

Health, Nutrition and Science in General: The Aboriginal Experience

I am delighted to have the opportunity to be with you this evening to express my thanks to the Advanced Foods and Materials Network (AFMNet) for launching the “Be a Food Researcher for a Week” science initiative for Aboriginal youth. I’m honoured to have my name linked to this exciting endeavour. I was pleased that food science was selected as “food” is something familiar to everyone. As I said at the launch of the program, food is an enticing and delicious subject.

I really don’t know much about food science but I do know that it is much more complex than knowing what foods we should eat. I’m sure our students in the first cohort were amazed to learn of the range of study included in food science.

At that basic level, I believe we, as Aboriginal people, have experienced many adverse effects to our health over the years due to the many changes in our eating and food preparation habits. We have departed from the days when nourishing foods were a big part of our diet. Going back in time, it is interesting to note that “ (American) Indians gave the world 3/5 of the crops now in cultivation”. Jack Weatherford, a cultural anthropologist states in his book **Indian Givers** that “ the food revolution was begun by the Indians of the Americas. They were cultivating over 300 food crops with many dozens

of variations. Potatoes have been grown for at least four hundred years. Means of achieving high yields was achieved by the Indians. Other food contributions to the world include peanuts, red and green chili peppers, corn, beans, tomatoes, squash, pineapples and maple syrup” just to name a few. How many of these foods were on our dinner table this evening?

These foods that resulted in healthier, stronger generations of people do not make up a significant part of Aboriginal people’s diet today. Much has changed even over the last few generations. My grandfather who lived to be 104 years old talked about the big gardens they used to have on the reserve along with farm animals. He enjoyed telling me, “your dad was stoking hay when he was only six years old”. Then in my parents day, only a few people had animals but many still had vegetable gardens. There is a place in northern Manitoba called Garden Hill because they did a lot of gardening. Like my community, Garden Hill and other reserves now have a very few, if any gardens. Today. Aboriginal people survive mostly on goods purchased from the local general store. Common purchases include foods like macaroni, spaghetti, bread (white), canned goods and far too much pop and chips. Fruit and vegetables are often not fresh and very expensive especially in the northern communities and therefore, these are not standard fare.

When I was growing up on the reserve we had a garden most years and enjoyed fresh vegetables. My mother usually boiled or roasted (baked) our vegetables and meats such as rabbit, moose or deer meat. My dad was a good hunter and we ate plenty of wild meat, even muskrats. We also ate a lot of fish as fishing was his means of livelihood. I can still picture those eight or so gold eyes lying across the pan freshly cooked from the oven. My mother had us picking berries such as strawberries, raspberries, saskatoons, cranberries which she canned or dried for winter use. This way of life is all but gone. Few have gardens, hunting is rare, no one picks berries anymore. Eating and cooking habits have changed and with it comes deteriorating health.

Food research is critical to understanding the adverse effects the many foods and their preparation have on our health. Today, diabetes which was virtually unknown among Aboriginal people 50 years ago is said to be an epidemic. Diabetes among Aboriginal people of all ages is three times the national average and the rates are increasing. A big part of this is due to the food consumed and having more fried foods.

Aboriginal people are most at risk for obesity. In the past 25 years rates of

overweight and obesity have reached epidemic levels. The obesity rate among children living on reserve is 36% compared to 8% for Canadian children over all. 27% of men and 34% of women are obese while 42% of men and 31% of women are overweight according to a recent government of Canada report entitled Horizons. The same report states that in 2001, 51% of the population of about 1 million was under 25 years of age. The Aboriginal population continues to be youthful and the birth rate is increasing at a higher rate than the rest of the population in Canada. The implications of our state demands that our people become knowledgeable about how what we eat affects our wellbeing. That is why the “Be a Food Researcher for a Week” is of particular significance to our people. I hope it will spark interest among our young people as they are the ones who through their teachings and example can create positive change for our future generations.

Science is a bit of an enigma for Aboriginal students. Since many of our high school students on reserves do not have proper labs or teachers who are science specialists, it is not emphasized and more attention is given to the arts. Those who have made it through high school and enter university more often than not choose to enter the faculties of law and education. We have by far more teachers and lawyers than in any other profession. Those

who have taken sciences often head for medicine. It has been my experience that science was not emphasized when we were in school. In fact, the three R's were the main concern of teachers. I don't have one significant memory of anything in science on the reserve in my day. In high school, in a small town, I had options and took physics and chemistry only to drop the physics the next day. Somehow I managed the chemistry. Somewhere along the way, the myth had begun that Indians couldn't do science or math. I had a fear of both.

I know that my dad had no formal science education, yet he knew what the weather was going to be like the next day and whether or not he could go out in his boat and set or lift his nets. He learned this by years of observation. I guess some people did put a lot of faith in how the Indians were able to forecast the weather. You may have heard the story of the old Indian gentleman that the neighbouring farmers relied upon to give them weather reports. They would go to him and he would tell them what the weather was going to be like the next day and he was often right on. One day, when he was asked, to his neighbour's surprise, he said he didn't know. When asked, "How come he didn't know?". He replied, "Radio broke". My dad did not use a compass when out on the lake. Lake Winnipeg is a

very large lake, yet he was able to find his nets and get back home. There scientific knowledge came from watching the seasonal changes and the day and night skies. He could figure how much he would get for his fish or a cord of wood all in his head. He knew math.

Our ancestors learned about many cures. Early American Indians learned how to use the bark from a certain tree to make quinine that could cure malaria, cramps, chills and heart-rhythm disorders, as well as dysentery. I remember when my mother had a miscarriage, my grandmother went out and picked red willow roots that were boiled and she strained the roots out and drank the liquid. Our people, in my young days also made poultices using natural products. They picked and dried a kind of root known to us as wehkas. Some of this is still picked today. So to say that Indians (Aboriginals) can't do science or math is indeed, a myth. Our youth have to be aware of this.

We have come to realize that we have to do something to bring science and math to the forefront of learning for our Aboriginal students. Efforts are being made to integrate Aboriginal content and context to science courses offered in schools, Elders are engaged in schools to present oral history related to various fields of science. A common topic is one of medicines

used by our people for dealing with the flu, cuts, headaches and other ailments. There is a theme of “Growing Our Own Scientists”.

Just recently I was invited to the opening reception at the University of Manitoba of DreamCatching 2009: Professional Development Workshops in Math and Science for Teachers of Aboriginal Students. It suggested that teachers are DreamCatchers who guide students to a lifetime of inspiration (and this could be done in math and science). In these workshops particular attention is given to incorporating indigenous knowledge using integrated cultural materials. It was a four day event with teachers of Aboriginal children coming from all across the country. It is led by an Aboriginal woman, Corrine Jette of Mount Pleasant Services who partners with Faculties of Engineering in universities across Canada. This was to be the 6th time that these workshops were being held.

While I was at UBC, we started a summer science program in about 1988. We brought in two groups of Aboriginal students from across the province e for one week each during the summer. One group was grade nine students, the other grade eleven. We wanted to get them before they made decisions about their post-secondary studies. They were exposed to science labs as well as Elders were part of the program to teach them about traditional science. The program was very successful in that when we followed up on

these summer science programs a number of them did choose to study science at the university level. The other sign of its success is that it is still going on today some twenty years later.

The “Be a Food Researcher for a Week” initiative is a wonderful effort that will surely spark the interest of Aboriginal youth in the broad field of science. It is needed as it will open doors for our young people to engage in science and potentially make a valuable contribution to our communities and to Canada.

Thank you, members of the board and staff of AFMNet and in particular Dr. Ron Woznow for making this project a reality.

Eskosi.