries, red currants, potatoes, tomatoes and peppers (See Section 3).

Plots 1 and 9, the successes of the garden project of the summer 1993, provided us with yield/production and garden condition standards which future garden projects at Six Nations can aspire to.

1.2 CBRDP MARKETING REPORT

Foreword

This marketing study was completed in consultation with project facilitators from the Community Based Rural Development Project (CBRDP). Included in this study are materials and terms which will form the overall basis for long term stability for a program directed towards a rural community with a desire for sustainable lifesystems. The following documentation would also form the basis for an agricultural information network within the indigenous peoples of the Americas.

Statement of Marketing Principles

1. To enhance Iroquoian Nations' ability to preserve and promote culturally appropriate intermediate technologies rich in philosophy, values and traditional teachings.

2. To enhance individual Iroquoian self-esteem by reinforcing positive traditional values and the individual's place within Iroquoian society.

3. To provide a proto-type framework for the gathering and wide dissemination of development research and information on culturally appropriate integrated intermediate agricultural technologies.

4. To provide in-service training for Indigenous and non-Indigenous instructors and/or diverse cultural instructors interested in furthering the basic concepts, materials and activities for self-sustaining life systems.

5. To develop and make available related audio-visual aids, instructional materials and display/exhibitry for potential reproduction and distribution.

6. To research, develop and market culturally appropriate goods and services.

Introduction

The survival of Indigenous people in North America was predicated on several crucial factors. These factors encompassed the physical Basic Needs of food, shelter and self-preservation. All three Basic Needs were reconciled to the Indigenous notion of Highest Virtues. The Highest Virtues for the individual were Courage, Humility, Wisdom, Temperance and Justice. The Highest

Good for the Nation was Survival. The means to Survival was peace. This is the ultimate difference demarcating the Indigenous criterion of Truth from the Western Christendom "comfortable self-preservation" criterion of truth.

The present and future Basic Needs of Humankind and the survival of individual Human Potential is completely addressed in Indigenous Culture, its social framework and spiritual infrastructure. Self-discipline and socio-spiritual responsibility were consistently manifested in outward expressions of Environmental Consciousness, Social Responsibility and Tribal Reconciliation to the Living World.

It is common knowledge the Indigenous did not pollute because their form of society did not require industrialization. A major reason industrialization did not occur was because Indigenous people did not maintain a potent military capacity. Thus, with a sacral form of warfare related to the Highest Good, the limited armaments, armies and populations served to restrict undue exploitation of natural resources. The eco-system remained intact. The Nation survived. There was Peace.

The cultural technique of Indigenous civilization, in the past, was fully integrated. Indigenous Culture maximized individual reconciliation socially, and societal reconciliation environmentally.

In modern terms, Indigenous Human Potential has been replaced through the destruction of the delicate balance between the three-fold reconciliation of Man to Society and Society to the Living World. Yet the secrets of Life are known to Indigenous people. Highest Goods are still known to Indigenous

People. The social, environmental and spiritual knowledge exists.

The CBRDP is an affirmation of Indigenous Survival on this continent as the ultimate criterion for truly effective human progression and development. The project proposes to create and sustain a model program for Indigenous people within Six Nations of the Grand River community. That is the CBRDP primary focus. Global attention to Indigenous peoples' development and their unique Social and Spiritual relationship with the Living World will be welcome as well.

CBRDP will provide culturally appropriate intermediate technical development support, particularly through an examination of Iroquoian agricultural and spiritual ontology. In effect the project will couple Traditional information and positive beliefs with CBRDP place in the New Age of an alternative self-sustaining civilization.

Purpose of the CBRDP project

The basic purpose of the CBRDP project is to organize and conduct an indigenous agricultural-cultural recovery program, at once practical and meaningful to individuals and their community. This program would focus directly on individual human potential, the individual's family and their community. The program would also seek to ensure enhanced lifestyle development, thus, allowing Indigenous people a new self-awareness of their genuine potential and increasing the quality of their lives while maintaining positive cultural traditions.

The strategy for the cultural recovery program is to research and develop a strong agricultural economic base by addressing interdisciplinary aspects of Indigenous knowledge. The strategy addresses actual social, individual and community needs through market research analysis of products and techniques developed through appropriate agriculture. The program will seek to integrate the Contemporary into the Traditional aspects of Indigenous agriculture--blending Indigenous permaculture, with soil regeneration to create chemical-free produce for market.

The traditional economy was based on a careful balance between hunters (men) and farmers (women). This balance was upset through upheavals in Indigenous society with a subsequent alteration in traditional knowledge. We will review the Iroquoian knowledge extant from earlier times for socio-economic structures, environmental sciences, bio-dynamic agriculture which could lead to the full recovery of Indigenous agricultural sciences in Iroquoia.

Through seeking to revive and integrate the inherent validity of Indigenous Culture with today's most advanced innovative ecosystem and educational models, the Program will set the stage for Futurity as it seeks to explore Human Potential, Social Stability and Environmental Peace.

CBRDP Description

This section will examine specific program areas placing into actual activities and physical plant descriptions how CBRDP might look and how the project would operate. The CBRDP could

become a model program not only for Indigenous people but for non-Indigenous people as well. Innovations in the Living Arts are largely unexplored in Canada.

Specific Components:

Research and Development: includes the on-going needs assessments and evaluation functions for the Project. The CBRDP will require resources, management expertise, specific meteorological, agricultural and technical data, appropriate human specialists and technicians as well as administrative and on-going operational information. This area would be under the supervision of Plenty Canada/IFAC or another organization to be determined by people involved in the implementation of the CBRDP during the first phase.

Agricultural Programs: will develop organic gardening and farming techniques, medicinal herbal horticulture, fruit horticulture, hydroponics and clean-culture agriculture, soil re-mineralization, reforestation and woodlot project development; research also includes arable land, micro climates, water supplies, forest inventories, topographical features, solar access and other relevant technical data.

Market Research: studies the demand for all products and innovations developed by individuals participating in the CBRDP, including intermediate technologies, fine arts and plastic arts, organic quality produce, as well as the test-marketing of products.

In this study area plans will be devised to provide exposure to tribal economies. For instance, traditional economies are based on renewable resources and their redefinition in products for sale or barter. In this area traditional diet/nutrition aids, personal aesthetic enhancement products might be developed under the slogan "Food is Medicine".

As for the food and produce markets, special emphasis will be placed on reversing the usual Indigenous community balance of trade--altering the amount of imports into Indigenous communities. Our plan will attempt to create a need for Indigenous Agricultural products, promoting the reduction and eventual elimination of pesticides, herbicides and chemical based fertilizers in agriculture. A proposed farmer's market in Ohsweken would offer pure and healthy Indigenous food products to local and neighbour urban based, nutrition conscious clientele.

A big component of reversing the balance-of-trade in the Iroquoian community the CBRDP would be to promote at least twice a week farmers market within the Six Nations territory. Local growers and producers would be encouraged to market their goods and products, attempting to attract Indigenous money back to the community.

Marketing Program Description

The Following is a description of the marketing strategy to be employed by CBRDP. No attempt will be made to determine or anticipate delivery or supply schedules, nor will there be an attempt to estimate volumes. This plan deals with a research-

and-development directed framework to deliver products to market.

Terms of Reference

The following terms, or buzz phrases, should be employed at all times by all personnel:

- Indigenous Foods of the Americas Committee -- we know the secret of life.

- All Natural -- this Food is Medicine

- Six Nations of the Grand River -- we know this land better than anyone.

Product Orientation:

Study 1: Six Nations Farmer's Market

Introduction

To reintroduce market gardening into the Six Nations of the Grand River community (Territory), we will develop a farmer's market. This will be a venue for local producers and growers for a variety of produce and meats. Also, the farmer's market would be marketed to two target groups the non-Indigenous urban dweller, but also the local shopper.

Here's how the market would work as we see it.

Local growers and meat producers would have access to sell a variety of vegetables, fruits, poultry, meats and fish. This would be promoted as the Indigenous farmer's market. Locally grown greenhouse and field produce, properly dressed poultry, traditional season based meats and fish sellers such as the Ojibwa from Cape Croker, would be encouraged.

A flea market might be an ancillary enhancement to the market overall.

With modifications, mainly to meet Health department criterion in non-Indigenous urban centres, the farmer's market could be expanded to provide good healthy food at the Kitchener Farmer's Market, the Brantford Farmer's Market, the Hamilton-Wentworth Farmer's Market (Hamilton). and the St. Lawrence Market in Toronto. These markets usually operate on Saturday.

Our market will operate twice a week, one day will be on Saturday.

Objectives

- To create a Farmer's Market within the Six Nations of the Grand River Territory.

- To supply a vending station at the St. Lawrence Farmer's Market (Toronto), the Kitchener Farmer's Market (Kitchener-Waterloo), the Brantford Farmer's Market and the Hamilton-Wentworth Farmer's Market (Hamilton).

- To provide and supply restaurants, hotels, and dining establishments with high quality produce and other foods.

Deliverables and Benefits

- provides a clear understanding of the local agricultural supply industry
- sets into motion business planning techniques for the Six Nations agricultural community
- clarifies promotional and marketing requirements

Study 2: All-Natural Strawberry Jam, All-Natural Red Currant Jelly.
Develop For Market Preserves And Sauces Make From Locally Grown Fruits and Vegetables.

Objective

- To provide superior quality sauces and preserves for use in the local community.

- To enhance the cottage-industry base of production.

- To supply a retail operation.

- To determine market for product in green tomato, red tomato, hot peppers, fruit crops.

Task 1

Deliver product, reusable containers, and recipes to chefs for sample batches, prior to actual delivery to test sites. A 'tasting' will be conducted to choose the best recipe(s).

Task II

To create a label design suited to the reusable containers which includes our inherent message. (See next page: designed labels.)

Task III

Deliver samples to hotel and/or bed & breakfast (hospitality) businesses as well as to tourism attractions in Ohsweken, and main food and shopping chain in Hamilton along with customer reply cards.

Deliverables and Benefits

- a sampling of three markets, with customer responses

- new batching samples for salespersons/pitches

Results of Product Market Surveys

The CBRDP project facilitators found that it was necessary to develop and test market some basic food products to determine the viability of the market study assumptions -- essentially that (1) the "Indigenous Foods of the Americas Committee" would be able to sell products based upon Indigenous foods that were grown with "all-natural" methodologies and (2) they would be purchased within the Indigenous community marketplace. As a result, two products were produced, a strawberry jam and a red currant jelly, while one "high concept" product, a three sisters snack food, was explored. Package labels were designed by Six Nations artist Raymond Skye and the foods were distributed along with questionnaires to 27 community individuals at restaurants, variety stores and craft shops in both the Six Nations of the Grand River and Hamilton communities. The response was overwhelmingly positive as the following statistics indicate:

Jam:

Percentage that liked the taste:	100
Percentage that would buy it:	100
Percentage that would use diet jam:	48
Jars purchased per year:	5.4 (total jam & jelly)
Percentage that would sell it:	27

(...of those that responded to this question. Many individuals who participated in the survey were not involved in retail of food service businesses, but were customers, etc.

For example, out of total 27 surveys, 11 participants did not answer this question.)

Jelly:

Percentage that liked the taste:	100
Percentage that would buy it:	100
Percentage that would use diet jelly:	83
Jars purchased per year:	5.4 (total jam & jelly)
Percentage that would sell it:	66

(...of those that responded to this question. Many individuals who participated in the survey were not involved in retail of food service businesses, but were customers, etc. For example, out of total 27 surveys, 11 participants did not answer this question.)

The results of the product surveys indicated that the basic principles of the market approaches used for the "Indigenous Foods of the Americas Committee," and therefore the products, were culturally and socially solid. Moreover, the Six Nations of the Grand River and Hamilton communities will support food products grown and produced by the involved Indigenous agriculturalists. In particular, they will support foods and food products that satisfy their existing diet patterns.

Comments:

- Excellent taste and appearance.

- We are from New York but would definitely buy it whenever we are here.
- I liked both the strawberry and red currant samples.
- Did not care for the consistency of the red currant jelly, too runny.
- Very good. Tastes like my mother's jam.
- I very much liked the strawberry jam.
- Good jam.
- Excellent red currant jelly.
- Lovely.
- A little too sweet.
- Very good.
- Use more ripe fruit, less sugar.
- I really enjoyed the strawberry jam but was not too fussy about the red currant jelly. My family does not consume a lot of jam so purchase is probably limited to one, possibly two jars a year. I would consider buying this jam but there are factors I would consider other than taste. There are so many varieties and producers of jam on the market ranging in price and taste. It is a buyers market as far as selection is concerned. In order to choose this product over others I would have to look at a couple of factors besides taste. One of course is the cost. It must be reasonable in cost in order to be competitive with other well known name brands. The other main factor will be marketing and in some cases this would be a more important factor than cost. When you are looking at shelves of various types of the same product,

there has to be something "special" or "outstanding" about this product that would encourage purchase.

- "Indigenous Foods of the Americas," brilliant concept.
- The strawberry jam was good, but the red currant jelly was fantastic. I loved it.

Study 3: Corn Flour Products: Develop And Market Products Make From "Indian Corn"

Objective

- To provide a flour suitable for the production of taco shells, tortillas, and baking, to supply a local home-use clientele.

- To provide a flour suitable to mass produce a variety of ancillaries for the restaurant and fast food industries.

Task 1

Determine the milling process of corn.

Task II

To develop a figure head for labelling named "Maisie" which shall be applied to all waxed paper packaging for these products, again in keeping with the philosophy of the Committee.

Task III

Deliver flour, waxed paper packaging, and recipes to chefs, for the production of sample breads, tortillas, tamales or other items to be made from corn flour.

Task IV

To have test markets and customer reply samples taken from the busy restaurants and fast food places in Six Nations of the Grand River and Hamilton communities, for tortillas, taco shells and taco salad shells.

Deliverables and benefits

- Encourage local producers to advance the uses of Indian corn as a food staple in the home.

- Opens a potential market for homegrown rather than imported corn flour products.

1.3 BUSINESS PLAN: Proposed Farmer's Market

CBRDP Development Priority

Throughout 1993, the Community-Based Rural Development Project (CBRDP) has researched ways to assist in the delivery of training and employment services toward its target groups at Six

Nations of the Grand River. This process has included the identification of business developments that would lead to sustainable job creation for the trainees involved in proposed development stages. As information was gathered and determinations were made regarding what developments (1) would have the broadest positive impact on the agricultural participants, (2) would extend the fairest distribution of capital resources and (3) would most likely succeed as financially self-reliant businesses, it became increasingly clear that the design and construction of a community-based farmer's market at Six Nations should be an immediate priority.

It was also recognized that the farmer's market needs to be managed by a community-based institution that has the capacity to incorporate the myriad employment objectives and market potentials such a facility would create. Therefore, the development of a farmer's market should coincide with the development of the community-based "Indigenous Foods of the Americas Committee," as originally recommended but not yet defined in the Terms of Reference of the CBRDP project. The market positioning of the "Indigenous Foods of the Americas Committee" has been designed to maximize advertising, promotion and sales of the farmer's market facility and the committee's food products. The general idea is based upon CBRDP market research that stresses a clean, pure and healthy image of Native foods. Under the traditional Iroquois principle that "all food is Medicine," the committee will market, whenever possible, organically grown produce and products that are all-natural (with no artificial preservatives or additives). This also

provides tremendous opportunities for creating a positive public image that will associate the farmer's market with:

- Good Health -- The benefits of traditional Indigenous agricultural practices.

