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COVID-19 PANDEMIC – IMPACT ON THE FINNISH AGRI-FOOD SECTOR

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The corona crisis has raised concerns about food supply and food security even in some developed countries such as Finland. The history shows that the shortage of food may easily result in civil unrest. Therefore, the ability to source and distribute adequate food to population is essential especially in times of disruptions. The nutrition and food security is a basic objective of any nation.

Food self-sufficiency rates are high in Finland

The self-sufficiency rates calculated based on domestic production, consumption and foreign trade figures prove that Finnish agriculture is able to satisfy the demand of domestic consumers for all major commodities. The production of milk, meat and grain nearly matches the volume of consumption.

The self-sufficiency of milk exceeds 100% and that of meat varies between 90 and 100%. The differences in yields may influence the self-sufficiency of grains in various years. In the case of coarse grains, such as barley and oats, Finland's self-sufficiency has been well over 100% (Luke, 2020). The self-sufficiency rates of bread wheat and rye may occasionally fall between 50 and 100%, but the high volumes of private stocks, together with notable state emergency reserves, ensure domestic supply for human consumption.

Finland's overall protein self-sufficiency is also high. Protein intake is usually secured both by crop and livestock products. The total crop-based protein self-sufficiency is over 80%. The majority of crop-based protein in Finland originates from either grain or silage, the latter being an important source of protein for ruminants.

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The self-sufficiency of complementary protein feed ingredients such as rapeseed, soybean, peas and beans is only about 15% in Finland. Protein is imported in various forms of rapeseed and soybean. Domestic alternatives have actively been searched over the recent years. Due to its amino acid composition, however, it is rather challenging to replace soybean with domestic substitutes especially in poultry feeds.

Food security is more than self-sufficiency

Domestic agriculture and food industry is considered to be of utmost importance in terms of maintaining professional skills, competences and resources. There has to be an adequate capacity to increase domestic production in case of prolonged crises and difficulties of importing foodstuffs from abroad.

The food sector infrastructure and viability of productive capacity quickly become unviable if production falls below a certain threshold level of critical mass (Niemi et al., 2013).

However, food security is more than just self-sufficiency, which reflects the overall competitiveness of Finnish agriculture on the domestic and international markets. The domestic agricultural production itself depends upon a variety of imported inputs such as fertilizers, plant protection materials, fuels, machinery and foreign seasonal workers. The circumstances in which imports were cut off would also be likely to hamper the domestic production potential. Hence, keeping the international trade relations and sourcing channels are conditions for maintaining the level of domestic production (Knuuttila and Vatanen, 2015).

In order to ensure food security, the logistics systems and the entire infrastructure of food supply chain has to be built in a sustainable way. The lean and low inventory, just-in-time logistics system that supplies the Finnish grocery sector is exposed to disruptions caused by deficiencies in information technology system, interruptions to fuel and other energy supplies or failures in transport infrastructure.

In energy- and oil-dependent economy, food security is strongly interrelated with energy supply security. Agriculture in its current form cannot be managed and food industry and distribution cannot be continued without imported energy. A complete break in fuel and energy supply would, therefore, paralyse the current food system (Niemi et al., 2013).

The vulnerabilities, risks and threats of food supply chain are general and identical to those of any other production and service supply chain. Measures which are predominantly designed to ensure energy supply as well as electricity and transportation infrastructure would contribute to the viability of food supply chain at the same time.

The impacts of corona crisis on agri-food sector

The impacts of corona pandemic on the agri-food sector can be divided into short- and long-term effects. Initially, the pandemic resulted in a demand shock on food markets. The first effects of the demand shock included hoarding of foodstuffs and dramatic decline in restaurant, school and work catering as well as shifting demand for food retail outlets and basic foodstuffs with a long shelf-life. The demand for rice, pasta, cereal flakes, crispbread and canned food increased and hoarding made certain goods difficult to access temporarily.

The long-term effects result from the economic recession which causes lay-offs and increased unemployment, decreased income and increased insecurity. All these consequences put pressure on the demand of high-priced and value-added products driving consumption towards basic foodstuffs even more. This, in turn, weakens the profitability of the food sector. Provided the crisis lasts only a few months and the economy recovers, the adverse effects experienced by the food sector may remain relatively marginal. The lower the general economic growth, the major the implications felt by the food sector.

The most significant direct risk in agricultural production associated with the corona pandemic is the shortage of workforce caused by the infection of farmers, their workers or family members and as a consequence a quarantine. The majority of Finnish farms are family enterprises, which operate with very few persons. In the case of individual farms production may be threatened by the availability of foreign seasonal workforce, spare-parts, feedstuffs, antibiotics and other imported inputs.

Similarly, the main concerns in the food industry and the logistics of the food chain are related to the infection of workers and the resulting breaks in domestic production as well as in international supply chains. Currently, however, there are no situations, which would seriously affect the operation of food manufacturers.

The concurrent corona infection of a large number of farmers and workers in the food chain would definitely cause insecurity and may disrupt logistic chains. If such risk becomes real, the food prices may increase.

The wide network and diversity of food retail alleviate the effects of possible disorders in Finland. Additionally, food retail companies have introduced the measures recommended by the government as well as their own measures to combat the spread of the coronavirus.

In Finland, the food supply is not threatened by the corona pandemic, although it has been put to a serious test. The threat would increase if the corona crisis extended to the next crop season. There may be a need to streamline the assortment of food industry and food retail in a long-lasting crisis and some inputs could become scarcely available on the global markets.

Finnish citizens would have access to the most critical foodstuffs even if the worst came to the worst. In cooperation with domestic food manufacturers, the National Emergency Supply Agency has outlined a list of the ultimate food items which they would continue to produce in times of emergency.

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