

An Economic Study for Manufacturing Possibilities of Oat Milk and Its Products in Egypt

Abstract:

The study analyzed manufacturing possibilities of oat milk and its products in Egypt. The objectives of the study are: (i) identify the current situation of dairy alternatives in the world, and (ii) analyze the possible opportunities for manufacturing oat milk products in Egypt. It was found an increase in global demand for dairy alternatives and its products. Dairy alternatives include soy, almond, rice, coconut, and oat milk. Oat milk tops the lists of the best-selling dairy products in most countries of the world, so it is considered one of the dairy alternatives that is a strong candidate for expansion in its production in recent times.

The study assumed a unit production capacity for manufacturing oat milk products (drink milk, ice cream, and yogurt) amounting to 3.5 tons of oats annually, the project lifespan is 12 years, and the discount price is 22%. The study concluded that the factory will achieve net cash flows during the life of the project whose current value is 0.29 million pounds, and IRR is 36%, which greatly exceeds the lending rate in banks, and the ratio of current benefits to current costs is 1.1, meaning that the project is financially feasible. The payback period is 2.8 years.

By analyzing the sensitivity of the project to an increase in the price of a ton of oats which used in manufacturing by 10%, it leads to a decrease in IRR and net present value by 15% and 39%, respectively, and an increase in the capital recovery period to 3.3 years. But the increasing labor wages by 10% leads to a decrease in IRR and net present value by 7% and 18%, respectively, and an increase in the capital payback period to 3.02 years. While increasing the price of containers by 10% leads to a decrease in IRR and net present value by 4% and 9%, respectively, and an increase in the capital recovery period to 2.91 years. As analyzing the sensitivity of the project to the decrease in the price of drinkable milk by 10%, it leads to a decrease in IRR and the net present value by 22% and 56%, respectively, and an increase in the capital payback period to 3.6 years. But the decrease in the price of ice cream by 10%, it leads to a decrease in IRR and the net present value by 14% and 37%, respectively, and an increase in the capital recovery period to 3.27 years. While the decrease in the price of yogurt by 10% leads to a decrease in IRR and the net present value by 9% and 21%, respectively, and an increase in the capital payback period to 3.06 years.

The study recommends the need to design and implement indicative campaigns in the field of manufacturing and marketing oat milk and its products with the aim of increasing consumer awareness of the nutritional importance of these products, designing a geographical map that includes specifying areas that are suitable for establishing production units in them, opening multiple marketing targeting the segment of consumers who are ready to pay higher prices in exchange for obtaining natural dairy products free of preservatives, and expanding production for the purpose of exporting to North America, as it is the largest consumer of dairy alternatives in the world, especially yogurt and ice cream, and to America, as it is the largest consumer in the world of oat milk and its products.