- Sharing of Knowledge -- The comprehensive contributions of Indigenous agriculturists.

Project Objectives

The CBRDP, through the proposed management structure of the "Indigenous Foods of the Americas Committee," proposes to design, construct and operate a 6,960 to 10,700 square foot, $700,000 to $1,000,000 Farmer's Market on a site behind the Six Nations Employment and Business Centre on Chiefswood Road in the village of Ohsweken.

The related research findings of the Community-Based Rural Development Project recommend and support the development of:

- Appropriate training programs in agricultural development, including traditional Iroquois and organic farming methodologies, foods and food product marketing, agricultural equipment maintenance and agricultural-oriented business management.

- Job creation for local farmers, food producers, agricultural administrators and business people.

- Entrepreneurial incentives that will lead to job creation, such as the provision of an open and competitive marketplace for local farmers and gardeners. Paramount is the construction of new physical facilities to establish renewed agricultural market activities and services. Such a facility will generate business growth in food supply and product development areas (butcher, bakery, poultry farms, etc.).

- Provision of educational extension services that educate community members (with an emphasis on youth in the Six Nations) and visitors about the significance and contributions of indigenous peoples to the world's food supply.

Vision Statement

The social, cultural and economic parameters that formed the guidelines for this CBRDP project were developed through consultation with key community informants, including farmers and gardeners, economic development specialists (private and band council), cultural resource people and business people interested in tourism industry development. The farmer's market will adhere to these community-based principles:

- The need to reappropriate community control over market segments of foods originally developed by Indigenous agriculturists, including potato and potato products, tomato and tomato products, corn and corn products, squash and

squash products, pepper and pepper products, various berry and berry products, etc., in ways that lead to appropriate job training, job development and job creation through entrepreneurial activity.

To educate Six Nations (and its neighbour Indigenous community of New Credit) youth about their vast and precious cultural heritage, which was predominantly agricultural, before and from the time of contact with Europeans to the establishment of the Six Nations Reserve and up until the early 1900s.

- To provide for balanced developments within the Six Nations and New Credit communities -- apart from but complementary to the rapidly expanding retail and proposed industrial sectors.

- To assist local economic development bureaus (i.e. Six Nations/New Credit Community Futures) in the realization of one of its development priorities for its Community Initiative Fund for 1993-1994, namely the construction of the community-based farmer's market.

- To provide a destination/attraction for The Six Nations Tourism Committee, in its desire to have significant cultural outlets as part of its visitor tour portfolio. For example, the proposed Farmer's Market includes a demonstration and educational space to accommodate media/film presentations to group tours. These presentations would provide: highlights

of local Iroquois farming and gardening activities; historical information regarding indigenous agricultural contributions to the "average" Canadian diet and to the world; explain the objectives of the "Indigenous Foods of the Americas Committee" and communicate a traditional Iroquois cultural perspective that is seldom understood.

- To take advantage of existing and expected food market opportunities within the Six Nations area.

- The farmer's market facility should be centrally located in the village of Ohsweken to maximize its visibility and to draw visitors into the "heart" of Six Nations of the Grand River.

- The design of the facility should reflect traditional Iroquois architecture (recommended two-floor longhouse with "Iroquois rafter" or post and beam construction) and should allow for ample access by farmers, tourists (including buses) and sufficient parking. Landscaping should be consistent with the original Carolina forest composition of this region. Because the market has great potential for becoming a local gathering place, the layout should emphasize areas where people can sit and talk.

- The farmer's market facility should be designed to include from 10,000-12,000 sq. feet of market space, 4,000-6,000 sq. feet of educational space, 600 sq. feet of office space and

600 sq. feet of processing space, large entrances, and washroom facilities.

- The business operations of the farmer's market should be financially self-sufficient -- with revenues being generated by fees charged for agricultural rental space, flea market rental space, multi-purpose rental space, special events rental space, admission for visitor tours and product sales from the Indigenous Foods of the Americas Committee.

- The farmer's market must be completely financed through grants from government agencies, community-based organizations and private foundations and donors, thereby allowing the Committee to begin business operations without debt.

- The farmer's market should be marketed as strongly as resources allow, and should consider designing spin-off activities that tie-in with other reserve and tourist activities.

Market Studies

The CBRDP market research indicates the size of the Six Nations grocery market. From this study come these three basic points that indicate the need and potential for food production and supply through the development of a farmer's market:

- The vast majority of foods consumed by Six Nations/New Credit residents are produced off reserve.

- The vast majority of foods and food products consumed by reserve residents are purchased off reserve.

- Of those foods and food products purchased on reserve, the vast majority are imported from off reserve food distributors and manufacturers.

The proposed location of the farmer's market, on property behind the new Six Nations Business and Employment Centre, would provide a site: that would be visible from Six Nations' busiest traffic area, Chiefswood Road, north of 4th Line* (see Traffic Counts list below); that is situated closest to the concentrated community housing developments and therefore resident consumers; that attracts visitors/tourists into the reserve's village where there will be spin-off economic benefits given the localized business concentration; that could access necessary utilities (water, sewer, natural gas); that would blend in with surrounding developments; and that would provide a central space for community gathering and socialization.

1991-1992 Traffic Counts (24 hr. period)

1. Sour Springs Road -- West of Chiefswood Road 2420
2. Sour Springs Road -- East of Chiefswood Road 1032

3.	Onondaga Road -- South of 4th Line	1177
4.	5th Line -- East of Chiefswood Road	597
5.	Seneca Road -- North of 2nd Line	527

1991-1992 Traffic Counts (4 hr. period)

6.	Chiefswood Road -- South of 4th Line	1007
7.	Chiefswood Road -- North of 4th Line	1980 *
8.	4th Line -- West of Chiefswood Road	650
9.	4th Line -- East of Chiefswood Road	1651

(Traffic Counts provided by Six Nations Tourism.)

Integrated Market Approach

The financial viability of the Farmer's Market is enhanced when using an integrated approach that is inclusive of tourism, economic development and education programming. The development of the market will provide financial benefits to Six Nations Tourism by establishing a formal attraction that informs and educates visitors, and to the business community by stimulating economic activity. For example, there are currently no cultural-specific attractions (other that some retail outlets) situated on the reserve proper, in which tourist or school groups can receive formal presentations on the history and culture of the Six Nations community. The E. Pauline Johnson family homestead is being renovated and when completed will serve as one such site, but other sites are needed. As a

result, the development plan should be inclusive and reflect the mutual objectives of the Indigenous Foods of the Americas Committee, Six Nations Tourism and the Economic Development Committee of Six Nations Council. (Note: Economic Development Commission's Chairperson Roger Jonathan has been informed of the CBRDP process throughout the implementation of the needs assessment study (First Phase of the CBRDP) and was supportive of the development of a farmer's market. Mr. Jonathan suggested the proposed site as one possibility.)

Consumer Base

Of the Six Nations Reserve population of 8,040, 5,922 are consumers aged 15-years-old and older. By incorporating visitor programming, the potential size of the market increases dramatically. Based on Six Nations Tourism statistics, 125,400 people were counted as annual visitors to Six Nations attractions and events during 1992/1993. This is a group that should be targeted for advertising and promotion activities.

Of these, however, a disproportional number of people visited a few select attractions and events. For example, 26,900 visited the Woodland Cultural Centre and 25,000 visited the Mohawk Chapel. Because of the locations of these two attractions, it can be surmised that most ancillary economic benefits went to the City of Brantford. The Champion of Champions Powwow, which is held in Chiefswood Park on Highway 54, received 32,000 visitors. Therefore 83,900 people, or 67 percent of all visitors to the Six Nations Reserve did not

necessarily provide the full economic impact that the number of site visits to the Six Nations Reserve would otherwise indicate.

Nevertheless, the potential for increasing tourism flow to Six Nations, and to the proposed farmer's market, remains strong. Six Nations of the Grand River is located in one of the most active travel regions within the province. The Six Nations destination area has a resident population of approximately 200,000 -- while 7,000,000 people live within 100 miles, or easily within the range of a one-day trip.

Tourism Market Demands

In addition to the Six Nations community food market being a main attraction for buyers and vendors, the development of the farmer's market should consider tourism potentials. A comprehensive understanding of the tourism market is necessary in order to indicate the significance of including public programming in the farmers' market concept.

Supporting information is provided in this excerpt from the Six Nations Tourism Centre market research and business proposal: Based on available information, the total potential market for the Six Nations destination area is approximately 14.2 million visitors consisting of:

- 12.4 million same day person trips to Festival Country, by Ontario residents (1990);

- An estimated capture, by Festival Country, of 579,600 Ontario person trips taken by residents of other provinces (1990); and,

- An estimated capture, by Festival Country, of 1.2 million Ontario person trips taken by international visitors (1991).

According to the Ontario travel Monitor (1990), the two most common reasons for traveling to Festival Country are to visit family and relatives (42.6 percent) and for recreation/pleasure (38.7 percent). Given the shortage of scheduled public transportation (i.e.. bus, rail, air) to the destination area, most travelers arrive by group motor coach tour or private automobile.

A visitor profile study undertaken by the Festival Country Travel Association (1992) provides some indication of visitor characteristics to the region, including Six Nations destination area. This information is based on data collected from four different events and attractions in each of the Association's eight regions and counties. The survey included only those persons who had traveled 25 km or more to the event or attraction.

The key survey findings are highlighted below:

- The large majority (85%) of respondents originated from Ontario, 9% from the US., 4% were of international origin and 2% were from other Canadian provinces.

- More specifically, respondents came from Festival Country (59%), Metro Toronto (23%) , and southwestern Ontario (8%).

- Most respondents came to the region to attend a special event (46%), for general pleasure (21%) and for vacation purposes (14%). Secondary activities identified by most visitors also included restaurants, shopping and touring around.

- Almost three-quarters of visitors were not spending the night in the region; the median length of stay was one day.

- Families were the dominant traveler group (72.3%) with a median size of 3 persons, while 23% of respondents were with friends.

- The predominant age group for visitors to the region was between 35 and 49 years of age, with household incomes of between $31,000 and $50,000.

- The average survey respondent was between 35 to 49 years of age.

The outlook for future travel to the region is optimistic.

Current Visitation

The total annual visitation to the Six Nations community is averaging approximately 116,000 visits. This represents an estimated market share of 2.7 percent of total potential visits to the destination area. Clearly, significant growth potential exists for Six Nations tourism product within the current potential market, regardless of the amount of growth in overall market size that can be expected over the next few years.

Group Tours

The volume of Six Nations Tourism Committee group tours has grown from 145 in 1985/86 to 161 in 1992/1993, peaking at 249 in 1987/1988. During the same period, the total annual number of tour group participants has declined from 6,441 to 4,767, with a peak of 11,308 in 1987/1988.

More importantly, during the period of 1989-1993 the proportion and absolute number of tours, sponsored by Six Nations Tourism Committee, focusing only on Six Nations' attractions has increased steadily and dramatically from 31 percent or 61 tours in 1989/1990 to almost 85 percent or 136 tours in 1992/1993.

The monthly pattern of group tour business illustrates the peaking of demand during the late spring and summer, with strong shoulder seasons in May and September. Over 45 percent of demand in 1992/1993 occurred during June, July and August, while 25 percent occurred during May, September and October. The

remainder of the year (six months) accounted for the just over 30 percent of all demand.

Forecast

The strong private sector entrepreneurial developments at Six Nations have established the infrastructure that provides the "comfort" level that North American travelers have come to expect. This includes full-service accommodations, a variety of restaurants, service stations, stores and gift shops. In addition, these and other various developments at Six Nations have eclipsed those of its surrounding communities, thereby providing a strong positioning within the tourist sector. Tourism statistics are likely to show continual increases, with aberrant fluctuations, for the foreseeable future.

Findings and Recommendations During First Phase:

- To provide training in agriculture that draws heavily from and bases its curriculum on indigenous agricultural knowledge.

- To establish a community-based group to be named "Indigenous Foods of the Americas Committee," to grow, produce and develop pure and healthy Indigenous food products. The committee is to be headquartered at Six Nations of the Grand River and is to be managed and controlled by local people of above mentioned group.

- To provide facilitation and training of committee members that assists them in the development and execution of organizational goals and objectives.

- To design and construct a farmer's market in the village of Ohsweken, Six Nations of the Grand River that offers retail/rental space for local and nearby indigenous farmers/gardeners to sell produce and food products. The farmer's market should feature a food storage facility, an office and a training classroom with adequate space to accommodate group tours.

- To create 5-8 jobs for the management and upkeep of the farmer's market.

- To provide management and marketing training to the staff of the farmer's market.

- To build formal links between the farmer's market and Six Nations Tourism Office so that common objectives are realized. The farmer's market should be used year round to educate tourists and school groups of the outstanding contributions Indigenous agriculturalists have made to the world. Six Nations Tourism Office would be able to offer an outstanding tour package that would include formal presentations at both the E. Pauline Johnson homestead and the farmer's market.

- To create free market opportunities in the Six Nations/New Credit agricultural sector that will lead to the creation of 20-30 jobs.

- To foster awareness and then development of agricultural businesses including farming of poultry, pig and cattle.

- To foster awareness and then development of food production businesses that have been slow to emerge at Six Nations/New Credit. These include bakery, butchery, fruit and produce, etc.

- To grow Indigenous foods and other vegetables and fruits that meet existing dietary needs at Six Nations/New Credit communities.

- To grow Indigenous food crops that may be processed into products (value-added) that are standard consumable in the existing marketplace and that are easy to grow at Six Nations. These include: potatoes for potato chips; tomatoes for salsa sauces; corn for flour and Indigenous foods; berries for jams and jellies.

- To add humus to identified cooperative land areas early in the year to prepare and work the predominantly hard clay soils at Six Nations.

Note: Commitments to provide land for the proposed development Phase II of the CBRDP have been secured from Iowne Anderson and Lehman Gibson -- totaling 20 acres or more if necessary.

- A dramatic and emblematic name should be used, and for the purposes of this study we have identified this name to be the all-encompassing corporate identity -- Indigenous Foods of the Americas Committee, Six Nations of the Grand River.

- Phase II should see the test marketing of sauces and products produced from CBRDP trainees and trainers. These products includes, Indian corn flour, picante salsa and other tomato products, tortillas and taco shells, jams and preserves. Also a test venue called Farmer's Market will be implemented. This venue would be owned and operated by the Committee once established. Until then it would remain under the management and supervision of the project management team.

2. Second Phase (1994): Training in Indigenous Agriculture.

The Second Phase of the CBRDP officially started on January 10, 1994. Plenty Canada secured funding for the training aspect of the CBRDP from Employment and Immigration Canada and Grand River Employment and Training with additional support from Jobs Ontario Training. This funding covers the training costs of 12-14 people, including trainers and support staff.

All aspects of the training component of the project have met its goals successfully. The trainees have received instruction in Indigenous (Iroquoian) agricultural methods, development methodologies and marketing strategies. In addition, the trainees, trainers and local community advisors have understood and agreed that their active on-the-job participation in the development of the community-based Indigenous Foods of the Americas Committee - IFAC, the design and construction of the farmer's market (which includes the Integrated Indigenous Agriculture and Food Centre -to be explained below in the section Third Phase) in Six Nations is critical.

The preliminary market findings revealed that Six Nations community does not produce much of its own food anymore, even though $11 million dollars are spent on groceries each year by reserve residents. It has also been rewarding to see the cooperation between the Six Nations Indigenous people and the residents from local community and from the neighbour one, Hamilton (immigrants), both groups working together for a common objective.

Specific Objectives of the Second Phase of the CBRDP:

- To provide training and work experience to 12-14 Indigenous people from Six Nations of the Grand River.

