Food Systems and COVID-19 in Germany

Ralf Greiner

Max Rubner-Institut, Federal Research Institute of Nutrition and Food, Department of Food Technology and Bioprocess Engineering, Haid-und-Neu-Straße 9, 76131 Karlsruhe

Strengths: Germany has a high degree of self-sufficiency in some areas of agriculture. This applies to products such as wheat, potatoes or sugar. There are also high levels of self-sufficiency with pork, fresh milk products and cheese. At the same time, Germany is dependent on trade in agricultural goods. This affects products such as fruit and vegetable, but also raw materials such as palm oil, rice or soy. Germany also relies on the trade in goods needed for agricultural production such as fertilizers, pesticides and feed.

Some of the farms have already bought seeds and other resources such as fertilizer or crop protection agents and have them stored in the warehouses. In this respect, direct effects of the pandemic on sowing in traditional arable farming is expected to be rather small, especially since farmers are probably not among the main risk groups of the corona virus. In the short term, only minor problems are expected in the staple food from agriculture (wheat, rapeseed, maize, sugar beet).

In addition, most food products are produced in several plants located all over Germany. Therefore, closure of one plant due to the pandemic will not affect the supply with these food products. Only for some special food products produced in one single plan supply difficulties might occur.

Weaknesses: Labour-intensive branches of agricultural and food production face major challenges during pandemic. Particularly in asparagus cultivation (April / May) and strawberry harvesting (June) problems occurred due to the lack of seasonal workers and the outdoor season of growing vegetables (e.g. lettuce) is expected to run into problems well into the summer. Furthermore, slaughterhouses work with a large workforce from Eastern Europe. Due to the lack of harvest helpers and closed borders, vegetables and meat have become significantly more expensive in the corona crisis, sometimes up to 10 percent.

Opportunities: The reduction in import of fruit and vegetable due to the pandemic can be an opportunity for German growers. If German growers can organize their seasonal workforce and prepare for cultivation they could benefit from higher prices for vegetables in early summer. In addition, food retailers state that online demand has increased significantly since the beginning of the pandemic with the consequence of a massive overload of online delivery logistics. Thus, plans exist to expand e-commerce with omni-channel solutions and to strengthen online marketing. Furthermore, automation in the processes in the warehouse and in logistics are intended. Local production might also benefit from the pandemic.

Threats: Because the German food system is dependent on import and export, the pandemic might have effects on food security. In addition, the population safes on money for food. That might have consequences in respect to a diversified diet. Restrictions in the availability and the increase in prize of especially fruits and vegetables has already resulted in a decrease in fruit and vegetable consumption. The pandemic might also affect the availability of meat and meat products due hygiene problems in slaughterhouses respectively in the accommodation of the workers.

Role of food science and technology: The pandemic seems to increase food waste and the shortage of some ingredients needed to produce specific food products. In some production plants it is also not a simple task to follow the hygienic rules. Thus, automation, appropriate technologies and adapted recipes are needed.