AGRICULTURE IN TODAY'S WORLD

Remarks by

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I've been told that half a peanut provides the energy required for an average adult to speak for an hour, and I have just done justice to today's hearty and plentiful lunch. So sit back, please, while I proceed to use up that energy in contemplation and discussion of agriculture in today's world.

Agriculture is as old as civilization. In a sense it is civilization. Learning how to make things grow and staying more or less in one place to tend, harvest and consume them has determined to a great degree the social organization and the culture of many of the earth's peoples. Even in its most primitive forms, farming is a skilled occupation. It could be called the oldest profession, if that title hadn't already been taken by those engaged in another line of work.

It is an honor for me to be here with the members of the Canadian Club of Toronto and the supporters of the Royal Winter Fair and to be permitted to speak on so spacious, and so sweeping a subject. I am sure anyone else, on any other topic, would have a much narrower range than mine. There are, I suppose, a couple of possible exceptions. An archbishop, for example, could discuss the infinite and the eternal, and the Minister of Finance could talk about the federal deficit, which amounts to much the same thing.

Well, if agriculture is as ancient as civilization, and if we have developed it to the point you see so dramatically illustrated at the Royal, why are there hungry people in the world? Why have we not been able to take our advanced knowledge -- technological,

scientific, economic -- and adapt it with consistent success to the food-producing potential of the most backward parts of the world? Why have we not been able to take the Canadian experience -- our record of abdundance and efficiency -- and make similar things happen in much the same way in other places?

There are answers to these questions, but they are not easy answers. They are made more complex by politics, by social factors and traditions, by geography, by inadequacies of education, by failures of understanding at both the national and international levels. And of course there is the other elusive element so often critical in human affairs -- the vital combination of coincidence, luck, happenstance and opportunism.

How did Canada reach its present envied position? Could we, if we were to try, identify the incidents, the actions, the natural and man-made advantages that enable this country to feed itself so well and to serve as the breadbasket of much of the world?

I am relatively new in this country, so I did not have a ready response to these questions. I did some research and one story in particular I want to pass on to you. Some of you are familiar with it, I know, but it is so fundamental to the country's history -- and, in a way, to my subject today -- that I have no hesitation in telling it again.

The story, as Bruce Hutchison told it in 1943 in his fine book, The Unknown Country, starts with David Fife, a young Scottish farmer living near Peterborough, Ontario. Fife's friend, George Essen, was going to Britain, and Fife asked him to bring back some samples of wheat. George, as most of us do, left the souvenir-shopping till the last minute. Just as he was about to sail for Canada, he saw a grain ship unloading, and he begged a small quantity -- a few quarts of wheat -- knowing nothing of its origins or its characteristics.

David Fife planted the mystery wheat the next spring. The first thing he learned was that it was fall wheat -- his spring planting produced only three shoots. He fenced in this modest crop, but one day one of his cows, seeking a change of diet, poked her head over the fence and munched away one of the three stalks. Mrs. Fife, waving a broom, chased the cow. Her alertness and decisive action did more perhaps to secure Canada's place in the world than any statesman has ever done before or since.

Those two stalks matured. Not only that, they matured 10 days faster than Divid Fife or anyone else in Canada thought wheat could mature. The forty grains of wheat harvested were far less than a handful. David stored them in a teacup. Planted, they produced a pint of seed, and the pint, a year later produced half a bushel. He called it Red Fife, and he passed it on to others.

Red Fife, says Hutchison, moved out of Ontario in 1876, and became the foundation of the Canadian West. It was at home in the dry prairie soil. It matured in little more than a hundred

days. The old wheat strains took longer, and were therefore useless in those parts. Red Fife brought widespread settlement and a basis of prosperity to the hitherto almost empty country west of the Red River Valley.

It wasn't the final answer. Something more resistant to rust was needed, and was eventually developed. Even shorter maturities were desirable, and they came too.

Coincidence, luck, happenstance and opportunism. Canada might have been a far different place, and developed in quite different directions, had it not been for Red Fife. Mrs. Fife did a good day's work, indeed.

The seed found by George Essen on a Glasgow dock came, it was later surmised, from Galicia. It seems appropriate that, as the wheat opened the prairies, the people of Galicia and adjoining territories were among the sturdy pioneers who came to break the soil, harvest the grain, raise big families and help build a nation. Sir Clifford Sifton, who oversaw much of the settlement of the West as Minister of the Interior at the turn of the century, stated his opinion: "I think a stalwart peasant in a sheepskin coat, born to the soil, whose forefathers have been farmers for ten generations, with a stout wife and a half-dozen children, is good quality."