- The proposed training will contribute to improve the trainees' skills and job qualifications and to increase their

employment opportunities in agricultural-oriented occupations.

- To provide training on Iroquoian agriculture and to facilitate their internship practice of gained skills on Indigenous agricultural knowledge and organic farming accomplished during this First Phase.

- To encourage business development and entrepreneurship among trainees in fields related to the training provided.

- To promote entrepreneurship within the Six Nations of the Grand River community.

- To foster public awareness on the implicit benefit of traditional/Indigenous agriculture and related activities.

- Identify a core group of people and facilitate the development of a multidisciplinary and capable Indigenous management team to promote the profile of IFAC's as a new local community-based Indigenous development institution.

Training Component:

Session	**Training Hours**
• Job Orientation	10

- Orientation & Introduction To The CBRDP 10
- Agricultural Training And Equipment Maintenance:
    - Soils 20
    - Productive Resources And Natural Determinants 20
    - Supply & Availability Of Plant Nutrients In Mineral Soils 20
    - Aggregation And Its Promotion In Arable Soils 20
    - Structural Management Of Soils 20
    - Effects Of Soil Aeration On Biological Activities 40
    - Native Food And Medicine Plants 40
    - Greenhouse 40
    - Technology 60
    - Indigenous Methods Of Foods Cultivation & Storage 40
    - Animal Manure And Green Manure 20
    - Farm Machinery And Equipment Maintenance 60
- Marketing And Farming Co-Operative Management:
    - Diversification Of Agriculture 20
    - Marketing Produce 60
    - Consumer Economics 60
    - Farming Co-Operative Management 60
    - Operational And Personnel Management 40
    - Financial Planning 60
    - Financing Project Development 20

Total Training Hours Per Participant 740

On-The-Job/Work Experience	**1340**
Total Training	**2080**

TRAINING DETAILS

Details of the On-the-Job/Work Experience (1340 Hours)

- Plant, care, collect and preserve Indigenous crops and seeds
- Prepare data on soil analysis and plant growth
- Maintain record of crop production, processing and inventory
- Conduct/provide equipment, tool inventory
- Repair and clean farming machinery
- Identify variety of Indigenous plants and their qualities
- Develop skills in organic and greenhouse farming
- Develop skills in marketing organic (Indigenous) crops and fruits and subproduct
- Organize/attend staff meetings and training sessions
- Provide a work schedule
- Prepare financial statements
- General typing/word processing

3. Third Phase (1995):

A. Training In Rabbit, Poultry And Earthworm Farming, And Entrepreneurship

The Third Phase of the Community-Based Rural Development Project started in February 1995 and it has ensured the

continuity and diversification of agricultural training and economic development activities identified and recommended in the needs assessment study/research (1993) of the Community-Based Rural Development Project (CBRDP) and partially implemented in the Second Phase of the project. The training components of this second phase are rabbit/poultry/earthworm farming. In addition, special emphasis has been on business development and entrepreneurship training.

These agricultural training activities have been interconnected and mutually dependent on each other. The benefits of these activities are twofold. They improve the human diet and they protect the environment by producing food free of chemicals, fertilizers and insecticides. Therefore, the CBRDP reinforces the Indigenous traditional knowledge in agriculture and complies with the philosophical principles of Indigenous peoples based on respect for the environment, " Our Mother Earth," for the sake of future generations.

Likewise, by-products of rabbit and poultry farming are beneficial to the environment. These farming activities produce excellent quality of manure for soil improvement. Similarly the earthworms give an abundant and nutritious by-product called "castings" (worm manure) to enrich soils. In addition, worms help the aeration of soils.

The training programs, in addition to classroom lectures, has included a practice on-site component and promote economic development on a small scale (pilot projects) to fields related to the training. For instance, the trainees have marketed strawberry jam, red currant jelly, maple syrup, and fresh vegetables and fruits during the Second Phase of the CBRDP. In

this Second Phase, they have sold rabbit and chicken meat, fresh eggs, fur and feathers with excellent results.

The entrepreneurship component of this training has offered trainees a chance to explore self-employment as a career option in depth while at the same time providing them with the skills and knowledge necessary to ensure successful start-up. Upon completion of this component, the trainees would have a realistic appreciation of business ownership and have developed a comprehensive business plan.

To facilitate discussion and active participation, instructional methods would include hands-on the job, case studies, group seminars and workshops, video presentations and personal research projects. The participation of experienced trainers, resource people and professional practitioners on the corresponding fields on the proposed training program has ensured successful outcome.

Specific Objectives of the Second Phase of the CBRDP

- To provide training and work experience to Indigenous people from Six Nations of the Grand River.

- To contribute (the proposed training) to improve the trainees' skills and job qualifications and to increase their employment opportunities in agricultural-oriented occupations.

- To provide training on rabbit/poultry/earthworn farming and to continue their internship practice of gained skills on Indigenous agricultural knowledge and organic farming accomplished during the Second Phase of the CBRDP.

- To encourage business development, entrepreneurship and partnership among the trainees in fields related to the training provided, i.e. a booth at the proposed farmers market in Six Nations.

- To accelerate and facilitate the entrepreneurial development of trainees.

- To assist trainees in examining and preparing for the start of their own (micro or small) enterprise.

- To facilitate community participation during study and implementation process of the farmers' market project in Six Nations of the Grand River and promote entrepreneurship within the community.

- To foster public awareness on the implicit benefit of agriculture and related activities based on Indigenous knowledge and/or organic farming.

Training Component:

Session	Training Hours
• Job Orientation	10
• Orientation & Introduction To The CBRDP	10
• CBRDP Project Objectives & Development Phases	10

Rabbit Farm

• Stock Selection for Farming & Husbandry of Rabbits	40
• Breeding and Raising of Rabbits : Rabbit Farming Practices, Techniques, Production Facilities, Cage and Farm Design	50
• Rabbit Farming: Reproduction techniques and birth handling	40
• Nutrition and Feeding of Rabbit: Feed Formulation, & Quality Control Parameters for Rabbit Diets, Basic & Essential Nutrients, Safety and Quality of Rabbit Products, Deficiency Signs, Energy Requirements, Food Sources & Ration Size	20
• Marketing & Economics: Product Quality in Standards and Inspection, Choosing Markets, Distribution, Pricing, Methods for Data Collection and Analysis Applicable to Rabbit Farming, Revenue & Profits Evaluations	50
• Rabbit Manure Handling and storage. Environmental Management: Waste management	20
• Rabbit Disease and Treatment. Resistance and Productive Performance. Sanitation and Environmental Controls	50
• Rabbit Industry and Furs: Rabbit meat preparation and grading for market and fur production and quality.	20

- Use and Maintenance of Rabbit Farm Equipment. 10

Sub-Total hours 300

Poultry

- Poultry Manure Handling and storage. Environmental Management: Waste management. 20
- Chicken Disease and Treatment. Resistance and Productive Performance. 40
- Chick Hatcheries: Incubation, Vaccination and Final Product: Poultry Meat and Egg Production. Sanitation and Environmental Controls: Regulation of Temperature, Humidity and Air Circulation. Diets and Feeding of Chickens 50
- Poultry Industry and Fresh Eggs: Chicken meat preparation and grading for market and egg production, grading and quality. 40
- Management of Poultry: Productivity and Product Quality. Housing systems and Handling Methods. Selection Procedures in Layer Stocks, Growth, Egg Production, Leanness and Artificial Insemination. Feed Formulation & Systems. Use and Maintenance of Chicken Farm Equipment. 50
- Safety and Quality of Feeds. Safety and Quality of Poultry Products. 40
- Marketing & Economics: Product Quality in Standards and Inspection, Choosing Markets, Distribution, Pricing, Methods for Data Collection and Analysis Applicable to Poultry, Revenue & Profits Evaluations. 40

Sub-Total hours 280

Earthworm Farming

• Earthworm growth and breeding.	20
• Preparing the Bedding.	20
• Method of Bedding: Basics, Alternate Beddings.	20
• Basics of Buying Worms.	20
• Feeding Process and Care Practices.	60
• Earthworm Handling and storage.	40
• Marketing: The Product as Bait and Sub-product as Castings (Worm Manure).	50
• Harvesting Methods.	30
• Tools of the Earthworm Farming.	20

Sub-Total hours 280

Entrepreneurship

• Orientation & Introduction	8
• Small Business Environment & Self-Employment	28
• Role Of The Business Plan	12
• Starting The Business Plan	12
• Marketing	74
• Organization	30
• Operations	28
• Financial Planning	68
• Financing	24
• Evaluation	16

Sub-Total hours 300

Total Training Hours Per Participant	**1176**

Work Experience:

- Develop skills in rabbit, poultry and earthworm farming
- Identify rabbit and chicken disease and provide preliminary treatment
- Develop skills in marketing rabbit and chicken meat, eggs and by-products
- Monitor diets and feeding of rabbits and chickens
- Keep records of expenses and income generated by husbandry of rabbit, poultry and earthworm farming and keep inventory of their growth and population
- Develop skills in rabbit and chicken meat preparation and grading for market. Similarly for eggs
- Develop skills in reproduction techniques and birth handling of rabbits
- Clean and collect rabbit, chicken and earthworm manure and store for agricultural uses
- Build and repair cages for rabbits and chickens and beddings for earthworms
- Assist and continue in the day-to-day operations of the agricultural training sites
- Conduct/provide equipment, tool inventory and a work schedule
- Organize/attend staff meetings and training sessions
- Develop abilities of participants in terms of self-assessment, goal setting, communication, interpersonal skills.
- Foster in participants a responsible and positive attitude as well as build self-confidence.

- To make participants aware of and understand the self-employment career option.
- Develop participants abilities to:
    - Screen and recognize business ideas
    - Build viable business plans
    - Identify steps to implement the plan
    - Develop some skills and knowledge in business management and networking.
    - To develop sales strategies, pricing policies, profit goals, etc.
    - To build a business/marketing plan specifically focused on trainees' business idea.

Total Work Experience Hours Per Participant 770

Total training Hours = 1190 = 60% Training

Total Project Hours 1960

Review of Objectives and Achievements

- The training in rabbit, chicken and earthworm farming was accomplished successfully. This training was combined with on-the job-practice of gained skills.

- Outcomes exceeded the expectations. Relevant professional and customized training in entrepreneurship was implemented successfully by Federal Business Development Bank (currently known as Business Development Bank of Canada) and Plenty

Canada. The objectives of this training program were to reinforce IFAC capacity to direct and implement development projects, as well as manage new businesses successfully. Periodical evaluations of training materials showed that they were appropriate and met the demands and needs of trainees. Similarly, these evaluations indicated that the transference of expertise, skills and knowledge was accomplished successfully by the trainers.

- Facilitated support and IFAC administrative, management, legal, financial and policy systems, instruments and controls were developed and implemented by Plenty Canada.

- Plenty Canada ensured the successful implementation of the Third Phase of the CBRDP by transferring the required administrative skills to IFAC members. Plenty Canada withdrawal from the Six Nations of the Grand River community took place in February 1996.

- All objectives were completed at the completion of the project supported by local government funders GREAT/JOT.

- Fundraising targets for the third phase project were completely met.

- Enthusiasm of agricultural trainees enrolled in the management and business training program was steady and very

encouraging. During the Second Phase of training some participants developed entrepreneurial ideas for food production and service related businesses to be located at Six Nations of the Grand River. At the same time, the trainees gained solid management training for the development of the Indigenous Foods of the Americas Committee.

- Successful transfer of Marketing Strategies, Techniques and Research to trainees. This happened during the Second Phase and Third Phase of the CBRDP by marketing strawberry jam, red currant jelly, maple syrup, fresh vegetables and fruits, and meat (chicken, rabbit), fresh eggs, fur and feathers.

B. IFAC's Institutional Development

Since 1992, IFAC (as an ad hoc committee), in collaboration and partnership with Plenty Canada, implemented the three phases of the CBRDP project, which included training in Indigenous (Iroquoian) agricultural and related fields and strengthening IFAC's institutional capacity. IFAC requested Plenty Canada involvement and participation in this project because its outstanding multidisciplinary expertise and development experience and cultural sensitivity in working with Indigenous communities within Canada and abroad.

During 1995 and 1996 Plenty Canada contributed to equip IFAC with the necessary knowledge, institutional instruments, structures and human resources required to operate a successful institution.

Objective of the Institutional Development

The institutional development activities were accomplished for the objective of consolidating and strengthening the administrative capabilities, technical skills, fundraising strategies, project development techniques and legal procedures of the Indigenous Foods of the Americas Committee, and to create an intensive training program to ensure operational success.

Period Covered: April 1, 1995 to March 14, 1996.

General Indication of Results

With the assistance of the Trillium Foundation, IFAC, in collaboration and partnership with Plenty Canada, accomplished the implementation of the Third Phase of the CBRDP very successfully. As the direct result of this project there were three highlights to report: (1) a very successful training program, centering on entrepreneurial opportunities in the local food market sector, was delivered to ten community trainees, (2) a comprehensive report was completed for IFAC by museum/educational professionals to guide the design and content for future public programs, and (3) Indigenous Foods of the Americas Committee, a community-based organization has been established and is now operating under its own mandate in cooperation and partnership with other institutions.

The emphasis on this Third Phase of activity was to assist in the institutional development of IFAC, to provide additional

training that emphasized small business development in the food sector, and to establish the direction for public programming to further increase community education/awareness about the potentials of local agriculture to service the community's $11 million dollar grocery market.

Review of Objectives and Achievements

1. Accelerate, support and strengthen the institutional development of IFAC by designing and implementing appropriate administrative, legal, financial and policy development systems, instruments and controls:

After formal approval of the Trillium Foundation grant, meetings were held immediately, beginning the first week of April 1995, with the Indigenous Foods of the Americas Committee trainees to chart the timeline for the preparations and delivery of the program. At this point Plenty Canada held sessions in institutional organization, community development and start-up procedures, charting a course for the year. At the same time meetings and negotiations began with the Federal Business Development Bank (FBDB) to custom design a training program for the IFAC group. During three separate sessions, FBDB officials were provided with a comprehensive overview of Plenty Canada's two-year community development process to foster agricultural developments at Six Nations of the Grand River.

2. Provide professional training in entrepreneurial and agricultural developments to the members of IFAC. Relevant

training will be provided by Plenty Canada in the sectors of business administration, human resources management and planning, legal and funding strategies. These activities seek to reinforce IFAC capacity to direct and implement and administrate development projects successfully:

A 17-week training program supported in-part by the Trillium Foundation was delivered by the Federal Business Development Bank on schedule from June 21, 1995 to October 16, 1995. A customized training manual was produced. The training program enrolled 10 community members and covered a range of topics including:

- entrepreneurial orientation
- starting a small business
- business plan development
- team building and marketing
- customer profile and promotions
- marketing
- customer service
- financing
- debt management
- training the trainer
- media relations
- tourism

As the direct result to the training program, one of the trainees has started an apiculture business by entering into a

small joint venture with Six Nations farmer Iowne Anderson. Iowne was interested in improving the pollination of her various crops and fields while the trainee wanted to produce honey and beeswax to sell to local markets. Both parties benefit in a venture that will also improve the local environment. This is precisely the kind of activity IFAC/Plenty Canada had envisioned the training program would stimulate. Other trainees have developed ideas or plans for the development of a gourmet Indigenous coffee shop and a landscaping business based upon plants indigenous to the original Carolina forest composition of the Six Nations region.

