

EXHIBITION CIRCULAR No. 26.

DOMINION OF CANADA.

DEPARTMENT OF AGRICULTURE.

EXPERIMENTAL FARMS.

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THE FARMER AS A MANUFACTURER.

BY

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Part I.—The world's sole manufacturer of Protein, Fats, Carbohydrates and Cloth Fibres.

THE REAL NATURE OF THE INDUSTRY.

The raw materials at the hands of the farmer and the proportions of each used are, roughly speaking, air, 20 pounds; water, 75 pounds; and soil 5 pounds. From these elements of nature he manufactures 100 pounds of products—Protein, Fats, Carbohydrates and Fibres. *It is important* that every farmer should be well acquainted with the nature of these products, for his whole life's work is involved in their manufacture. He will then find greater interest in every operation and will be better able to conduct his work that it may yield maximum profits.

The ultimate object of farming is to prepare substances which will yield these products in maximum quantities and of the best quality. Nature can be encouraged to add to these substances attractive colours, lours and flavours. Food materials can be produced in digestible forms, clothing materials (fibres) of good texture, oils of good quality for paints, lubricants, etc.; barley can be grown specially valuable for brewing and malting; corn for starch industries; sugar-cane and beets for sugar, wheat to yield flours for special purposes, etc., etc., etc.

In foods we always find one or more of the constituents, Protein, Fat and Carbohydrates. This is true of everything we eat, whether it be fish, oysters, meat, potatoes, apples, ice cream, celery or candy, and even beer. The chief differences in foods lie in the amounts of water and protein they possess—strawberries may contain 96 per cent water and flour only 8 per cent; cheese may contain 3 per cent protein; apples less than 1 per cent. Nature does things up in neat packages of fibres and by introducing colours, odours and flavours we get apparently an endless variety. Illustrations of this are everywhere abundant, as witness the orange, apple, bananas, etc.

REQUIREMENTS OF MAN.

All the necessities of life are included under the three headings of Food, Clothing and Shelter and of these the farmer must supply the first and second. All materials of clothing (wool, cotton, leather, silk, linen, etc.,) are made up of either animal or vegetable fibres. To understand the nature of foods we must first ascertain the requirements of the animal, including man.

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Exp. Farms

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