

produced per laying hen also increased substantially; in Ontario and Quebec, for example, the increase was about 23 eggs or nearly 15 p.c. Egg production is rapidly becoming a large-scale commercial business. Small farm flocks are being replaced by large commercial production, one plant with mechanical feeding, watering and cleaning equipment raising thousands of layers. The aim in these large-scale operations is low-cost production of a large quantity of high-quality eggs.

In dairying, too, specialization has become prevalent. The pounds of milk produced per cow has risen from 3,935 in 1937 to 4,792 in 1947 and to 5,499 in 1957, and the number of cows per farm has increased considerably. Producers specializing in beef are watching for and accepting the results of new techniques in breeding and in feeding, which includes improved methods of pasture management. Yields per acre of field crops are also increasing as a result of better cultural methods and more productive seeds and plants.

**Contract Farming.**—Of the many adjustments associated with the technical revolution in agriculture one of the most widely discussed is contract farming, or "vertical integration". There are many examples of this type of development in industry, and though much publicity is now being given to contract farming it is by no means a new development. The growing and marketing of sugar beets, of canning crops, and of certain kinds of seeds under contract has been under way for many years. Fluid milk and beef feeding contracts also go back a long way. What is being hailed as the new development of vertical integration, with varying degrees of approval and alarm, is the invasion of contracting into fields where the growers have traditionally made independent production and marketing decisions, yet where certain kinds of contracts are now removing all management decisions from the control of the producer and making him dependent upon the credit and the market outlets of the trade.

In no industry has vertical integration become so extensively established as in the production of broilers. About 90 p.c. or more of the broiler output in Canada is produced under contracts of one kind or another. These contracts may be agreements between producers and processors for the delivery of broilers at a given time and at a certain price. Another kind of contract may be an arrangement whereby feed dealers advance credit to producers for the purchase of chicks and feed, the farmer making his own marketing arrangements. Contracts may include the type where a feed manufacturer or a processor furnishes chicks and feed to the grower, leases his buildings and equipment, supervises his management and pays him wages for his labour. There are also other arrangements under which the grower shares his profit in return for credit and risk sharing.

Contracts have greatly contributed to the rapid adoption of more efficient practices in the production of poultry meat and have made it available in vastly increased quantities at lower prices to Canadian consumers. In the past ten years since contract farming has been applied to the broiler industry, Canadian production of this commodity has risen to 60,000,000 birds a year. In this specialized industry considerable capital investment is necessary which can be justified only if the operation is on a fairly large scale. In one enterprise there may be as many as 40,000 to 80,000 birds at a time, with four crops produced in one year.

Some features of contract farming have been extended to the production and marketing of other agricultural commodities in recent years, such as hogs, turkeys and eggs.

**Canada's Food Needs and Farmer Problems.**—The national economy of Canada and its population have made remarkable strides upward in recent years. Gross national production has increased from \$16,300,000,000 in 1949 to about \$34,500,000,000 in 1959 and the population in the same years has risen from 13,500,000 to 17,650,000 persons. The adoption by farmers of new and improved techniques has made it possible for them to provide adequate supplies to satisfy the increased and changing food requirements of the population. With higher purchasing power and a greater appreciation of the need for