Plenty Canada also provided training in the sectors of business administration, human resources management and planning, legal and funding strategies. These activities resulted in IFAC developing the capacity to direct and implement its development projects independently. Plenty Canada personnel and consultants conducted several workshops that facilitated:

- strategic planning methods
- management planning
- financial control standards
- legal options/structures for Aboriginal organizations
- IFAC by-laws
- board development
- advisory board development
- governance practices
- fundraising

The result of this overall process was the inception of Indigenous Foods of the Americas Committee. A operational manual for IFAC has been produced, which contains, among other documentation, lists of directors, by-laws, financial control document, management plan and various minutes from meetings.

3. Foster further institutional partnership between IFAC and Plenty Canada, primarily, and other Indigenous and non-Indigenous organizations within Six Nations and abroad:

Through the strategic planning sessions that focused on the development of IFAC, particular attention was given to the social, cultural, political and economic dynamics within the Six Nations community. Traditional people did not want to receive funds directly from any government source. As a result, a formal agreement was made through a letter of understanding, that Plenty Canada act as IFAC's non-governmental, charitable partner. This arrangement satisfied the concerns community members had that governments would be able to establish jurisdiction over a sovereign people and its territory. A high level of trust has been formed between Plenty Canada, IFAC and the Six Nations community over the past three years.

4. Develop a multidisciplinary and capable Indigenous management team to strengthen IFAC's position as a new local community-based Indigenous development organization:

The administrative team that emerged has been developed. They include, trainees, trainers, board members of IFAC. All are committed to the further development of the organization and have been working towards the development and implementation of a strategic plan to continue to carry forward IFAC's objectives.

5. Design, develop and transfer expertise and facilities management to trainees regarding IFAC's educational/resource centre (facility component of the Integrated Indigenous Agricultural Food Centre) to accommodate media/film presentations. The focus of this public programming is to provide information of Iroquois farming and gardening activities; historical information regarding Indigenous agricultural knowledge and food production contributions to the world:

Based on the Trillium Foundation support Plenty Canada contracted the services of the two most widely recognized and highly respected Native museum professionals in North America, to provide recommendations for public programming and facilities management for the proposed IFAC Center. Tom Hill, museum director of the Woodland Cultural Centre has curated dozens of art and museum exhibits. He is a member of the Board of Trustees of the National Gallery of Canada and co-chair of the National Task Force on Museums and First Peoples. Rick Hill, special assistant to the director of the National Museum of the American Indian, has designed several museums, from the ground up, including the Native American Center for the Living Arts in Niagara Falls, NY, and the Institute of American Indian Arts

Museum in Santa Fe, NM. He has recently planned public programming for the new NMAI museum to be constructed in Washington, D.C.

Both of these professionals collaborated on the facilities and management systems to be required for the interpretation centre. They reviewed all of IFAC's institutional materials and reports and made recommendations regarding community processes, personnel and museum management structures and systems, public programming content and funding sources that would support public education. The strengthening of the education concepts and management capacity was also a key objective of their work. Their work is represented in two separate reports which are in possession of IFAC for future plans.

The IFAC group was very pleased with the results of the reports as well as with the personal and professional interest both consultants showed in what IFAC was working toward.

Outcomes

1. Outcomes have exceeded our expectations. The Trillium Foundation funds were successfully used to facilitate a partnership with the Federal Business Development Bank, in cooperation with Plenty Canada, to custom design and deliver a training program that specifically addressed the needs of the Indigenous Foods of the Americas Committee's trainees, to develop an innovative community-based organization that possesses great potentials, and to increase the community's overall awareness of their agricultural heritage and local market opportunities.

2. The most positive outcome was the tremendous interest of prominent community people who agreed to serve on the board of directors of IFAC. It is a multi-disciplinary board that is truly representative of the diversity of the Six Nations community that, as a whole, spans the many political, religious and economic divisions of the local population. The original premise that community members would be able to reach common ground over discussions of food, nutrition and health held true. In this regard, the CBRDP project has been profoundly shaping a new paradigm for the Six Nations community to "plan, problem solve, and meet common needs in a collaborative fashion."

3. The greatest adverse outcome has been the realization of the enormous challenge it will be to locate funding for the capital campaign for the $2.2 million Integrated Indigenous Agriculture and Food Centre (Farmer's Market and educational/resource centre). As a result, IFAC has decided to proceed in two steps: (1) initiating the farmer's market component first at an estimated cost of $700,000-1,000,000 and (2) building awareness to secure funds for the educational/resource centre.

The identified funder for the construction of the Farmer's Market, JobsOntario Community Action (JOCA) was eliminated as a provincial development funding agency as soon the new provincial government took power. Therefore, new funding strategies are needed in order to implement this development phase.

Achievements and Fundraising Status

1. All objectives were completed at the completion of the project supported by the Trillium Foundation grant. Principally, this included the formal organization of the Indigenous Foods of the Americas Committee with structure, by-laws, financial instruments and policies in place.

2. Fundraising for the Institutional development component of this project was completely met. The Trillium funds were essential in the timely delivery of the project.

Discoveries During the Implementation of the Project

1. Enthusiasm of agricultural trainees enrolled in the management and business training program has been steady and very encouraging. During the Second Phase of the CBRDP, i.e. agricultural training, some participants developed entrepreneurial ideas for food production and service related businesses to be located at Six Nations of the Grand River. However, they did not have the knowledge for converting their ideas to realities by assessing the viability of their businesses. The Trillium Foundation training has therefore provided a much needed service in this area. At the same time, the trainees have gained solid management training for the development of the Indigenous Foods of the Americas Committee.

Implementation Approach

1. Plenty Canada was completely satisfied with the successful implementation process of the project. The Board of Directors of IFAC constitute a very interesting and dynamic group that has been exploring new activities and approaches that will educate young aboriginal students in Six Nations and across Canada, e.g. via an interactive IFAC Web site, that will stimulate people to utilize the natural resources found on and in their land, to promote market opportunities to service the local marketplace through such events as a "Three Sisters Festival," and to increase the Canadian public's awareness of the enormous contributions Indigenous agriculturalists have made to the world's food supply.

2. In addition, a series of groups visited the project throughout 1995 and 1996 to learn more about the project, about Indigenous (Iroquoian) agriculture and about ways to form strategic alliances and partnerships. These included:
    - Mennonite Central Committee
    - University of Toronto/OISE
    - McMaster University
    - Delegations from various countries including Chile, Brazil, Spain and India
    - Mondragon Group
    - Cornell University

- University of Rochester
- Oneida Indian Nation of Wisconsin

C. Implementation of a feasibility: Integrated Indigenous Agricultural Food Centre (Farmer's Market & Educational/Resource Centre).

The purpose of this study was to examine the feasibility of designing, constructing and operating the proposed Farmer's Market and an educational/resource centre. Both facilities together will be identified as the Integrated Indigenous Agricultural Food Centre, at the proposed site in Ohsweken, Six Nations of the Grand River. The essential parameters of the Centre are described below:

The Community-Based Rural Development Project (CBRDP), through the proposed management structure of the "Indigenous Foods of the Americas Committee," proposes to design, construct and operate a $2,200,000 Integrated Indigenous Agriculture and Food Centre facility that will include approximately 10,000-12,000 sq. feet of market space, approximately 4,000-6,000 sq. feet of educational space, 600 sq. feet of office space and 600 sq. feet of processing space, large entrances, and washroom facilities. The centre will be on a site that would be visible from Six Nations' busiest traffic area, Chiefswood Road, north of 4th Line in the village of Ohsweken.

Consequently, a feasibility study is needed in order to ensure that the construction of the Integrated Indigenous Agriculture and Food Centre, including the Farmer's Market, is

the appropriate social and economic decision for the Six Nations community. To accomplish this goal the study would incorporate three interconnected areas, namely:

- community vision and feedback
- building and strengthening communication with community organizations, e.g. government, public, cultural agencies.
- research and development activities

Market Segmentation: Research Findings for IFAC Centre

General Overview

From a general overview of this particular project, we have identified three particular market segments, listed as follows:

- Primary Market - Tourism Industry
- Secondary Market - Schools - Grades 4 - 8
- Tertiary Market - Vendors

These segments are expanded on individually in the following sections.

Primary Market - Tourism Industry

In Canada, tourism is a 20+ billion dollar industry and one of Canada's fastest growing industries. At the turn of the

decade (1990), the tourism industry was second to only the auto industry in revenue and number of jobs generated. Although ninety (90%) per cent of the tourists came from the United States, the international tourists - primarily Japanese - are increasing at 30% per year. In Ontario specifically, there are 12 travel associations, all of whom have designated geographic areas. The Six Nations Reserve falls within the Festival Country Travel Association (mid-Western & Niagara) and the Indigenous Foods of the Americas Committee will be taking out membership in the Association.

The Local Primary Market

A study by Marshall, Macklin, Monaghan has indicated that Festival Country has a total market demand of 14.2 million visitors (source: Six Nations Tourism: Tourism Centre Business Plan, November, 1993).

- 12.4 million same day person trips to Festival Country by Ontario residents;
- 579,600 same day person trips to Festival Country by residents of other provinces;
- 1.2 million same day person trips to Festival Country by international visitors.

The Ontario Ministry of Culture & Recreation have indicated that the 1991 Festival Country tourism statistics are 30 million as opposed to the data found in the Six Nations Tourism study.

From the leading project facilitator's own research, there have identified the Festival Country visitors statistics to be 26.2 million. For the purposes of this study, there will be utilized the 26.2 figure as opposed to the 30 million figure of the Province.

Market Evaluation:

The Local Primary Market

A visitor profile study, also undertaken by Festival Country Travel Association in 1992, has identified 85% of their visitors as Ontario residents, 9% U.S., 4% international and 2% from other Canadian provinces.

The Six Nations Tourism Bureau estimates that the current tourist visitors is approximately 116,000 visits. This is less than .5% of the Festival Country Travel Association total market demand. (assuming a demand of 26.2 million).

The overall synopsis of this market assessment is that the Six Nations of the Grand River (Iroquois) Community has massive untapped market potential in the tourism industry. The existing market of Festival Country (which includes Niagara Falls) and the 26 million tourists in Toronto represents a major market for an Indigenous tourist draw. No concentrated effort has ever been made to capture this massive local market. In a past study conducted by TAG (Tour Advisory Group) for the Six Nations Band Council, the study identified that the primary reason for people coming to the Brantford area was to see the Six Nations Reserve.

Given that the Six Nations Reserve in general, is already the tourist draw or generator in the immediate area, there have assumed that the IFAC will be a primary draw in the above market place.

Secondary Market - Schools

No attempt was made to identify the overall provincial market as schools are only day trippers and, in fact, only constitute a local market.

The Local Secondary Market

In addition to the cultural uniqueness of the facility as a general tourist draw, it will also have an educational focus that will be geared towards the school boards in a 60-70 mile radius. There have also only targeted the Grades 4 to 8 student population. The results of this research is as follows:

- No. of Elementary school boards - 38
- No. of schools - 2,106
- Sampling Size - 30
- Sampling Percentage - 1.5%
- Margin Error - +/- 17.9

Tertiary Market - Vendors

The IFAC will have a Farmers' Market operation as part of the overall project. This market will be an organically grown producers' market along with a complementary handicrafters/flea market vendors' section.

In terms of the community support for this market, a market survey was conducted. The results are highlighted below:

- Total Surveys Completed - 327
- Total No. of Households - 2,300
- Sampling Percentage - 14.1%
- Would Support Market - 96.3%

The community support is very high. No attempt was made to survey off-reserve customers; however, the reserve currently attracts numerous off-reserve shoppers now.

The project proposes to have 80 - 10' x 10' vendor stalls available. A canvassing of the local community has produced 73 Letters of Intent to rent stalls. From the market survey, another 125 indicated interest in renting a stall. As the project goes from sod turning to capital construction, we fully expect that the remaining stalls will be quickly snapped up -- if they aren't already full from some vendors requiring more than one unit.

For this study assumptions, again on the conservative side, there will be used 50/80 or a 60% occupancy rate for the first year.

Other Pertinent Information

After ten (10) years of operation, the Band Council's Tourism Bureau is becoming a pro-active agency in generating increased tourism trade for the Reserve. They generated about 140 busloads in 1994, the total of which was included in the 116,000 visitors to the community. There are many individualized private tourist draws in the community, but no serious attempt has been made to package up these people. The IFAC, with its approach to entrepreneurial opportunity, will be able to pull together this private sector as well as work along with the tourism bureau. The point being though, is that by having a receptive tour operator under contract, and, with its primary focus on developing the tour bus industry, the IFAC will be in control of its own destiny as opposed to waiting for other organizations to generate traffic.

In addition, the trend of Canadians visiting the U.S. has slightly curtailed due to the currency exchange rate and at the same time, it has encouraged more U.S. visitors who realize the extra spending power they have, especially in border towns. The Six Nations Reserve is only an hour from New York State - either through Niagara Falls or Fort Erie, Ontario.

Advertising & Promotion

Most of the pro-active advertising and promotion will occur once the capital construction has been completed so that photographs can be used in developing appropriate promotional material - brochures, information packages. In general, all of the advertising and promotion will be directed appropriately at each of the market segments there have been identified. It is recognized that the day-tripper market is the immediate market and that the tour bus market is a 2-3 year development time frame. The general theme will be "Journey Into Mother Earth's Kitchen - an Iroquoian Cultural Experience - Six Nations of the Grand River (Iroquois) Community." Both the tour bus packages and the general advertising will be built around this type of theme.

Tourist Market

The receptive tour operator will be an "arm's length" arrangement with IFAC. It is expected that this operator will undertake all of the necessary advertising and promotion to develop the tour bus business. This will include joining the Festival Country Travel Association, the three major busing associations, developing brochures, developing receptive tour packages from a half-day duration through to 3 full days, making presentations to other tour operators and the busing associations and attending trade shows.

General advertising and promotion such as road signs, newspaper, radio and TV spots will be undertaken by IFAC. The IFAC will focus on developing the day-tripper market and will develop a massive discount coupon program - on brochures, in relevant discount coupon flyers and travel guides.

School Boards

The receptive tour operator will also be responsible for developing the school market. The Grade 4 to Grade 8 segment is the student segment that would be targeted. Based on this research, one of the key areas to address is that the teachers want the students to have an opportunity to do something that is "hands-on." Too many of their field trips are visual displays and schools are looking for "hands-on" field trips where the students can touch something and do something. This provides for a better learning experience. IFAC will ensure that these programs are developed.

IFAC will make one-to-one presentations to the School Board Directors and if necessary, an audio-visual presentation will be made to the School Board of Trustees.

Market Vendors

A general call for interested vendors has already generated an excellent first response. The vendors will be encouraged to develop their own committee of vendors who will in turn liaise with the advisory committee of IFAC. General mass media advertising will be undertaken to promote the market and this

will be continued on an on-going basis. All of the market vendors will have discount coupons for the museum part of the complex and these will be presented to customers once they make a $5.00 purchase at any of the vendor stalls. One coupon is allowed per person per entrance to the museum. The vendors' committee will also be requested to consider introducing a frequent shopper card and to develop a mailing list.

Operational Plan:

Operations Strategy

The Centre will serve as the administrative operations base for the Indigenous Foods of the Americas Committee. It will be open from 7:00 a.m. to 6:00 p.m. on market days and 8:00 am to 5:00 p.m. on non-market days, 7 days per week, approximately 360 days per year. Holidays will be determined by the IFAC group as it develops its policies. In addition, evening hours may be extended to include theatre rehearsal and performance groups, film presentations, lecture series and workshops, and other community-based events.

