

CANADIAN CLUB OF TORONTO
MONDAY, 5 APRIL 1976

J.H. Graflund
President, John Deere

Mr. Chairman, Honoured Guests, Ladies and Gentlemen:

It is indeed a privilege for me to be able to discuss briefly with you today a subject that is near and dear to my heart and one that I believe is of the utmost importance for Canada and the world in total.

Will there be enough bread?

All of us remember the teachings of the scriptures of the world that hunger often existed. Hunger and famine are horrible things. Men steal and kill to feed their families and themselves. When we consider the food inventory situation today and the population growth the world is experiencing, it is a fair question to again ask -- will there be enough bread? In order to understand the food situation, we must talk about population and population growth, the food needs of the world in quantitative terms, and the problems of meeting those needs.

I. POPULATION

As to population, the most rapid growth generally comes from countries that are not self-sufficient in food production, and some of the growth statistics are startling. Our friends south of America in Mexico contribute more to the world population growth than does America. The country of Brazil adds more people to the population each year than does the Soviet Union. The Philippines adds more people than does Japan. These are cold, hard facts. The various projections for the year 2000 -- and that is only 24 years away -- state that we will have a world population of about 7 billion people. That is a growth of about 3 billion more than are living today. Now whether this growth is $2\frac{1}{2}$ billion or $3\frac{1}{2}$ billion rather than 3 billion is not very important in considering the scope of the problem. The key point is that each of these persons must eat to live -- that is our problem.

The Canadian Club of Toronto
Monday, 5 April 1976

Another difficult factor that goes right along with population is the limited area of the so-called green belt of the world -- that is the land of the world that lies between the 30th and 55th parallels of both the Northern and Southern Hemisphere. This land represents only about 4% of the world's total land area, yet it is this green belt that must produce most of the food requirements of the world because other areas have either inadequate soils or climate or both. Here in our own continent, the green belt extends from the northern portion of Mexico (and we know how dry that is) up to the north end of the Peace River country in our own prairies (and we all know what a short growing season exists there).

This green belt in the Northern Hemisphere basically then covers southern Canada and all of America, and extends across Europe and Asia from the general level of the very northern strip of Africa and extends up to the southern portion of the Scandinavian countries. It is sad that in the Southern Hemisphere most of the green belt area is covered with water and the good crop land in the Southern Hemisphere is restricted to the southern portion of Brazil and most of Argentina, the very southern tip of Africa, and the southern approximately-20% of Australia.

II. FOOD NEEDS

Now what are the food needs of the world? The major consumption of food of the peoples around the world is grain. That is why the production of grain occupies more than 70% of the world's crop area. However, we need to talk about two types of grain consumption -- direct consumption and indirect consumption.

Canadian Club of Toronto
Monday, 5 April 1976

By direct consumption, we mean eating grain in the form of bread or cereal in Canada, tortillas in Mexico, rice in China, or pasta in Italy. By indirect consumption, we mean eating beef, drinking milk, eating chickens and eggs, cheese, and even drinking good Canadian beer or rye whiskey.

It is generally conceded that the minimum food requirements to support a human life is 150 lbs. of grain per year consumed directly. When we add indirect consumption in the form of beef, milk, cheese, and the like, we here in Canada lead the world at almost 2,000 lbs. -- almost one ton -- of combined direct and indirect consumption of grain per person per year. America is next at about 1,500 lbs., with the U.K. and the Soviet Union averaging a bit over 1,000 lbs. per person per year. In the least wealthy countries of the world -- we could say the poor countries of the world -- the consumption of grain averages only about 400 lbs. a year of direct and indirect consumption, and in order to meet the average needs of the people involved, much of this is consumed in a direct manner. You will note then that the key figure of 150 lbs. of grain per year to support a human life is the absolute minimum and all of the figures that I will give you from this point on are clearly very conservatively understated and could, in fact, be at least double.

The world supply of grains has dropped down to a bit over a 20-day supply. If it were not for the fact that the harvesting of grain is right now going on in the Southern Hemisphere because of the reversal of the seasons, and if it were not true that grain will start to be harvested in Mexico some time late this month and then work northward until 6 or 7 months later it is completed in the Peace River area of our prairies, you can easily see that we could have long queues in

Canadian Club of Toronto
Monday, 5 April 1976

front of the bakeries today filled with people clamoring for bread. Think with me then to the time 24 years from now when New Year's Eve will announce the year 2000, and at the rate he's still going, I believe Guy Lombardo and his Royal Canadians will sound it in with Auld Lang Syne. If there will be 3 billion more people in the world at that time and if the absolute minimum requirement for direct consumption of grain per person is 150 lbs. -- and please remember that this figure is ultra conservative -- then it will take some additional 450 billion lbs. of grain per year and this, of course, is 225 million tons.

