

performance of chemical manufacturers is difficult to obtain. The corporate financial statistics published by Statistics Canada give an overview of the pesticides sector without distinguishing among the various possible uses; consequently, it is not possible to draw a reliable portrait of the agrochemical market from those data.

The Committee asked for and received from the Crop Protection Institute of Canada (CPIC) information on the financial picture of the agricultural chemical industry.

The data received for 16 companies showed that profit figures have declined since 1983 for agricultural chemical producers to a net profit of 2.2%. CPIC officials told the Committee that the products registered and sold in Canada and around the world have to carry the costs of all of the products that do not make it out of the laboratory.

The research and development costs of identifying potential successful products is becoming more expensive. The average cost of the development of a new product on an international basis is estimated to be \$40 million in the mid-1980s. It would appear that the success rate is becoming smaller and smaller as the identification of new and innovative products becomes more difficult to make. In the 1960s 3,000 to 4,000 compounds had to be screened to find a successful one. In the 1970s this ratio was 1 to 7,000 to 10,000. In the 1980s it is 1 to 15,000 to 17,000 and by the 1990s it is expected to be 1 to 25,000 compounds.

The Committee heard that agricultural chemical companies in Canada spend \$25 million per year on research, primarily on field testing. Much of this amount is spent on toxicological studies to meet the registration standards for farm chemical products in Canada.

Representatives from CPIC told the Committee that the price of existing farm chemicals must reflect these research costs, the cost of registering products, the cost of equipping and operating production facilities and the cost of environmentally acceptable waste disposal. Sufficient profit must be generated by sales if a portion is to be reinvested in further research — to benefit both the health of Canadian agriculture and of the industry's profit picture. CPIC told the Committee that the price levels of farm chemicals being charged in Canada are fair and reasonable, given the high research and development costs in the industry and the corresponding high risks inherent in that research, including extra costs to meet Canadian requirements.

This explanation does not, however, reassure the farm community that farm chemical prices will fairly reflect real costs in the future. The Committee considers that price monitoring could assist in allaying their fears and has made a general recommendation in reference to monitoring input prices in a later section.

## **B. Patents and Registration of Farm Chemicals**

Farm organizations expressed considerable concern that federal patent legislation and registration policies hamper competition in the farm chemical market by making entry into the market place difficult and costly.

Products patented in Canada presently have patent protection for 17 years under the *Patent Act*, which falls under the jurisdiction of the Department of Consumer and Corporate Affairs. In reality, this does not necessarily mean that the chemical receives a full 17 years market protection. To be sold in Canada, farm chemicals must also be registered under Agriculture Canada's *Pest Control Products Act*. To obtain registration a company must provide a voluminous data package, which can cost up to \$7 million to prove that it meets safety, merit and value standards. A company cannot apply for registration until the product has been patented. It can take from two to four years after the granting