Services and Activities

The educational components of the Centre will function as the main pathway for the group tours. After paying admissions, the maximum full-range tour will proceed as follows:

Orientation Hall -- an underground earth mound structure that brings people into the earth and where exhibits inform visitors of the significance of the earth as mother to all life. (Time: 10 minutes)

Agriculture Theatre -- an hour-long orientation multi-image program presents the ancient developments of such Indigenous food plants as corn, potatoes, tomatoes, pumpkins, peppers, various medicines, tobacco, various beans, etc. The presentation will visually travel from South and Central America to the Six Nations community, following the journey of the plants themselves. It will emphasize the contributions Indigenous farmers have made to the world's food supply and economy. (Time: 60 minutes)

Resource Room -- photographs, publications and interactive CD-ROM video terminals will enable visitors to access information about various Indigenous foods and indigenous agricultural values and practices in a hands-on learning environment. (Time: 30 minutes)

Exhibit Hall -- using the theme "All Food Is Life," this exhibit will explore the cultural basis of Iroquoian life, its blended observation of seasonal cycle with agricultural cycle. Exhibit objects will be displayed that are used for food gathering, preparation, storage and service. (Time: 15 minutes)

Food Processing/Demonstration Kitchen -- hands-on work in Iroquois food processing and preparation will be an active part of the tour. Visitors will assist in the cooking and sampling of white corn soup, strawberry juice, roasted corn snacks, three sisters succotash, Indian pudding, etc. Snacks will be for sale. (45 minutes)

Longhouse Farmer's Market -- entering from the second floor visitors will be given an explanation of the architectural concepts of the Iroquois longhouse -- its rafters, post and beam construction, six skylight structures representing smoke holes, etc. (10 minutes)

Shopping -- visitors will then spill into the market to browse and purchase items and services from the various vendors. (30 minutes)

Herbal Gardens -- in the appropriate season visitors will also be toured through Indigenous herbal gardens on the natural grounds of the Centre's mound circle.

The time of the approximate length of the full tour package could hold visitors as long as four hours including lunch and breaks. This makes the tour a significant tour destination for the community. Of course, a variety of smaller tour packages will be designed.

Special Events

Indigenous Foods of the Americas Committee will organize new special events for the Six Nations community designed to attract additional visitors. These will include a week-long summer solstice festival that is triggered by the sun's light beaming directly through a skylight shaft astronomically aligned for noon on that day. A harvest festival will feature harvest and fall activities including special exhibits and other public programming as well as outdoor activities such as pumpkin patch rides, etc.

In addition, there will be an indigenous film festival in the theatre and other entertainment activities held inside and outside the market centre throughout the year.

Retail Sales

IFAC will own and operate a gift shop that will sell various processed Indigenous food products and mainstream health food products, as well as IFAC merchandise targeted at the tourist visitor. The gift shop will be open during regular business hours and during special events and tours. It will be managed by the market manager or a minimum wage sales clerk when appropriate. This facility is not intended to be a major income generator for the IFAC.

Community Contribution to the Project

Community participation is assured in the implementation and development of the Integrated Indigenous Agriculture and Food Centre. IFAC members have invited the Mennonite Central Committee (MCC) to assist in the raising of the structural supports and roof for the proposed facility. The involvement of MCC on the Community-Based Rural Development Project, during the three months of summer in all three development phases of the CBRDP, has contributed to foster a positive and fruitful relation with people from the Six Nations community translated into genuine support for IFAC's development efforts and commitments. For instance, some members of the local community have expressed their interest in helping during the construction of this project and others to advertise and outreach the needed clientele. The rationale of this expected support is based on the fact that the Six Nations community sees the planned Integrated Indigenous Agriculture and Food Centre as one of their community-owned buildings.

In addition, IFAC members will be involved in activities that are not remunerated but are needed for the normal development of the project such as to assist personnel in administrative and clerical duties, maintenance and security of equipment/building, training and supervision of volunteers, etc. This community participation and volunteer work will be calculated in monetary terms during the feasibility study research.

Strategic Planning Process of the CBRDP

In this section, we will discuss the strategic planning process that was used by project facilitators and members of the ad hoc committee in charge of the implementation of the CBRDP project in Six Nations of the Grand River community. This alternative model is both eclectic (inspired by Indigenous peoples of the Americas) and ideal (presenting the best elements identified in this experience). This socio-economic development model is a social learning encounter for any Indigenous community: the process, as a human experience, is as important as the final product.

The implementation of the CBRDP, following a recommendation made by the ad hoc committee, was in charge of one lead agency: Plenty Canada, an Indigenous international development organization, which has been working with Indigenous communities around the world for the last nineteen years. The agency's mission would have two objectives:

1. To make available top-notch management services and technical assistance to the Indigenous community members during the implementation of the project;

2. To work with Indigenous community members in facilitating them to meet their goals of sustainability and self-sufficiency through training, job creation and new business opportunities.

Next, we will detail the strategic planning process that was used by project facilitators and members of the ad hoc committee in charge of the implementation of the CBRDP:

First, the implementing institution of the CBRDP project (Plenty Canada) and Six Nations of the Grand River community representatives study the pertinence of establishing a strategy to improve socio-economic development (step 1). Then both parties agree on setting up an ad hoc committee (step 2). The ad hoc committee recruits experienced project facilitators who will support the planning, organization and co-ordination of the committee's work. This facilitators have solid socio-economic experience in national and international community development. The facilitators' main role will be to stimulate and ensure community participation, input and communal creativity en route toward meeting the community's needs. One of the committee's first tasks is to inform the Six Nations of the Grand River community of its past and present socio-economic situation in order to receive their opinions, suggestions and/or recommendations for a community development plan (steps 3 and 4). The scope of the task at hand would require the hiring of local advisors (Community Elders, leaders) (step 5).

The ad hoc committee and the community prepare a socio-economic profile and a spiritual-cultural profile (step 6) and examine strengths and weaknesses of the community base (step 7). A wide variety of participatory technique will be required to release the enormous quantity of human energy and creativity

: community consultations, public forums, press, workshops on visions of the future (elders, women, youth), etc.

A detailed overall analysis of steps 6 and 7 gives the committee a better grasp of the Six Nations of the Grand River community's development potential and the entrepreneurial potential of its human resources (step 8). Based on this data and with nominal group techniques, the Indigenous community then prepares a list of priorities for socio-economic development geared to the strengths and weaknesses of the community (step 9).

Then the facilitators and the ad hoc committee prepare a local development strategy (step 10). This strategic plan deals with: the spiritual and cultural development (spiritual and traditional revival); psycho-education development (self-esteem, self-confidence, junior achievement programs); economic development (micro-business, joint-ventures, tourism, arts and crafts, etc.) ; plans for manpower training (primary, secondary and tertiary sectors); project financing (loans, grants, venture capital, government subsidies). This overall plan (step 11) must be congruent with the cultural and spiritual ideology of the community.

The following step (step 12) result in the preparation of a list of short-, medium-, and long-term projects. The logical next step is to establish an evaluation and follow-up system (step 13). Finally, the facilitators oversee the dismantling of the ad hoc committee and the activation of a permanent local socio-economic community-based development organization (Indigenous Foods of the Americas Committee -IFAC).

Rebuilding Traditional Social and Economic Structures

The need for balanced development activities has become increasingly clear at Six Nations. Ever since the community departed from its agriculturally-based economy in the 1800s, to an agriculture and industrial labour-based economy through most of the 1900s, and to the retail-based economy in the 1990s, the community has been in search of balance. Appropriate, sustainable and balanced development activities can be achieved when the Iroquois people at Six Nations begin to research, design and implement ways in which fundamental human needs, such as food supply, are returned to community control.

There is little question that since contact with colonizing European peoples, traditional Iroquoian institutions have been under great stress. Following the American Revolutionary War period, Iroquois unity was broken and independent control over community economic life was severely restricted. This era brought forward sweeping changes that included: shifting family structures "from the longhouse to the loghouse" (or from extended clan families with women at the head of the household to nuclear families with men at the head of the household), religious conversions from indigenous spirituality to Christianity, economic freedoms that allowed access to the land's resources to reservation systems that restricted hunting, fishing, gathering and other sustenance practices and forced political oppression that sought to convert Iroquois nations to minority populations. Throughout this prolonged process of

cultural intrusion and the breakdown, but not destruction, of traditional Iroquoian institutions, certain valuable aspects regarding organizational principles began to fade. The myriad divisions now in place within the Six Nations community make pro-active community development much more difficult.

Recognizing these problems would lead the project facilitators to move slowly forward with measured interaction with key community informants. At the same time, the structure of the project would be designed to encourage the rebuilding of traditional work processes and values. To this end a project team would be hired and structured as follows:

Elders: Provide the core agricultural values and Iroquoian farming knowledge. These team members would occupy positions as local advisors (Community Elders, leaders).

Adults: Provided the administrative and organizational skills to translate and transfer valuable work experience, observations and findings as expressed by the Elders, into reports, work and business plans (Project Facilitators).

Youth: Work as assistants to the adults and elders, gaining experience from both levels. Training programs are to be targeted at this group at Six Nations.

Respect is recognized as the most important ingredient of indigenous organization. In an effort to rebuild a traditional organizational structure at Six Nations, CBRDP project facilitators emphasized that the younger people respect the

Elders for their experience and knowledge, and that the Elders also respect the younger people for their skills in administration, documentation and paperwork. The proposed hiring of a project team that includes Elders, adults and youth is a deliberate action by the ad hoc committee to reconstruct a balanced Iroquois social work group that would be able to accomplish positive, beneficial and long-term community developments in the agricultural sector. It should be noted that, historically, during those times when the Iroquois were highly productive and involved in economic developments, community-based movements were not driven by the consensus of the entire community, but were driven forward by groups of people truly interested in those activities. However, the CBRDP is promoted by the ad hoc committee that embraces the interests of the Six Nations Community.

It is envisioned that the CBRDP, as an implemented project, will retain and strengthen the traditional structure and values currently in place. It is recognized that exists a need to design a structure that will enable the community-based group to access resources in a manner that will not encumber it with formal responsibilities to governmental agencies and organizations. As a result, the CBRDP will seek support from a non-governmental development organization, preferably, an Indigenous economic development and community-based organization.

Throughout the history of contact the people of the Six Nations have been given special attention for their agricultural practices. Staple foods of corn, beans and squash supplemented a varied diet which included natural vegetation like watercress,

milkweed and berries, as well as fish and fowl. Important for the festival calendar, red meat from deer was served approximately 10 times per year. It is estimated the stable traditional economy of the Six Nations supported a population of 1.27 million people prior to the American Revolution.

Naturally, the people seemed to adapt readily to market economy structures for agricultural production. After the American Revolution and re-settlement in the Haldimand treaty area of Iroquoia, the remaining 50,000 Iroquois began to participate in the Great Lakes economy around 1790. From 1790 to 1830 the Six Nations boasted an array of agricultural activities which included corn production by Cayugas near Port Maitland, the Onondagas near present-day Ohsweken, and cereal monoculture crops and grist mills by Mohawks from Brantford to Galt. In 1830 European colonists put extreme pressure on the Six Nations people. From 1830 to 1890 militia and colonial mobs burned the Iroquoian settlements from Port Maitland, Galt, to the Oxbow, the Oneidas at Cainsville, and the Onondagas at Middleport. Fleeing Six Nations people finally settled on a strip-forested section of land, the site of the present-day Six Nations Reserve.

Six Nations again became an active participant in the agricultural economy. The formation of the Six Nations Agricultural Society in 1867 illustrates the importance of farming and agriculture to the Six Nations. Some of the finest harvests, in terms of bounty and quality, were brought to market by Six Nations farmers. This was to last until the 1900s.

The Grand River, as well, was under constant pressure from communities upstream from the Six Nations Reserve. Constant

complaints from the Six Nations Confederacy Council of Chiefs failed to have communities like Brantford, Paris and Galt, monitor their raw municipal waste effluent being dumped in the river. From 1907 to 1919 five small pox epidemics swept through the Six Nations, casting a black cloud over the produce brought to market. The epidemics were linked to the Grand River water.

By the 1940s the only important agricultural export from Six Nations was the expertise and transient labour. A few farming operations existed, but from the 1940s to the 1990s many Indigenous people augmented their incomes by working on farms in an area stretching from Delhi through to St. Catharines. In fact, much of Six Nations expatriate population is comprised of families who merely resettled off-reserve in the agricultural belt.

The loss of agricultural activity, measured in knowledge and skills, has been a significant factor in the economic and cultural decline of the community during the past few generations. This has taken place while the market demand for foods and food products, as evidenced by the increase in population and food service businesses, has grown dramatically.

The indigenous peoples of the Americas are ideally placed in the food production industry at the current time. The increase in New Age and intermediate technology driven tertiary economies are perfectly suited to Indigenous people. And the recent re-acquisition of appropriate cultural technologies place indigenous people in a strong image, and qualitative position for delivering goods to market.

Debilitating dependencies created by colonial mismanagement of Indigenous lands and resources had struck deeply into

Indigenous society. The promotion of anguish and despair in the Indigenous territories has been a well-documented policy of the governments of the United States and Canada right up to the present time. The epidemic of suicides among Northern Cree, such as those at Attawapiskat on James Bay, is a visible social response, tragic, but entirely pre-meditated.

Here is an answer to Attawapiskat's problems based on the sustainable lifesystems paradigm--get your nose out of the gas can, and back to the goose camp. This would be viewed by liberal and Keynesian economic theorists as retrogressive, even undermining the powerful corporate and industrial elites, and their employees. Contrary to this view, and since Indigenous people aren't generally involved in the primary and secondary economies except as labourers, most Indigenous communities self-sustaining economies would not adversely affect the dominant economy, but rather enhance the market, and even free the dominant economy's perceived tax burdens.

More specifically toward market items, the potential for Indigenous originated product is underlined by recent developments in North America. An example of this potential is seen in the picante salsa products which are considered by the CBRDP. (A relevant statistic--in 1992 salsa outsold ketchup in the United States by $640-million to $600-million.)

In addition the CBRDP is suggesting full-production of organically grown fruits and vegetables will expand very rapidly by the end of the 1990s. According to the Vegetarian Times the market for organic food in the United States will increase from its present one per cent to nearly ten per cent, by the year 2000. Increases are also being gauged by consumer surveys

through the Consumer Association of Canada (CAC). The 1990 survey by the CAC found that 32 per cent of Canadians worried about health effects from produce grown commercially. Despite this concern the organic food market share is only a fraction of a per cent of food sales in Canada.

To improve the tertiary economy in Indigenous territories there is a need to develop a suitable culturally appropriate infrastructure. Various levels of Crown governments have resisted the development of permanent infrastructural supports, except where obliged through treaties or other legislation. Having removed Traditional Governance and destabilized the social and cultural systems of Indigenous people, a deeply rooted beggar mentality is perpetuated by Government and Media. If the Crown and Canada were to accept the Indigenous wish for self-sustaining community development there would by a movement to assist Indigenous people in producing their own food, building their own storage, greenhouse, and market buildings. There would also be a movement toward documenting this information as a resource which would be of value to other impoverished peoples.

Gauging Community Interest in Agriculture

"We should aim our training at the younger ones that are willing to learn. You can't change an older person who perhaps has been burdened with other pressing responsibilities. Agriculture isn't something they are likely to respond to. But the younger people <u>are</u> interested. With the younger people you can influence them and they are searching for guidance..."