As an immigrant myself, I find Sir Clifford's tone a trifle condescending -- but who could quarrel with the truth of his words?

It is universally true that agriculture is the generating force for other industries. In Canada, our transportation and manufacturing industries underwent massive expansion and change as a direct result of the prairie grain revolution. You may be aware that the name Massey became well known in that era, and that along with the grain, the Massey harvesting equipment began moving around the world.

Before I develop my main theme, I want to review briefly the current situation in Canadian and world agriculture.

1979 will not be a bad year.

For the world, estimates of wheat and feed grain production indicate a result quite closely in line with the long-term trend but still about five per cent below 1978's record production. Wheat and rice will both be down about five per cent, but high protein crops -- soybeans in particular -- will be up about 15 per cent. Only three countries, the United States, China and Brazil, are anticipating an over-all increase in wheat and feed grain production. The Soviet Union experienced both winter kill and drought, and the impact on the 1979 crop has been severe indeed. The harvest is expected to be down by 27 per cent from the 1978 figures and this will be reflected in an expansion of about 10 per cent in world trade in wheat and feed grains.

The United States will be the major beneficiary of the increase in trade in these commodities. Canada and Australia will have a smaller share of the increase than they otherwise might, because of limitations arising from the availability of handling facilities. Prices, of course, are up, and will be going higher. Production will be about 35 million metric tons or 3 per cent less than consumption in the current year. Carry-over stocks are adequate to cover that shortfall, though there are grounds for concern, particularly if we face another year of declining production. Even if 1980 production is at the same level as this year's or close to it, you can expect further sharp increases in prices.

Canadians have every reason to be concerned about obstacles and bottlenecks that limit this country's ability to take full advantage of grain export opportunities. Grain handlers in the port of Montreal were on strike for five months this year, from late May to late October. We still managed to export quite a lot of grain, in spite of the extra strain placed on the already less than adequate alternative facilities. But the cost was high, there were delays and you can be sure that Canada's reputation as a reliable supplier has suffered.

In addition there are problems with rail lines, with the quantity and deployment of boxcars and with other elements of the transportation system. In farming, growing is only part of the battle. Nature is not 100 per cent reliable, but the truly spectacular and usually avoidable foul-ups tend to be man's.

However, there are hopeful signs. The new federal administration is placing a high priority on the improvement of the grain transportation system, and is encouraging the provinces to participate to a greater extent than ever before in providing better transport services. A grain transport co-ordinator, Dr. Hugh Horner, who has a solid reputation as a man who gets things done, has been appointed.

International trade in agricultural commodities faces formidable tariff obstacles, and often it is the less developed countries that are hardest hit by these. The Director-General of the United Nations Food and Agriculture Organization recently pointed out that increased agricultural protectionism by the developed world was cutting sharply into the export sales of developing countries. Consider how disastrous this is for the many developing countries that have virtually nothing but agricultural products to offer on world markets. In 1978, their share of world trade in agricultural goods declined by $4 billion. That, coincidentally, is equal to the amount the European Economic Community spent on price supports for milk products alone. When you couple the export problems of the developing countries with the higher costs they face for imports -- for example, the higher wheat prices I mentioned a moment ago will cost the developing countries about $2 billion extra this year -- you get some idea of the impact on their ability to improve their lot.

There probably are fewer people actually dying of starvation now than during most periods of human history, but we frequently hear that two-thirds or more of the world's population go to bed

hungry each night. It is hard for some of us in this room, well fed as we are (I will not say excessively fed, though some might) to grasp a definition of hunger that would truly describe what so many millions actually feel. We may try to comfort ourselves with the thought that while they may be hungry, they aren't actually dying in great numbers. Still, what is life if health, physical and often intellectual, is weakened? What satisfactions and joys can really offset constant misery and deprivation?

The growth in world population is such that world grain production must increase by about 30 million metric tons per year in order to maintain per capita consumption at the level of recent years. To put this in perspective, world production must increase by somewhat more than three Canadas every four years.

In fact, the world's food production in recent years has tended to move upward at or close to the rate of population growth, but this fact masks an ominous reality. As these over-all movements take place, the wealthier nations eat more, or their diet improves, while in the poorer nations there often is actually a deterioration. More people, over time, are malnourished.