How much is 225 million tons? The four leading grain exporting countries of the world are Canada, Australia, Argentina and America. The minimum of additional grain that will need to be exported by these four countries combined would be 250%. Think about that carefully. These four countries then would have to export grain at a level $3\frac{1}{2}$ times the exports that have been going on during the past two or three years just to meet the added minimum food requirements for just direct consumption of grain. To give us all another understanding of the size of this figure, this added amount of grain would require a train containing almost 5 million railroad cars, and this would mean a train approximately 50,000 miles long. If you could imagine with me a train with 10 cars abreast stretching from St. John's, Newfoundland to Vancouver, B.C. -- that is what it would take for these 3 billion people to merely exist. And this is not enough to provide them with the energy they need to perform any sort of manual type of work and is not enough to provide them with a cup of milk, or an egg or two a week, or any meat. We must also face the fact that indirect consumption of grain throughout the world will increase as people develop tastes for -- and recognize the need for -- protein-rich food such as beef and cheese. Statistics show very clearly that

when per capita income rises above \$500 a year, so likewise does indirect consumption of grain start to increase sharply. The point here is that demand -- subject to the ability of people to pay or the willingness of wealthier governments to share -- will increase sharply for generations to come. It is true there will be ups and downs in the supply of food because of varying crop conditions year by year, but on the average, it is indeed going to be a difficult job to provide enough bread for the world.

III. PROBLEMS IN MEETING THE FOOD NEEDS

- A) I am going to skip many of the problems such as the non-existence of appropriate infra-structure in many countries of the world and the problems of storage and transportation of grain, but rather concentrate on just a few of the more understandable problems.
- B) First, good farmland continues to disappear because people like us in this room and countless millions of others like us have an uncontrolled appetite for places to live, for parks and other recreation areas, for new places to work, for new highways, and the like. In other words, this irreplaceable asset of nature is actually slowly being removed from our farming capacity.
- C) Second, the sea catch is becoming more difficult and we face a diminishing supply of many forms of sea life. This is not only a problem of over-kill, it is also a problem of water pollution. Countries that rely heavily on sea food for protein today will probably be forced to convert to grain-fed protein to replace the sea food. This importantly involves Western Europe, Japan, and large portions of the Mid and Far East, as well as many portions of South America.

- D) Third, the use of chemical fertilizer should be doubled in the next 25 years in order to help meet this tremendous food need. However, much of this fertilizer comes from limited and irreplaceable natural resources. For example, the most common form of manufactured nitrogen requires natural gas. We also have the work of the environmentalists that needs to be paid attention to because of the effect that fertilizers, insecticides and pesticides have on the waters of the world.
- E) Fourth, there have been no recent truly significant scientific breakthroughs in food production that are economically viable. As I look back over the third-of-a-century I have been associated with the agricultural economy, I can think of only four important breakthroughs that have made truly significant contributions toward the world food supply. These are: the development of hybrid corn which basically took place during and immediately after World War II; the extensive use of soy beans as a source for food that started to leap forward during and immediately after World War II; the development of the miracle wheat and miracle rice strains that took place 10 to 15 years ago; and, of course, the outstanding work in the manufacture of fertilizer, insecticides and pesticides which caused a sharp jump in Post-World War II production. Otherwise, the growth of production has been a steady -- but low -- growth.

Canadian Club of Toronto
Monday, 5 April 1976

In conclusion, let's address ourselves to what can we people here in this room do about the problem since we are what the farm population would probably call "city folks". Some definite steps are:

- A) First, we can encourage our representatives in Queen's Park and Ottawa to not reduce agricultural research budgets. Canada should undoubtedly play an important part in helping supply this increased demand for bread in the world and we need agricultural research to make that become a reality.
- B) Second, we can help by raising our voices again with Queen's Park and Ottawa to help improve the situation regarding transportation and storage of grain and other farm products.
- C) Third, we can let our thinking be known as regards some of the labour strife that has existed especially at the ports so that the food that we do produce may indeed be exported.
- D) Lastly, we can encourage our friends and associates and our government that it is only proper for Canada to be much concerned about the world food problem and the Canadian ability to increase food production. This is true not only from a humanitarian point of view, but also it will help strengthen the Canadian economy, it will increase our exports which obviously will favourably help our balance of trade, and it will significantly add to the stature of our country in dealing with other world leaders on general problems of a worldwide nature.

* * * * *

Canadian Club of Toronto
Monday, 5 April 1976

You all remember that for years after World War II, the dollar of the world that other currency was pegged to was the American dollar. Then a few years ago, the American dollar weakened and the so-called petro dollar emerged as a strong factor. Are we going to come to the day when the agro dollar will be the potent dollar of the world? Will it be necessary that some day we have an OPEC organization of the grain producing nations of the world to determine who will be sold grain and at what price? I hope and pray that it will not be necessary if each one of us takes up the banner.

Thank you.

JHGraflund/n

29 March 1976