-- Iowne Anderson, a Six Nations Elder

The approach used in the implementation of the CBRDP proceeded along two parallel tracks: participatory and developmental. Early in the research period select community members who had an interest in agriculture and horticulture were invited to attend meetings in which they were involved in "creative" sessions designed to facilitate expression of their needs and aspirations. Their suggestions ranged from the need for farm equipment and access to markets to the potential benefits of a community greenhouse and an agricultural training facility based upon Indigenous agricultural practices. These meetings provided the terms of reference for project facilitators to follow in order to ensure that the direction of the project would remain within the path of community-based objectives.

At the same time (and based upon international development experience in fractured indigenous communities), the project facilitators moved cautiously to identify and work with key informants of the Six Nations community who were actively and passionately involved in agriculture, while not raising expectations beyond the resource capacity of the implementing organization. It was clearly understood that the research process would extend over an entire year and that future developments would be founded upon objective data. By working with these key community informants through out the year, principally Iowne Anderson and Lehman Gibson, the project remained connected to the target group. Both of these two local key informants became to be the local advisors for the project.

Given the cultural, historical and social perspectives of the project target group at Six Nations (one that is distrustful

of government agencies, studies and surveys), the dissemination of questionnaires was not an appropriate method of assessing the community's needs and economic development potentials, i.e. agricultural training programs, agricultural farming. Access to the community was provided by the local advisors (community Elders, leaders) based upon their various related activities.

The process of gaining community access to this group was made possible by Plenty Canada's status as an indigenous international non-governmental organization with no political, religious or imperial affiliations. Therefore, resources channeled through Plenty Canada imposed no conditions or allegiances on the traditionally based peoples and nations at Six Nations. This was a serious and valid concern expressed by several community members during the first month of the project.

Based upon an assessment of people interested in agriculture (through meetings held with the Six Nations Agricultural Society, 4-H club and presentations made to local schools), principal community advisor Iowne Anderson (Elder) identifies the primary target training group to be youth ages 19 to 24. Within this group it is estimated that approximately 40 young people, all of whom are identified as underemployed, unemployed or receiving some form of social assistance, would be interested in receiving agricultural training. This estimate is based upon Iowne's direct community outreach. Long an advocate for educating young Indigenous about their cultural heritage, Iowne recognizes that the most positive responses to her presentations have been from younger people who are searching for ways in which they can further explore and practice their traditional heritage. Among the Iroquois, that heritage is

closely linked to agricultural knowledge and practice. In addition, Lehman Gibson's deep understandings of Iroquoian plant life and practical farming provided project facilitators with clear data on the inputs (labour, mechanical and biological) necessary to work the predominantly "hard" clay soils at Six Nations.

Total on-reserve population for the training target group is estimated at 807, consisting of 429 male and 378 female. This is the primary age group for those enrolled in post secondary institutions. In 1991 the number of students enrolled in college, university and technical institutions numbered 502. These findings indicate that a substantial portion of those who are of post-secondary school age are not pursuing formal education -- opting instead for menial jobs where few skills and little knowledge are transferred and/or entering into a cycle of continuous unemployment and underemployment.

In addition, and also based upon community outreach, it has been estimated that up to 12 adults, aged 25 to 64, all of whom are identified as underemployed, unemployed or receiving some form of social assistance, are also interested in receiving training in Iroquoian, organic and sustainable agricultural practices.

This chapter has described the evolution of the CBRDP project at Six Nations of the Grand River community. It is paramount that the traditional knowledge and practices invested in this project be documented to ensure that the detailed understanding of ecosystems accumulated over thousands of years is not lost. The project has provided a rich source of knowledge in terms of traditional decision making processes. The elders

involved in the CBRDP project have played a very important role in guiding the planning and implementation of the corresponding community economic development plan. The key element for the success of the project was people's participation. Their involvement ensured community ownership, and therefore the CBRDP implicitly reflected the real vision of the community in terms of preserving their local values, culture and goals of self-sufficiency. The project has also aimed to share this experience with other communities who might benefit from it.

CHAPTER IV

INDIGENOUS KNOWLEDGE AS AN ALTERNATIVE TO DEVELOPMENT

Introduction

In April 1987, the World Commission on Environment and Development (the Brundtland Report) warned governments of the adverse impact of continuing to exclude Indigenous societies in the world from the processes of development. The Brundtland Report suggests that industrialized nations could learn a lot about sustainable development from Indigenous peoples. Indigenous peoples have been able to live sustainably in their environments for thousands of years, a feat no modern technological society can claim. It is well known by the international development community that Western development models have had adverse effects on the environment: ozone layer depletion, atmospheric pollution, oil spills, ocean dumping, solid waste disposal, etc.

In recent years, Indigenous knowledge has gained more credibility in the Western world. Indigenous peoples of the Americas have made significant contributions to the world in the areas of food, medicine, and technology. Foods such as potatoes, originated in the Americas. Many common remedies used in modern medicine were developed by Indigenous healers prior to Western contact. Throughout history, human societies have passed on hard-earned lessons and knowledge crucial for survival. This Indigenous wisdom has been passed on to suitable initiates from

generation to generation. But colonization and "modernization" have threatened the survival of traditional Indigenous peoples throughout the Americas, and the knowledge they possess is on the verge of disappearing with them. For example, since the beginning of the century, an average of one tribe of people in Brazil has disappeared each year along with knowledge that took thousands of years of accumulate and will never be duplicated by scientists. To protect this knowledge, activities should aid Indigenous peoples in preserving their knowledge and culture.

Indigenous Knowledge

Indigenous knowledge is one of the most exciting and newly emerging fields of Indigenous Studies. Warren et al, (Veldhuis 1993) has identified important contributions in a number of academic disciplines and fields such as ecology, soil science, veterinary medicine, forestry, human health, aquatic resource management, botany, zoology, agronomy, agricultural economics, rural sociology, mathematics, management science, agricultural education and extension, fisheries, range management, information science, wildlife management, and water resource management. New fields of study in Indigenous knowledge (IK) include ecology, mediation, healing and arts.

Indigenous knowledge is really local knowledge and Indigenous science passed down since time immemorial. Its impact has been felt in many areas of the world since contact and will continue to influence all fields of science in the

future. One of the leading researchers and proponents of Indigenous knowledge, D.M. Warren defines it as:

> "... local knowledge - knowledge that is unique to a given culture or society [ecology and territory], IK contrasts with the international system generated by universities, research institutions and private firms. It is the basis for local-level decision-making in agriculture, health care, food preparation, education, etc." (Warren, page 9)

There is a new research ethic emerging as scientists study and document Indigenous knowledge: participatory, community-based and controlled research. Martha Johnson in Documenting Dene Traditional Environmental Knowledge writes:

> The Dene Cultural Institute Pilot Project has provided some preliminary insights into the nature of Dene TEK [Traditional Environmental Knowledge] and the system of traditional resource management. It is clear from the research that Dene TEK is a valuable resource for assessing the environmental impacts of development projects and understanding environmental change. It is also clear that the successful documentation of TEK is dependent upon Dene to conduct the research themselves, in collaboration with Western scientists. Successful integration of Dene TEK and Western science depends upon the ability of both groups to develop an appreciation of and sensitivity to the strengths and limitations of their respective knowledge systems. However, only through a change in the present power structure

will Dene TEK take its rightful place in future resource management. (Akwe:kon Journal page 79)

To adequately study Indigenous knowledge, Indigenously controlled institutions will have to be established. These institutions could establish partnerships and collaborations with the already proliferating indigenous knowledge resource centres. Today, there are 11 formally established indigenous knowledge resource centres in The Netherlands, the United States, Sri Lanka, Mexico, Nigeria, The Philippines, Ghana, Indonesia, and Kenya.

There are several more centres of being developed in Benin, Namibia, Zimbabwe, Burkina Faso, Costa Rica, Venezuela, Columbia, Peru, Bolivia, South Africa, Tanzania, Nepal and Australia. Both the Dene and the Inuit in Canada have been contributing to the international dialogue on Indigenous knowledge.

The Indigenous knowledge centres would strengthen the traditional economy by dispelling myths about the subsistence economy being "primitive" and harsh. Research on traditional knowledge would provide some answers to questions like, "To what extent can wildlife resources in the North support the numbers of Indigenous people wishing to live a traditional lifestyle?" There is currently very little specific knowledge regarding the traditional subsistence economy. There is very little known about other aspects of the Indigenous traditional economy like the informal economy, the arts economy, and micro-enterprise, which all arguably have roots in the traditional economy.

These centres, in addition to strengthening the traditional economy, would also serve the purposes of self-government. As Indigenous People increasingly control programs, they will attempt to merge both traditional concepts and values with Western concepts and institutions. Knowledge on how this process would work, gleaned from Indigenous knowledge research, would be a substantial contribution to Indigenous self-government and management of programs and policies.

Indigenous knowledge will substantially contribute to perceptions of traditional societies and economies. The public and scientists are developing a new respect based on the remarkable success of traditional medicines, technology and concepts. These successes include medicines for childhood leukemia, and some forms of cancer. Time magazine in an article fears that, "Today, with little notice, more vast archives of knowledge and expertise are spilling into oblivion, leaving humanity in danger of losing its past and perhaps its future as well." In the article, Eugene Linden compared the loss of traditional knowledge to the great library in Alexandria burning down 1,600 years ago. Linden also realizes that if Indigenous cultures are lost, so is the knowledge. The article argues strongly to protect and maintain Indigenous cultures in order to preserve the traditional way of life and the Indigenous knowledge embedded in these societies.

Western Development Model and Indigenous Knowledge Model

Indigenous people occupied the land for thousands of years before contact with Europeans. During this period of pre-contact, their ancestors developed ways and means of relating to each other and to the land, based upon a very simple and pragmatic understanding of their presence on this earth. If they failed to consider what the environment had to offer, how much it could give, and at what times it was prepared to do this - they would simply die. This basic law held for every living thing on the earth. All living creatures had to be cognizant of the structure of the day, the cycle of the seasons and their effects on all other living matter. The consequences of this relationship with the earth and its gifts are a profound, intimate and respectful relationship with all living things and a deep reverence for the mystery of life. In Indigenous ways, spiritual consciousness is the highest form of politics.

Culture identifies Indigenous Peoples who continue to maintain their own cosmology, worldview, language, ceremonies, government, economic system, health systems, and traditions which are rooted in their specific land base and have existed from antiquity. Indigenous peoples have a specific way in which they perceive reality, and that reality is based in ancient beliefs about how this world originated and how beings should conduct themselves on this earth. A people's culture contains a deeply rooted complex set of beliefs, customs, and traditions which belong to them and are continued by them because they are integral to life.

Worldview is the knowledge, the philosophical base, with which a culture defines itself. Worldview contains the beliefs that form the central core of the culture's understanding of the world, and worldview shapes the cultural enactment of those beliefs.

It was not that long ago when the majority of Indigenous communities in the America's exercised a full system of development, enjoying the fulfillment, integration and dignity that comes from having a strong and stable self-sufficiency. Their's, was a way of life that was finely attuned with the creation and with its natural laws. For its people this system of life produced advanced levels of physical, mental and social development.

Based on historical observers the pre- and early post-contact conditions distinguishing American Indigenous societies were those of good health, sanity, familial security, honesty, chastity, sobriety and socioeconomic self-sufficiency. In correlative terms it was a societal form free of need for hospitals, insane asylums, nursing homes, orphanages, police forces, prisons, brothels, half-way houses.

With the advent of European settlement and its ever expanding reign of power, came the inevitable impositions of a foreign techno-materialist culture, which largely shattered the Indigenous life system of vision, intracommunity cooperation and respectful balance with the natural world.

Traditional Indigenous societies in the Americas enjoyed the practice of a range of distinct technologies that were reflective of their common cultures and world view. The basic characteristics and qualities observed in these Indigenous

technologies were simplicity, functionality, holism and cooperative integration, thus minimizing waste and duplication, while maximizing individual reconciliation to society and societal reconciliation to the environment.

Most Indigenous societies were sustainable in food and medicine. Their technology was directed to the development of efficient preservationist, non disruptive, production systems. Indigenous technologies used in the Americas tended to increase levels of production as well as the span of productivity of resources (agricultural soils, forests, water sources, wildlife, etc.). Such systems included irrigation, terraces, artificial soils (floating islands or Chinampas) which were mostly unknown to Europeans. Medical knowledge was more advanced and focused on the prevention and control of pests and diseases, which were practically non-existent, and surgical interventions, including heart and brain surgery. There was also substantial understanding of mathematics and astronomy.

The past trends have been that the metropolitan West has fundamentally manipulated investment strategies to the south which have been for the purposes of extracting wealth from the south to the north and that process has meant that practically every acre of arable land in some developing countries where people are poor and hungry is used for growing cash crops, which are contributed to the profits of the foreign investor in those countries. Every square inch of land on Earth has now been claimed by some nation state, every nation state outside of the north is in debt to the north to the degree that most of these developing countries are on the edge of bankruptcy. So that the poorest people in the world are contributing their tax dollars

to the wealth of the richest people in the world. Under these circumstances, development in the first world is such that the ecology in most of the planet, particularly in places that support Native peoples, seems to be on the verge of extinction.

Anthropologists and environmentalists have demonstrated the unique ability of Native peoples to live in harmony with and to protect "Mother Earth" at a time when the destruction of the planet's resources is threatening the very survival of humankind. The protagonists of this destruction, mainly of European stock, have everything to gain by ending the suppression of Native cultures in the name of "development" and "modernization."

Marshall Sahlins, in *Stone Age Economics*, demonstrates that Indigenous peoples were historically the most efficient users of the Earth's resources, and only worked two to three days per week. Western research interest in Indigenous knowledge began in anthropology and ethnobiology. Indigenous people have ecological knowledge based on the long-term sustainable use of the Earth's resources based on principles of respect and conservation. More recently, however, the ethics of research have come under international scrutiny. In some cases, Western institutions are paying small third world countries large retainers for the rights to undertake research for Indigenous knowledge. Ethical researchers have become concerned that "mining" the knowledge of Indigenous people, without considering the cultural context, does not provide a sufficient understanding of the knowledge.

David Suzuki and Peter Knudtson discuss the advantage of a holistic approach to science compared to some of the misconceptions prevalent in Western science in their recently

published book, *Wisdom of the Elders:* "Science is a reductionist approach through the belief that by stripping nature to its most elementary components, we can gain insights that can be fitted together like pieces in an immense jigsaw puzzle to reveal the deepest secrets of the universe."

Indigenous knowledge is derived not by focusing on one particular species of plant or animal, but from the context of its place within the entire cosmos. For example, a species of animal will be observed over generations in terms of its relationship with all other forms of life. Moreover this vantage point "assigns [to] human beings enormous responsibility for harmonious relations within the whole natural world rather that granting them unbridled license to flaw personal or economic whim." Indigenous knowledge can, through its spirituality, fulfill the ever enlarging spiritual void created by Western rationalism and alienation with the natural world.

Western science is in its infancy in terms of finding a place and context for this knowledge. Jerry Mander, in *In the Absence of the Sacred: The Failure of Technology & the Survival of the Indian Nations,* desconstructs the ideology of technology, of megatechnology, and therefore of megadevelopment. He points out that for the last 50 years everyone on the planet who could speak and read English has been deluged by propaganda that has been fostered by the major corporations in the world to make people accept their technologies -without questioning their impact, without questioning the basic fundamental restructuring of society, without questioning what it does to the human psyche. He says that many examples of the techno-corporate drive to commodify the wilderness culminate in reports of the

scientific research now going on in the most prestigious American universities, provided with corporate funding and a platform from which to propagate its disturbingly psychotic rationale: genetic research for everything from the development of "designer babies" to military applications in genetic warfare, and plans for the "post-biological" age in the ultimate techno-fantasy of immortality -the removal of the mind from the brain, where a computer-surgeon "downloads" the contents of the human brain into a robot.

