

*Established Programs Financing*

We do not like to think of ourselves as hewers of wood and drawers of water, which is perhaps tied up with the colonial kind of approach. But this is exactly what we are doing now.

Canada has some tremendously able people. We have a history of being able to contribute as far as research is concerned. But at the very time when we should be going ahead and putting more emphasis on the frontier that I would like to call the frontier of the mind, we are reducing our research. We are not giving it any prominence. The federal Government is not setting an example by leading and showing us where we can co-ordinate and obtain better value for our dollars. We may look back 15 years or 20 years from now and say that we missed that opportunity and as a result Canada is still a colony in the sense that it imports goods from other countries rather than doing what it is capable of doing and letting the rest of the world benefit from what we are able to show them how to do.

• (1750)

That is an important point which I think the federal Government should consider. It is the kind of thing which should be included in Bill C-12. The Bill says more to me than simply that the federal Government is cutting back on the amount of dollars it will spend or reducing the amount of money. When it moves in this kind of direction and I see the other areas where it is spending money, I become very concerned about the way it sets its priorities.

I had an opportunity to pose a question to the Prime Minister (Mr. Trudeau) about a year ago concerning the amount of dollars spent on Canadair. It was exactly the kind of thing which concerned me at that time. When I see this Bill show up as a result of the six and five program, it makes me wonder why such questions have not been asked with much more vigour in the past or why we have not received some better answers.

I would like to give a couple of startling examples of where Canada has gone in terms of research in the last number of years. If we take a list of countries—Canada, France, Germany, Japan, Holland, Sweden, Switzerland and the United States—we rank at the bottom as far as percentage of GNP spent on research and development. Figures can bore us to death and we can lose the point, but out of eight countries Canada spends less as a percentage of GNP than any of the countries I mentioned. This tells us where is the Government's emphasis as far as research is concerned.

Walter Bushuk, an internationally-honoured Canadian plant scientist, made an interesting point when he spoke at a farm business association meeting in Winnipeg during the first ten days of January. He said:

Canada lags 10 to 15 years behind many other countries in the employment of genetic research to increase the yield and quality of farm crops.

Also he said:

Canada is already seriously short of agricultural scientists. It is expected that by 1990 it will be short about 400.

I have had conversations with some of the people who are involved in this area. When they graduate with an undergradu-

ate degree and obtain an honours degree, then they have a chance. Usually by this time they are in their mid-twenties, have families or some kind of personal commitment, and a chance of working in the private sector. They earn enough money to keep body and soul together. If they remain in university to obtain Ph.Ds to make use of some of the ability or knowledge they have acquired for further research, in some cases they are offered a third, or certainly less than half, the amount of money they could earn in the private sector.

This is the kind of thing which is happening in Canada. Right now we are short of engineers, Ph.D graduates and capable research people. It will get worse because, as I said, the Bill before us accentuates the problem.

I would like to refer to another interesting figure. In Great Britain the yield of cereal grains in 1982 was 6.2 tonnes per hectare. I do not know what that translates into in bushels and acres, but the figure to remember is 6.2. That has doubled in the last 25 years. It has risen 3.4 tonnes per hectare in 25 years.

What have we done in Canada? In Canada it has risen from two tonnes to three tonnes. Not only did we start from a lower base but the increase was 50 per cent less. At that rate, by 1990 we will be 30 years behind Great Britain. If that trend line continues, by 1990 we will be in exactly the same position as Great Britain was in 1958. That is the prospect for the future.

Turning to Japan, it has 15,000 lawyers in the entire country. That country is half the size of the United States. I do not have the figures for Canada, so I will quote United States statistics. As I said, Japan has 15,000 lawyers, whereas the United States has 35,000 graduates per year. The Japanese have a saying which goes something like this: "Engineers make the pie grow larger; lawyers only decide how to carve it up". That is the kind of problem we have in Canada.

I would like to refer to another startling, almost shameful figure. In Japan the ratio of engineers to lawyers and auditors is roughly 100 to one; there are 100 engineers for every lawyer and auditor. In Germany it is roughly eight to one and in France it is about the same. In Canada the proportion is roughly equal. That tells us where we are going, and that is why we get into this absolute garbage. When we talk about the formula to amend this Act, I do not think anyone can read it and tell me what it means in simple terms in less than a couple of days. Why is this so? It is because we have people who regulate rather than people who want to be productive.

I remember a very distinguished thinker who died last year, Arthur Koestler. He was a very distinguished gentleman in many disciplines as far as the scientific world was concerned. I remember reading some of his comments a long time ago when he said that the dinosaurs on this planet disappeared because their bodies got too big for their brains. Also he said that if man kept going in the same direction, we would disappear because our brains were getting too big for our bodies. In many ways that is true and almost scary.