and have lost the ability to plan, which every other modern country worth its salt has been able to do.

This is why I argue that we need government planning and involvement. If we cannot rely on industry alone to solve the problems in Canada because industry is foreign owned, we will never move beyond the branch plant economy in which we are now. Therefore, we must have government planning, economic planning, and government investment decisions in co-operation, or in some cases maybe with coercion, with some of these companies operating in Canada. We have seen how West Germany, Japan and the Scandinavian countries have been able to do this successfully.

It is amazing to me that that lesson has not been learned by my colleagues opposite. Laissez faire will not do in Canada any more. We have gone beyond that. We are in too much of a predicament. We need research and development; we need government initiatives. I am afraid that unless we have a change in government, we will never solve this fundamental problem facing our economy today.

Miss Aideen Nicholson (Parliamentary Secretary to Minister of Supply and Services): Mr. Speaker, the opposition motion before us is an important one and probably there would be no disagreement with the principle, although obviously there is a good deal of room for disagreement on methods of application and on deciding priorities. The motion states that it is crucial to the strength of Canada's economy and the provision of employment opportunities that a vigorous program of technological research and development be promoted by the government. It goes on to deal with industrial research, to which the hon. member for Scarborough East (Mr. O'Connell) and the hon. member for Halton (Mr. Philbrook) have already directed their remarks. The motion also addresses the question of agricultural research, and I would like to speak briefly on this.

The Department of Agriculture's expenditures have increased very greatly in the past three years on work on new crop varieties, the efficiency of animal hybridization in the development of modern strains of animals and poultry, and the protection of plants and animals from diseases, insects and weeds.

The budget of the agricultural research program since the 1971-72 financial year has increased 2.4 times. Science expenditures related to agriculture by all departments have increased from $116.8 million in 1975-76 to $159.5 million in 1978-79. Expenditures on science and technology in 1978-79 will be $134.1 million in Agriculture Canada and will represent 18 per cent of Agriculture Canada's total estimated expenditures. Of this, it is expected that $5 million will be spent extramurally, compared to $6.3 million in 1977-78, of which $0.8 million will be spent in industry and $3.3 million in universities.

The agriculture industry produces nearly two thirds of the food consumed in Canada. In addition, agricultural exports play a significant role in our international balance of trade. The Minister of Agriculture (Mr. Whelan) aims to preserve and influence the productivity and prosperity of agriculture in Canada within the context of a total food system.

The research branch of Agriculture Canada has as its mission to ensure the efficient production of an adequate and appropriate supply of food and agricultural products and to help maintain a stable and profitable agricultural industry in Canada. The research program has a management-by-objectives philosophy. Most of the objectives are based on various crop and animal commodities. Goals are set so as to provide real targets for assessment, accountability, and cost benefit analysis. Some objectives, however, embrace a broad class of agriculture; for example, soil survey or environmental protection. In others a discipline basis is used for setting objectives and goals.

Apart from administration and research services, the program is organized into 14 research areas, namely, horticultural crops, cereal crops, forage crops, beef cattle, biosystematics, oilseed crops, land and water resources, field crops, dairy cattle, environmental quality, poultry, swine, sheep and honey bees and other animals.

The department operates 47 science establishments, sited across the country so that local factors in the production and utilization of agricultural products are considered in research programs.

To ensure that department research is co-ordinated with research in the provincial, university and industry sectors, and that the national research effort is responsive to needs, the branch uses three national advisory groups: the Canadian Agricultural Services Co-ordinating Committee; the Canadian Agricultural Research Council; and 17 Canada committees, each concerned with a specific commodity, discipline or subject area. Each of these groups has representation from the federal, provincial, university and industry organizations concerned.

Within the research programs, increasing emphasis is being placed on the breeding of new crop varieties; the efficiency of animal hybridization in the development of modern strains of animals and poultry; the protection of plants and animals from diseases, insects, and competing weeds; the culture of plants in a way that uses space, light, and nutrition with the greatest efficiency; the storage of primary products for off season demand and future export; and the utilization of agricultural production to provide Canadians with a greater variety of more appealing and nutritionally processed products.

As the petroleum sources of nitrogen for fertilizer manufacture become scarcer and more expensive, one new avenue of research will focus on the microbial fixation of atmospheric nitrogen. The fact that many leguminous crops naturally draw, or fix, nitrogen directly from the air challenges scientists to attempt to extend this symbiotic relation of plants and bacteria to other crops.

A program of soil classification and mapping being run co-operatively with the provinces is one of Agriculture Canada's most important activities. It will take many years to complete but is already providing useful information to plan-