These stories not only argue that the preservation of traditional Indigenous knowledge and practice is basic to the survival of Native communities, they also indicate that only by abandoning the profit-motivated technological paradigm, to learn from the sound local wisdom of Indigenous peoples and live by it, will humans in general have a change to survive on this earth. Of course, the renewal of ecological relationships requires a profound transformation in social relationships. Our connection with each other must shift from those imposed and administered by a market economy and disproportionately huge entities of state power to relationships reintegrated into the surrounding ecology with localized decision-making based on commonly held values of respect for people and habitat.

In traditional Indigenous philosophy the need to return to nature, through a studied obedience to the natural ecological and biosocial design is accepted as the original purpose of the creator for his creatures. Compliance with natural law is hardly a matter of some utopianistic ideal or mere wishful thinking, but rather an issue that constitutes the very basis for human survival and development.

Indigenous knowledge is local knowledge and skills which have been developed and passed down over the millennia, and which remain unique to local cultures and societies. It stands as a distinctive body of working knowledge, in contrast to the conventional and now internationally dominant industrialized, urban and university based knowledge system. Like the latter, Indigenous knowledge encompasses many disciplines including: agronomy, natural resource and forestry management, aquaculture, human and veterinary medicine, nutrition, meteorology, social and management systems, childhood development and education, and ecology.

However, a critically distinguishing feature of Indigenous knowledge systems is a pervasive worldview which undergirds a general capacity to integrate multiple knowledge disciplines. Contextual to development practice, this synergism demonstrates markedly higher levels of efficiency, effectiveness, adaptability and sustainability than do many of the conventional technologies used in development programming. Due to its highly adaptive and dynamic nature, when holders of Indigenous knowledge come into contact with other types of knowledge and skills, whether Indigenous or Western, as a rule, they will seek to integrate what is considered useful into their own knowledge base.

Because Indigenous knowledge has been largely derived through means of oral traditions passed down over multiple generations, and has been largely ignored and even denigrated in the formal education of today's young and middle aged generations, much has been forever lost, with what remains being vested in the minds of limited numbers of Elders who likewise

will soon pass away. The question of its preservation, expansion and practical utilization can thus be seen as of an especially urgent nature.

Integrating Indigenous Knowledge and Western Science

Jack Weatherford in his book *Indian Givers,* demonstrates that despite all the technological innovations of the Indigenous peoples in the Americas and their history as the world's greatest farmers, today few of them benefit from this largess. "Too many of them live like the families along the Mamore River near the Brazil-Bolivia border, who eat chocolate fruits and spit out the seeds for people in richer countries when they should be growing more corn and plantains, International market trends have warped their world so that it becomes more difficult for them to practice their traditional agriculture."

Throughout the 1980's, a number of sectoral development specialists, and applied researchers, in the industrialized nations including the USA, the United Kingdom, Japan and a number of others, have progressively shown that (despite their historical marginalization) in both the developing and developed nations there remain Indigenous groups who continue to maintain, across many sectors, vital knowledge, experience and skills which can effectively strengthen development initiatives within the developing world. In fact, in recent years many successful development innovations have been based on what are Indigenous knowledge based practices. Examples include: alley cropping, intercropping, terraced and raised plant bed agriculture,

biological pest control, integrated rice-fish culture, soil classification, natural and biological resource conservation, plant medicines, and cooperative management and governance.

What is a growing and now sizable body of field experience with and applied research on Indigenous knowledge systems has served to influence a number of new and promising developments, of which the following are a sample:

- in recent years a series of special seminars and workshops on the role of Indigenous knowledge systems in development have been staged in various universities and institutes in England, the United States, Japan, Nigeria, Kenya, and the Philippines;

- the International Institute of Rural Reconstruction in Cavite, the Philippines has successfully established a "Regional Program for the Promotion of Indigenous Knowledge in Asia". This program envisages the establishment of an Asian Indigenous knowledge resource centre;

- In the United States a centre for Indigenous knowledge for Agriculture and rural development is now fully operational at Iowa State University. Its External Advisory Board includes representatives of the World Bank; the African Development Bank; the UN University (Helsinki); Institute of Developing Economies (Japan); Overseas Development Institute (UK); Chinese Academy of Social Sciences; and a range of developed and developing world universities and institutions. It

presently services a network of 2,500 individuals and institutions in 124 countries interested in documenting and using Indigenous knowledge systems and approaches;

- The World Health Organization now officially recognizes that many facets of traditional medicine -in particular Indigenous botanical medicines, and traditional midwifery- must be accorded a more prominent position in developing world health policies and programming.

In fact, examples abound of cooperation by Indigenous practitioners in the interface point between Western Civilization and the Natural World. In the tropical forest, in the Arctic, in remote mountain areas and in a few deserts, many Indigenous peoples in the Americas and other Indigenous peoples retain intricate observational and empirical knowledge of many varieties of natural phenomena. As biological and herbological guides, Indigenous informants are working with and as scientists on a compelling range of research and development projects and their information is increasingly well-considered by international scientists and by officials in several governments.

The Inuit whalers in Alaska, mostly subsistence hunters, protested when the International Whaling Commission, on the basis of a 1200-whale total population estimate, completely banned all bowhead hunting in 1977. The Inuit whalers claimed double and triple the estimate of the bowhead whale population and asserted their Aboriginal rights to care for the welfare of

the bowhead. The Alaska Eskimo Whaling Commission's claims turned out to be correct. Wildlife resource management conducted by Western institutions often underestimates the size of animal populations through sporadic censuses. This method and other deductive techniques are employed to establish harvest quotas. These methods are currently a subject of contentious debate in the scientific community because of the growing non-supportive evidence (census data) provided through Indigenous knowledge. In the case of whaling in Alaska, Indigenous peoples and Western scientists are now cooperating on establishing mutually informed counts.

The Dene Cultural Institute Traditional Environmental Knowledge Pilot Project is one example of cooperative approaches. Over the past two years a team of local Dene researchers, a biologist and an anthropologist have developed methods to document the Indigenous knowledge of the Dene People of Ft. Good Hope and Colville Lake in the Northwest Territories of Canada. Under the guidance of the Dene Cultural Institute and a Steering Committee of Elders from Ft. Good Hope, the research team developed semi-structured questionnaires in the Dene language of North Slavey. Information was gathered about the behaviour of different animal species and the traditional rules that governed Dene use of natural resources. The ultimate goal of the research is to integrate Dene Indigenous knowledge and western science for the purpose of community-based natural resource management.

In Central New York, not far from the Onondaga reservation, the Indigenous Preservation Networking Center (IPNC), an agricultural study center, operated and guided by Native people,

collaborates with Cornell University researchers looking into the sustainability and applicability of Native agricultural methods, running programs to help preserve Native germplasm and cultural land-based practices. In alternative (sustainable) agriculture endeavors, many researches have paid homage to Native lifestyles. Research in various plowing and cultivating methods is providing avenues for farmer to curb erosion and pesticide use.

José Barriero in his essay, *American Indians: The Search for Lessons (Akwe:kon Journal, Summer 1992),* identifies compelling reasons for the current quest for Indigenous knowledge. First, Western peoples are seeking a sense of inner peace and spiritual strength through traditions spawned in Indigenous cultures to cope with the stresses of modern existence. Second, Westerners want to learn about Indigenous cultures and belief systems that allow for a more harmonious and environmentally sound co-existence with the natural world. In order to understand Indigenous knowledge and spirituality, the West must enter into a partnership with Indigenous peoples built on respect. For the West to adopt Indigenous knowledge, they do not have to become "Indigenised" but they do need to reflect on their own culture and benefit from lessons learned.

The large majority of Indigenous peoples are not substantially aware that their early heritage contains a wealth of positive life skill principles and practices developed over millenniums. The adaptive re-introduction of this wealth of utilitarian knowledge and experience is essential to the discovery by today's Indigenous people of their untapped potentials for both personal and community development.

Comparison Between Indigenous And Western Cultures

Indigenous Values Culture and Development Techno-system	Western Societies Culture and Development Techno-system
Ecologically sound (encourages integration with nature)	Ecologically unsound (encourages alienation from nature)
Small energy requirement	High energy requirements
Reliance on renewable and mostly local materials and resources	Reliance on non-renewable and mostly external materials and resources
Craft industry	Mass production
Relatively uncomplicated, low specialization, ongoing outside expertise not required	Complex, with high specialization, requiring ongoing infusion of external assistance and expertise
Adapted to extended family and communal achievement	Adapted to nuclear family and individualized achievement
Ruralization - small community emphasis	Urbanization emphasis
Always useful and functional	Highly subject to obsolescence
Compatible with local culture culture	Destructive of distinctive or local
Subject to more stable localized trade and bartering	Vulnerable to international and national trade system fluctuations
Technology easier to control and more directly subject to safeguards against misuse	Technology liable to misuse and exploitative practices
Development and innovation regulated by need	Development and innovation highly regulated by profits and war
Employment intensive	Capital intensive
Integrates the young and the old	Alienates the young from the old
Decentralist	Centralist
Efficiency tends to increase with smallness	Efficiency necessitates major scale machinery and hardware
Accidents are few and unimportant	Accidents tend to be frequent serious and costly
Uses multi-factorial integrative solutions to resolving technical and social problems	Attempts isolated (partial) solutions to resolving technical and social problems

Agricultural productivity emphasis on small scale diversified culture for local consumption	Agricultural productivity emphasis on large scale mono-culture for export
Food production shared on familial or community level, low capital, organic, self-sustaining	Food production a highly specialized, regulated and mechanized industry, petro-chemical dependent
Science and technology integrated with culture	Science and technology alienated from culture
Work (or non-existent) work/leisure distinction	Strong work/leisure distinction
Work valued primarily for satisfaction and fulfillment	Employment primarily valued on basis of monetary income scale
Quality criteria highly valued	Quantity criteria highly valued
Production units basically self-sufficient	Production units highly dependent on other units
Science, technology and human services performed freely by all	Science, technology and human services performed by the authorized elite specialists
Technical goals valid for all men, for all time time	Technical goals valid for only a small proportion of the earth for a limited

**** Modified by Raymond Obomsawin from a table developed by R. Clarke of Biotechnic Research and Development.***

The Need for Indigenous knowledge Model in Development

Development has been perceived by Indigenous peoples as a very negative concept. The large scale economic and industrial development that has taken place without recognition of and respect for fundamental rights has left Indigenous peoples adamantly opposed to the whole notion of "development". Capitalism dominated development has been imposed from outside without respect for land and resource rights or the right to participate in the control, implementation and benefits of

"development." The adverse impacts of this kind of development have untold consequences for Indigenous peoples.

The International Work Group for Indigenous Affairs, in its publication *IWGIA YEARBOOK 1991*, identifies one of the more blatant capitalistic forms of Western development, complete with gross human rights violations as the Calha Norte project in Brazil. "In particular, the gold mining done under this project, has had horrific impacts on the Yanomami people and their traditional lands. The mining operation includes processing the mud and ore in settling pools with mercury, to extract the gold. These activities go on along many miles of the river system and have poisoned the headwaters of all rivers within the entire Yanomami territory (about 9 million hectares). Thus the waters and fish are poisoned and the river ecosystem is left completely desolate. The impact on the Yanomami communities has been equally devastating. The overall death toll is estimated at approximately fifteen percent of the total population -one out of six."

These killings of Yanomami and Ashaninka peoples in Brazil and Peru in the early 1990's, and the increase in dumping waste in Indigenous communities across Canada and United States of America have been, for some people, far too dramatic to believe. It is ironic perhaps that in 1993, the International Year of Indigenous Peoples declared by the United Nations, Indigenous peoples were "celebrating" their year with such atrocities. Indigenous peoples are well aware that when their communities become the focus of special attention it is most often because external interests, with a hidden agenda, prize their access to

natural resources. For instance, a common factor in these violations of human rights is access to land.

Likewise, it is profoundly disturbing to learn that regulations under the Indian Act in Canada have not been substantially updated in 20 years. Therefore, virtually every Indigenous community in Ontario is in violation of regulations of environmental laws. The systemic racism against Indigenous populations has been recognized recently by the Canadian Human Rights Commission. Citing the case of Innu people of Labrador, the report states that for more than 40 years, the government violated their human rights, impaired their political and economic development, knowingly shirked constitutional responsibility to them, breached fiduciary duties, and connived to shift blame for their poverty, ill-health and appalling social dysfunction to the Newfoundland government. In the case of the U.S., the government is making profitable deals to dump the nation's nuclear waste on the four percent of land tribes have left. The bait is money for development projects in these poor communities. However, the U.S. government hasn't shown a good record in respecting agreements with Indigenous nations of this country.

Paradoxically, Indigenous peoples have gained international recognition and respect for the richness of their cultures and their stewardship of the natural environment. From the Inuit of the Arctic Circle to the Yanomami of the Amazon, Indigenous peoples are now seen by industrialized countries as unique custodians of knowledge and practices which are vital to the preservation of ecosystems on which all of humankind depends. This premise was restressed at the United Nations Conference on

Environment and Development (Rio de Janeiro, 1992). 1995 marks the beginning of the United Nations International Decade of the World's Indigenous People, which has *Partnership in* Action, as its theme. Therefore, this decade should provide valuable reinforcement for Indigenous peoples rights.

In order to effectively reverse the causes of the failure of Western "modern" economics and technology, a new and strategic focus that recasts the very nature of human and community development is required. Such a strategy will need to harness proven traditional principles with useful contemporary knowledge in order to effect a genuinely alternative socio-economic, educational, technical and political system. Culturally appropriate alternative methods can and should be progressively designed and employed by Indigenous people in conducting innovative and effective solutions to solving their own problems and meeting their own needs.

Raymond Obomsawin in his essay *Alternatives in Development and Education for Indigenous Communities in Canada,* suggests that such a development system would intrinsically incorporate the following practical principles, and overall approach to life as exemplified in the early Indigenous cultures. It would be: "Intra and inter-community cooperative, family reinforcing, bonding of young and old, self-scheduled and administered, holistically integrated, local and renewable resource reliant, ecologically sound, Indigenous skill and employment intensive, and self-sustaining.

Many who agree with these concepts and goals will undoubtedly pose the objection that before we can attain these worthy ideals, there remains the impossible task of radically

changing the very nature of: the vested self-interest of major human service institutions, the highly complex systems of bureaucratic inertia and control, the all pervasive phenomena of multinational socio-economic domination and exploitation, and collaborative media and political servility to these various domineering forces.

No doubt such a pessimistic conclusion has a valid base, for although socio-economic changes are occurring, they are painfully slow, highly superficial and unfortunately, not always for the better. However there is no reason to give up in despair, for we may take courage in the reality that needed changes are indeed today taking place. Such changes have come and will continue to come from those whose ears have caught the sound of a different drummer, and are taking determined steps to develop alternative institutions, processes and more cooperative human relationships.

For Indigenous people both traditional and contemporary alternative models for realizing economic, technical and social development, remain largely unexamined and untapped, but now merit full investigation and consideration. The large majority are not substantially aware that their early heritage contains a wealth of positive life skill principles and practices developed over millenniums of survival in Americas. The adaptive re-introduction of this wealth of utilitarian knowledge and experience is essential to the discovery by today's Indigenous people of their untapped potentials for both personal and community development.

