

The recent exposure of the tests at the Industrial Bio-Test Laboratories where over 100 pesticides were improperly tested means that we must do our tests in Canada. While this bill does not provide for the testing to be done in Canada, that is the next major step the government must take.

We believe it is a very legitimate role for government to be testing dangerous chemicals, pesticides and herbicides. This is an area where the government should act quickly, and I hope it will.

Canadians should clearly understand the whole area of crop production and pest control. There is one undeniable fact in Canada, the United States and the world in general. Without pesticides and herbicides, Canada, the United States and indeed the world would not be self-sufficient in food production. Without pesticides we in Canada would be much less sufficient in food.

At present Canada is a major importer of the basic foods we consider essential for our table each day. That should not be the case because we have the agricultural skills in our farm people and a lot of land which could be put into agricultural production. Without pesticides we cannot feed the people of the world today. The spotless apple, Mr. Speaker, is a product of chemicals and of good farm management. The healthy beef, dairy animals, sheep and hogs are all the result of excellent farm management, good veterinarians and the case of chemicals. There is no doubt that in the past there have been major abuses. Many of those abuses have been committed by those of us who have been on the land. I can remember within my own life experience when chemicals were first starting to come into major use, during the late 1940s and 1950s, and how we as farmers were really very careless with them because we just did not know of their effects. The accumulated experience of danger had not yet built up. That experience is now built up and we find that, as a matter of fact, the farming community is much more careful in its handling and use of these chemicals.

• (1520)

There used to be a philosophy that a little was good, a lot was a whole lot better. That does not apply in the case of chemicals. It is often true that if the instructions say two ounces per acre, that is sufficient and it does an excellent job, whereas five or six ounces would build up a residue in the soil that can destroy future crops and can affect that very intricate microcosm of bacteria, fungi and single cell organisms that work in our soil. The improvement has come largely as a result of excellent research being done at our research stations and through our provincial associations and agrologists being imparted to the farms.

It is clear that in the future we will need more biological control of pests and of weeds other than the use of chemicals. We need to develop more resistant strains of crops and more specific chemicals that can be brought in under unique circumstances and used. The only way we can get to that point is by more research and development. If one needs evidence to find out that a dollar spent on research returns itself many times

### *Pest Control Products Act*

over, I will read from a report by the Agricultural Institute of Canada. On page 2 of that report it states as follows:

The benefits accruing from agricultural research have been well documented. The safeguarding of wheat from the ravages of rust provided a benefit to cost ratio of 482:1; research leading to the reduction of fallow acreage in Manitoba provided a benefit to cost rates of 278:1 but the benefit should continue to accrue for decades ahead: a benefit to cost rates of 260:1 was estimated for R & D on chicken broilers; in Ontario input cost of \$32 million for the improvement of corn provided additional returns of \$2.6 billion or an investment return of 80:1.

One can see that for every dollar that is invested, the economy has \$482 returned to it on rust research alone. Clearly we need to do more of that. I believe the government can be quite properly criticized for its lack of emphasis on agricultural research and development.

In 1970 the statistics showed that 3.7 per cent of the over-all federal budget was spent on agriculture. By 1979 that had dropped to 1.9 per cent spent on agriculture. Of the 1.9 per cent, only 11 per cent of that was for agricultural research and development. The result has been a deterioration of our agricultural research physical plant and the obsolescence of the equipment and the high technical equipment that is needed for proper research. We also find ourselves at the point where we have too few scientists.

I sat on a fiscal task force this past summer that was called "Fiscal Federalism in Canada". While we were in British Columbia, we heard evidence from Dr. Kenny who is the president of the University of Victoria. As to the need for researchers in Canada, the report states at Page 124:

... It is clear that, if Canada is to achieve its goal of R & D expenditures ... it will be necessary to increase substantially the ... rate of production of highly qualified manpower ... Canada needs an estimated additional 1,500 researchers by 1985 to meet the federal target of 1.5 per cent of GNP to be spent on R & D by the mid-1980s. Canada needs ... 8,000 ... foresters over the next decade, or twice the number now graduated in Canada. Canada needs ... 740 Ph.D.s in agricultural science between 1980 and 1986, but ... is only turning out 49 graduates per year ... Canadian universities have about 300 openings for business professors and yet ... 15 to 20 Ph.D.s will be graduated annually. This shortage ... will prevent students from studying in Faculties of Commerce ...

It is patently obvious, and everyone within the establishment of higher education is aware of it, that we have a crying need for our youth to be given the opportunity to become researchers. But they do not have that opportunity because we do not have the infrastructure *en place* in order to process them. The reason we do not have the infrastructure is that the government has chosen to put its research dollars in other types of programs, rather than in basic research, even when the rate of return is in the order of \$480 for each dollar expended.

One of my colleagues has handed me a note stating that President Kenny is not the president of the University of Victoria but the president of the University of British Columbia. I make that correction in my comments.

From comments that the Minister of Agriculture (Mr. Whelan) has made, it is clear that he appreciates the great need for research and development in Canada in agriculture. Unfortunately he is one person out of 36 in the cabinet who appreciates that need. I am certainly asking members on the opposite side—we will certainly back them up in this, as will the university system—that they put pressure on each and