The solution to the problem does not lie in simply sending food -- though that, of course, must be done in the short term and in emergency situations. Every country needs to develop as healthy and as productive an agricultural base as its natural resources of land, climate, moisture and so on will permit, or can be induced to permit. All of the healthy industrial economies in

the world have a strong agricultural basis. Japan might be thought of as an exception, but in fact Japan, with its limited agricultural resources, has perhaps led the world in making productive use of the little it has.

So the real need is to help the developing countries improve their own agricultural operations. With improvement in food production comes the necessity, the incentive and the economic justification for other steps forward -- for better roads and other transportation facilities; for improved distribution methods and facilities such as processing plants and wholesale and retail networks; for fertilizer and machinery production; and beyond that for other developments not directly related to the agricultural expansion but made desirable and affordable by the stepped-up economic life of the country and its citizens.

Does this mean that all of the countries of the world must adopt the same goals and standards and seek the same way of life as we in the West have? The answer is no. We certainly should not intrude with our own cultural attitudes and ways on civilizations with different values and traditions. The choice of courses to be followed must be theirs. We should not assume they want to be like us, even though there are some indications that the fascination many of the people in the poorer nations feel for the West has a substantial element of longing for the kinds of material comforts we have and they lack. Choices should not be forced on them by the wealthy nations of the world, but neither should their options forever be restricted by their own poverty.

I originally thought of entitling this talk "The Tractor and the Hoe." The Tractor and the Hoe, for me, sum up the imbalance that exists in world agriculture -- technological advancement and substantial capital investment on the one hand, primitive methods and inadequate financial resources on the other.

The words were suggested by the title of a section of a book by professor Theodore Schultz of the University of Chicago, one of this year's winners of the Nobel Prize in Economics. His words were "big tractors and many hoes" and he used them to illustrate an error made in the Soviet Union. The Russians, having developed large tractors, designed their collective farms to fit the tractors. Besides the collective farms they had tiny hand-cultivated plots. Tractors come in many sizes and a wise agriculturalist chooses the types that are compatible with his labour, management and land situation. If you bring all elements together in the right combination, you should have an efficient industry -- and not need many hoes.

Hoes no doubt have their place in some circumstances, at some stages, in the agriculture of developing countries. There are some people who would like to see the hoe retain its place in an unspoiled, non-materialistic simple and natural environment. But in fact the salvation of the developing countries -- indeed, their survival -- more likely depends on finding the right role for the right kinds of mechanical equipment and using them efficiently.

I happen to be president of a company that manufactures both tractors and hoes. In fact we make a hell of a lot of hoes -- over a million a year -- compared with about 150,000 tractors. But I am not dispassionate on the subject. I much prefer tractors. And I suspect that the people around the world whose backs ache and whose hands are calloused from using hoes prefer tractors too.

A favourite theme of Professor Schultz is that agriculture is the primary industry of the developing countries. His view is that the first thing such a country should do is develop its agriculture so that it can not only feed itself but can produce a surplus for export. There are probably no universal rules for achieving this, but such factors as the size of farm units, the allocation of manpower, the creation of transport and other infrastructure, and the degree and nature of mechanization all enter into the equation. In a country like Canada, where we have had a century or more to work all the problems out, we still have not achieved perfection. What can be expected of the countries that only recently have begun in any systematic way to make agriculture a modern and efficient industrial pursuit?

Douglas Roche, a Canadian Member of Parliament who has intensively studied the problems of the developing nations and who is deeply concerned about the third world and its prospects, said in one of his books that "agriculture lies at the heart of the development problems of many countries. It accounts for the production and

income of the bulk of their people; it is the source of food supply and raw materials and in most developing countries it is a major earner of foreign exchange and source of domestic savings."

When our fellow humans are facing starvation it is clearly our duty to feed them. But when they find themselves somewhere this side of starvation -- even if they are still some way from abundance and security -- surely our responsibility is to do what we can to encourage and help them to feed themselves -- and, if possible to produce enough for others.

All too often the conventional humanitarian concern for our neighbours is combined with what to me seems to be a woolly-minded, romanticized desire to retain the primitive simplicity of our neighbour's way of life. A way of life which, in spite of its superficial charm and historical interest, never did supply the needs of that neighbour's society. The shortcomings perhaps were concealed by other factors -- a high infant death rate, for example, which reduced demand; low expectations resulting from lack of exposure to the way of life of other societies. It was not, in short, and intrinsically desirable or satisfactory way of life.