An international pool of recently evolved local development and appropriate technological models, now holds great promise

for Indigenous people wishing to integrate traditional values into more contemporary aspects of community life and development, e.g. cooperative socio-economic structures, community life skills development, biodynamic agriculture, renewable energy resources, community and familial centered education, natural medicine, midwifery, Indigenous languages, and cultural arts, etc.

A new and primary focus must now be given to exploratively creating an alternative system of human and community development that is effective, balanced and less costly, as well as community initiated, sustained and controlled. This form of development will necessarily make maximum use of locally accessible energy, natural and human resources, while incorporating the forces of communal knowledge and action. Through engendering a new vision and mastery of practical development skills, it would be able to synchronously forge unprecedented levels of human and community renewal and growth.

A progressive adaptation of such accomplished developmental and self-sufficiency models, could now make a major contribution in reducing the destructive malaise of socio-economic dependency that is so prevalent in Indigenous communities. In fact such an initiative will undoubtedly demonstrate that Indigenous people can exercise a full capacity to both design and implement highly durable and self-sustaining forms of local development and self-government. It is further anticipated that in seeking to adaptively refashion and integrate the best of past cultural principles and practices with today's most advanced and innovative development models, Indigenous peoples may with a new

found pride and courageous vision set the stage for a greatly enhanced future.

It is obviously not enough to understand and expose the failings, inappropriateness and depredations of the current polity and its inherent form of socio-economic system. What is equally vital is to decisively engender a renewed and intensified vision, know-how and commitment to bringing about alternative human and community development approaches which can serve as paradigms and social experiments, demonstrating on a severely practical plane how the key functions of a society, i.e. employment, education, healing, etc. -as part of a truly fulfilling life- can be successfully carried out by non-exploitative, non-elitist and cooperative forms of development, economy and organization.

As stated earlier, the positive contribution that Indigenous peoples can make may ultimately help all of humankind. Indigenous peoples must create the opportunity to contribute or they must be respectfully afforded the opportunity. Either way, the world community must reverse this trend of marginalizing Indigenous peoples. In the Indigenous peoples' world of plenty, no one is required to believe in the ideology of another. Each person is a vision, a system, a world.

There have been positive opportunities since 1990 for Indigenous peoples from the Western Hemisphere. They have been participating in a series of conferences and round tables in Latin American countries, U.S.A. and Canada to discuss common concerns, problems and ideas as well as potential solutions and strategies imbued with their perspectives in development and partnerships. Traditionally, Indigenous peoples have been seen

by some institutions of the western world as people to be protected from business and development when in reality the opposite holds true. The outcome of those gatherings have demonstrated that Indigenous people want to participate positively in sustainable development projects and are looking for partners to work with them. Such is the case of Indigenous peoples from Canada and New Zealand, where Nuu-chah-nulth First Nations from B.C. and Maori are looking for venues to implement a joint venture agreement which benefits their peoples. Likewise, Cree and Dene from Saskatchewan signed a joint venture with Miskito people in Nicaragua.

Land provides the base of sustainability for all other human factors, including the social, cultural, economic, political and spiritual. Indigenous peoples have great attachment to original land bases and stay and/or seek to return to the place of birth in their lifetime. There is always concern if not always practical achievement for the continuation of Indigenous jurisdiction over the ancestral territory, as well as concern over environmental and ecology of the home lands.

An Iroquois tradition begins with an acknowledgment that we who walk about on the earth should turn our minds to an appreciation of all that which makes the quality of life as it is, including the people, the Mother Earth, the water, the grass life, the trees, the animals, the birds, the winds, the moon and sun. Humankind cannot possibly be separated from these things. Separated from all this, humanity must die.

There is, in that way of thinking, not only a common sense but also a very psychologically healthy way of being in the world. Humans must take responsibility for how they view the

world they live in. The natural world is view able as a helpmate, the source of all life, a sacred mysterious environment which lifts the spirit and provides sustenance for untold generations to come, or it is an enemy to be conquered, a mechanical contrivance of discoverable complexity which can be manipulated and controlled. Both views are arguable, but only one is arguable healthy. The West has long erred in the direction of dangerous speculation and absence of respect for the obvious dependency of our species on the world which has in fact created us. Science and technology can exist in a cultural environment of respect and reverence with the forces of life designated as nature. Indeed, a healthy science and technology which serves the interests of coming generations can hardly exist otherwise. Therefore, Indigenous knowledge as a science for development is the alternative for the survival of humankind.

As Darrel A. Posey, in his essay *Indigenous Ecological Knowledge and Development of the Amazon,* states: "If the knowledge of Indigenous peoples can be integrated with modern technological know-how, then a new path for ecologically sound development of the Amazon [and other regions] will have been found. Also, if technological civilization begin to realize the practical value of Indigenous societies, then the Indigenous people can be viewed as intelligent, valuable people, rather than just exotic footnotes to history."

Georges E. Siou, in his book *For an Amerindian Autohistory,* states wisely: "To those who still believe that the task of the Euroamerican is to assimilate Indigenous peoples, we reply in the words of Felix Cohen: 'There is still

much that we [Euroamericans] can take from Indigenous people to enrich ourselves without impoverishing the Indigenous people. We have not by any means exhausted the great harvest of Indigenous inventions and discoveries in agriculture, government, medicine, sport, education and craftsmanship... When we have gathered the last golden grain of knowledge from the harvest of the Indian summer, then we can talk of Americanizing [assimilating] the Indian. Until then, we might do better to concentrate our attention on the real job of the New World, the job of Americanizing the white man'."

Conclusion

The writer has tried to demonstrate that Indigenous knowledge could richly serve as the foundation tool for building a more just, humane and sustainable society, not only for Indigenous people but for all of humankind.

Based on the case study, the Indigenous Development Model is defined by the following characteristics:

- respect is shown to the environment;
- peoples' participation is indispensable;
- sustainability and self-sufficiency are the principal goals;
- it is crucial that development plans be implemented by Indigenous peoples for Indigenous peoples in Indigenous communities;
- decisions are reached by consensus from direct beneficiaries;

- implementation of community-based development projects are a priority which emphasizes and incorporates the exercise of indigenous knowledge and practices;
- equality and respect are intrinsic;
- the main motivation is the well-being of the people and not profit by itself;
- a key concern is to share the wealth among participants and benefits among the entire community.

The Western Development approach has practiced opposite principles to the Indigenous Development approach. For instance, this is clearly described by Hall and Hanson: "The Industrial Revolution, however marked the beginning of the end for tribal peoples. Fueled by technological change and population increase, it unleashed a culture of consumption on the world, a culture that cries out for new lands and resources. Since World War II, the rate of exploitation has grown exponentially. Multinational corporations have penetrated even the most remote regions in their quest for timber, oil, and minerals. Governments, aided by development agencies and multilateral financial institutions have built dams for power and irrigation and encouraged unsustainable land-use practices. Landless people from other regions have been moved onto tribal lands with little thought for the consequences. For Indigenous peoples social and ecological devastation has been the result. Almost nowhere have Indigenous peoples benefited from decolonization. In most countries, European rulers have been replaced by dominant ethnic groups that have continued or intensified policies of repression

and resource exploitation" (Hall and Hanson, p.255 & 259). They also praise Indigenous peoples' networking abilities: "Stripped of their culture, marginalized for the most part in society, Indigenous people have endured great suffering. Yet Indigenous peoples are mobilizing to fight for their right to self-determination, for control over their lands and resources, and for preservation of the environment. The growing network of Indigenous organizations, often allied with environmental, church and human-rights groups, is becoming a powerful voice on the world scene. It is a voice that is challenging destructive models of development, fighting for human rights, and leading the way to more sustainable path of development" (Hall and Hanson, p. 218)

The Six Nations of the Grand River Community, through the corresponding Ad Hoc Committee, has successfully accomplished the implementation of the CBRDP project. As the direct result of this project there are the following highlights to report:

1. a very successful three-year training program, centering on Indigenous (traditional) agriculture and husbandry, and entrepreneurial opportunities in the local food market sector.

2. a multidisciplinary and capable Indigenous management team to strengthen IFAC's position as a new local community-based Indigenous development organization has been developed.

3. IFAC, as a community-based organization has been established and is now operating under its own mandate in cooperation and

partnership with other institutions. An operational manual for IFAC has been produced, which contains among other documents, tailored by-laws, financial control policies and a strategic management plan. IFAC possesses great potentials to foster the community's overall awareness of their agricultural heritage and to promote local market opportunities.

4. The most positive outcome was the tremendous interest of prominent community people who agreed to serve on the board of directors of IFAC. It is a multi-disciplinary board that is truly representative of the diversity of the Six Nations community that, as a whole, spans the many political, religious and economic divisions of the local population. The original premise that community members would be able to reach common ground over discussions of food, nutrition and health held true. In this regard, the CBRDP project is profoundly shaping a new paradigm for the Six Nations community to plan, problem solve, and meet common needs in a collaborative fashion. Currently, the Board of Directors of IFAC has been exploring new activities and approaches that will educate young aboriginal students in Six Nations and across Canada, e.g. via an interactive IFAC Web site, that will stimulate people to utilize the natural resources found on and in their land, to promote market opportunities to service the local marketplace (based on observations made by project facilitators, there has been a noticeable increase of Indigenous agriculturalists in the community) through such events as a "Three Sisters Festival," and to increase the

Canadian public's awareness of the enormous contributions Indigenous agriculturalists have made to the world's food supply.

5. IFAC would face an enormous challenge to locate funding for the capital campaign for the $2.2 million Integrated Indigenous Agriculture and Food Centre (Farmers' Market and educational/resource centre). As a result, IFAC has decided to proceed in two steps: (1) initiating the farmers' market component first at an estimated cost of $850,000 and (2) building awareness and developing a fundraising strategy to secure funds for the educational/resource centre.

There was an experience that should be shared with the readers of this study. During late 1995, IFAC introduced the results of the feasibility study for the Integrated Indigenous Agriculture and Food Centre to the Provincial Government, at that time an NDP government in Ontario. As an outcome of this presentation, the government officials expressed sincere support for the efforts until then accomplished by IFAC members. These officials suggested that the proper venue for funding this worthwhile project would come from their JobsOntario Community Action (JOCA) program. Unfortunately, months later with the election of a Conservative government in Ontario and the subsequent elimination of various social and services programs promoted by the former NDP government, among them JOCA, the hopes of IFAC to build the Centre disappeared.

This experience suggests that there has been no real commitment by the former and current provincial government, or

worse yet, there has not been any sincere interest in promoting community development in Indigenous communities which would facilitate self-sufficiency and recovery of Indigenous traditional knowledge and cultural revival. This has been a lesson always to remember for each one involved in the CBRDP implementation team, never to depend on government promises.

Currently, IFAC is continuing to provide training to the Indigenous population of the Six Nations of the Grand River community in micro-enterprise and they are at the same time implementing their fundraising strategy aimed at building the first phase of the Integrated Indigenous Agriculture and Food Centre. Development can neither be transferred, nor carried out by others. This implies that people organize themselves to determine their own needs and agenda, in a manner that is culturally, economically, politically, and ecologically sustainable over the long term.

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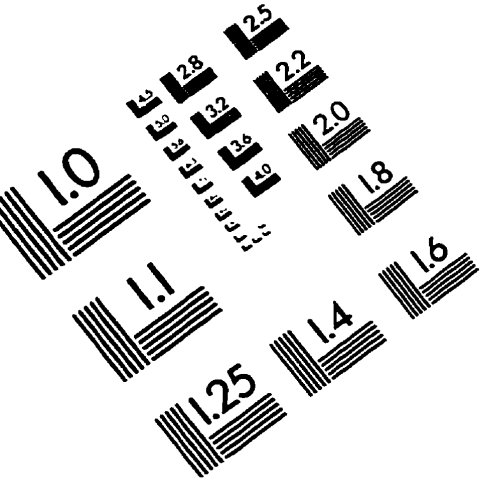

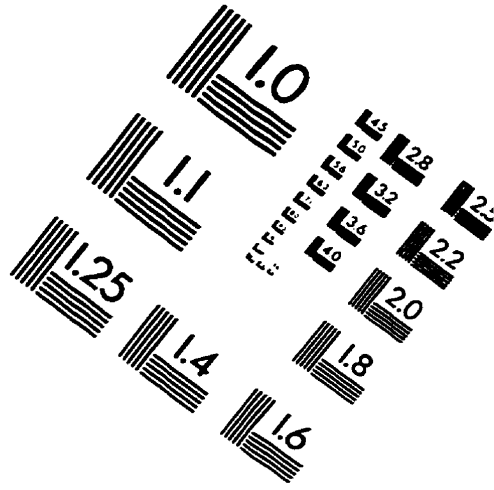

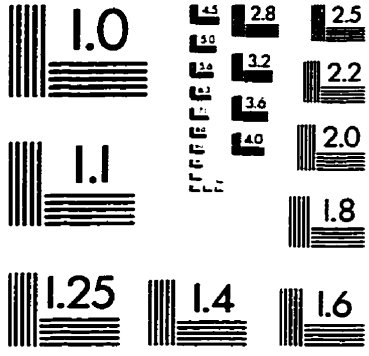

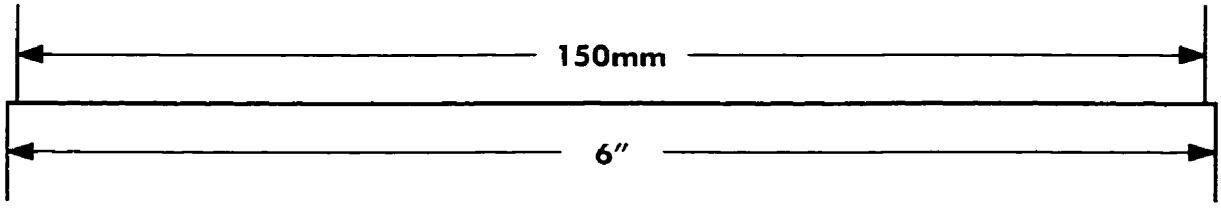

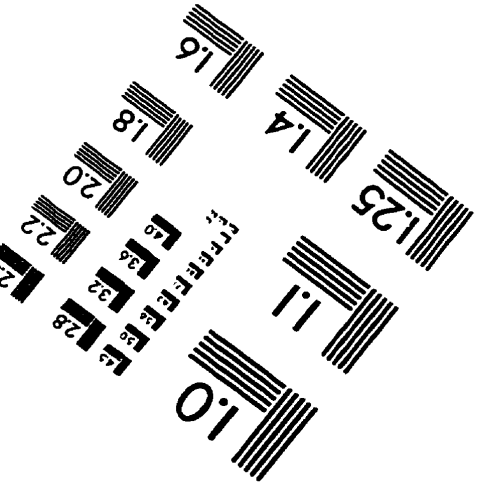

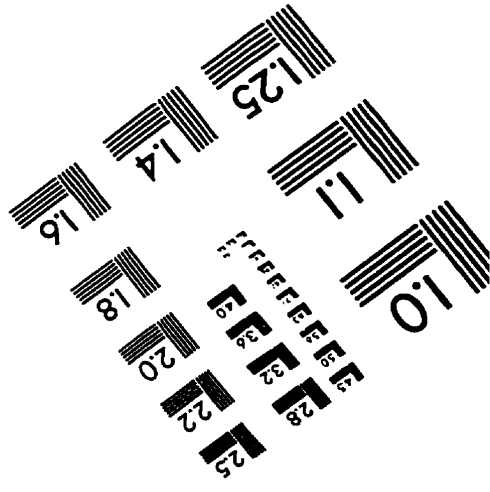

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