Peter Drucker, in a recent article, told of a discussion with an Indian Government economist who complained that Ghandi had made a mistake in advocating the use of the spinning wheel. It was too efficient, he said. The appropriate technology, in the light of the unemployment and underemployment of the villages of India, was the hand-held distaff.

Economists often are out of touch. In fact, the villagers of India seem interested in such things as bicycles, motor scooters and transistor radios. These things, in their view, come closer to being "appropriate technology." They create jobs and purchasing power, which the distaff does not. Drucker, in India heard constantly about "appropriate technology" from people who thought of it as the primitive, the pre-industrial. You would hardly expect me to advocate "inappropriate technology." What the developing countries need is a level of technology adapted to their natural resources, their manpower, the level of skills, their demand and their opportunities -- a technology that makes the country most productive in agriculture and in any other industry.

It is easy enough to list the benefits to be expected from the introduction of advanced farming methods in developing countries -- and by advanced methods I do not necessarily mean the kind of mechanization we have in North America or Western Europe. I mean simply a move beyond the intensive manual labour which has traditionally prevailed. The most important of the benefits is the progression from subsistence levels of farming to the production of surpluses. This in turn leads to a growing ability to purchase consumer goods and to both generate and take part in economic activity.

But there can be disadvantages in a move towards mechanization. There can be uneconomic application of the investment -- like the wrong kinds of tractors on the wrong kinds of farms in the Soviet

Union. There can be an imprudent allocation of scarce capital -- perhaps something else was needed more in the economy. And there can be a harmful, disruptive displacement of labour.

Ideally, mechanization could be introduced first in those aspects of agriculture where human or animal power is inadequate for optimum results -- where, in fact, there would not be displacement but where they would be increased production. Such a move in many cases could lead quite rapidly to diversification of the farm enterprise and an actual increase in the demand for labour.

Resistance to mechanization often is prompted by a desire to protect jobs, but the cost can be high. There is in many cases a conflict between this objective of maintaining employment and the need for cheap, locally produced food. Mechanization, even at the cost of some displacement of labour, may well be justified. Furthermore, if the mechanization is well planned, the longer-run effect is likely to be the creation of more jobs through the cumulative effective of stepped-up economic activity.

There is a debate between those who advocate attempts to maintain high employment through selective and indeed strictly limited mechanization in developing countries, and those who think it desirable to introduce on a broad scale the most modern agricultural technology in order to bring about the most rapid economic growth possible. And, of course, there are a variety of opinions in between. I will not attempt to adjudicate this debate in any definitive way. I believe that the gradual but steady introduction of mechanization and advanced farming techniques will bring the

developing nations closer to self-sufficiency in food and stimulate their development of balanced economies, but I recognize that caution is required.

The developed world -- and certainly the commercial enterprises of the developed world -- should not impose on the developing world the machines and the methods that we ourselves have found effective, assuming that they will fit the conditions of peoples and lands far different from our own. Nor should we withhold from them the only means they are likely to find to begin to feed themselves and develop their economies. To the extent that we do lead them into the modern technological era, we have an obligation to help them prepare for, and cope with, the social and other dislocations that may be by-products of progress.

After all, it has been a long road from the pioneer clearing the forests or breaking the prairie sod to the abundance and sophistication of the Royal Agricultural Winter Fair of 1979. There have been hardships and reverses, social turmoil, cultural shocks and population shifts. We cannot make anyone else immune from these vicissitudes. In spite of them, Canadians have found the move forward rewarding and worthwhile.

That may not be unanimous. Some feel the old times were better, that something was lost when the Masseys and the McCormicks and the Cockshutts with their infernal contraptions changed farm life and made it possible for fewer people to do more work and produce more food.

The old days had their good side and their bad side -- and I will close with a couple of nostalgic references. The first is by a Canadian senator, speaking at a political rally in 1921 at the little village of Pakenham, near Ottawa, to an audience of farmers. "Youse farmers," he said, "want to keep your boys at home. Don't let them go up to the city; keep them on the farm. The temptations is more pure."

That was the good side of old-time farming -- pure temptations. The bad side is summed up in these lines -- fortunately no longer widely applicable in Canada:

"Lives of farmers all remind us
We must work at every chance,
And departing, leave behind us
Extra patches on our pants."

Thank you