



IATRC

**INTERNATIONAL AGRICULTURAL
TRADE RESEARCH CONSORTIUM**

Commissioned Paper

European and Member State Policy Responses and Economic Impacts on Agri- Food Markets due to the COVID-19 Pandemic

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March 2021
IATRC Commissioned Paper 26

International Agricultural Trade Research Consortium

Commissioned Paper No. 26

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The International Agricultural Trade Research Consortium (IATRC) is an organization of approximately 220 economists from 28 different countries, interested in research, policy analysis, and current developments in international agricultural trade. It is supported by the United States Department of Agriculture (ERS, FAS, and OCE), Agriculture and Agri-Food Canada, and the participating organizations. Funding for this commissioned paper comes from Agriculture and Agri-Food Canada.

*European and Member State Policy Responses and Economic Impacts on
Agri-Food Markets due to the Covid-19 Pandemic*

St. Paul, Minnesota: University of Minnesota, Department of Applied Economics, International
Agricultural Trade Research Consortium

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Executive Summary

This study analyses how between March and November 2020, the Covid-19 pandemic affected the agri-food markets of the European Union (EU) in terms of production, income, trade, and demand and how EU Commission and EU Member states politically responded to the pandemic.

Even though the first outbreaks of Covid-19 in EU Member States (France and Germany) were observed in January, the full impact of the pandemic only started to emerge in March 2020. With about ten months since the first outbreak, thus, as of November 2020, the pandemic is still a relatively recent development.

The Covid-19 pandemic and its impacts on agri-food markets are unprecedented, and it will take a while to fully capture the explicit and implicit transformations that were induced by the pandemic's market disruptions. As the Covid-19 outbreaks progressed and intensified across EU Member States, governments had to react to contain the virus transmission. These nationally divergent lockdowns affected national agricultural sectors in different manners: starting from problems with local distribution over the closure of the hotel, restaurant, and catering sector and continuing through shifts in consumption patterns. As a result, agricultural production and income and food demand were all affected, with the fruit, vegetables, meat, and livestock sectors, as well as the food processing industry, identified across most analysed Member States as most affected.

Regarding the political response to the pandemic at the EU Commission and Member State level, three phases in the period March to November 2021 can be identified. The first phase focused on national ad hoc responses, such as border closures and economic lockdowns. In the second phase, a return to Europe-wide answers and protection of the functioning of the internal market were observed. In the third phase, a "new normality" was prepared, allowing for economic activities again by monitoring and reacting jointly and flexibly with protective and containing measures where necessary.

The pandemic adversely affected either agricultural production or agricultural trade in all the studied Member States, particularly for fruit, vegetables, meat, livestock, and the processing sector. Closure of the hotel, restaurant, and catering/out-of-house service led to important shifts in the demand pattern. Supermarket sales went up, as higher food purchases by households and more food preparation at home were observed, and individual consumers concentrated most purchases on one shop. Some hoarding occurred, mostly for non-perishable goods, and less frequent shopping trips led to turnover gains for supermarkets at the costs of other retail outlets. This was particularly a problem for perishable products (e.g., fruit, vegetables, fresh juices), as fresh markets were closed or less frequented. Also, flowers and floricultural products were in less demand.

The net effect on direct farm sales of the closure of the hotel, restaurant, and catering/out-of-house service sector and the concentration of purchases by households in supermarkets is difficult to determine. On the one hand, some farmers sell directly to restaurants—for example, in the case of top-quality beef or vegetables—while on the other hand, certain rural

areas benefited economically from weekend tourists who continued to visit the countryside during the pandemic and purchased local food products as a part of their touristic experience.

At the same time, new digital innovations were developed on extremely short notice: internet-based platforms for the recruitment of seasonal labor and for online sales of farm produce, for the distribution of produce and other products directly from the farm in “food boxes” to urban areas, or for the establishment of new home delivery and carry-out services by restaurants.

The Covid-19 pandemic also led to several changes in management practices along the food chain. It seems that the most impactful changes occurred at the farm level, as new work practices were established in order to compartmentalize potential outbreaks. These new practices included creating stable working teams, not allowing team members to switch from one team to another (no “team switching”), and reducing physical contact between teams. For food processing, strict hygienic conditions and protocols were already in place before the pandemic; however, at least for the slaughtering industry, it seemed that these measures were not sufficient to prevent severe Covid-19 outbreaks across several EU Member States.

Overall, the analysis showed that EU policy making and market management had to balance the protection of the health of EU citizens with the substantial economic and political threats for the EU Common Market resulting from the Covid-19 policy response. This balancing act can be considered an ongoing process in which adjustments to health and protection policies on the one side and economic and support policies on the other have to be made continuously. In particular, we identified threats such as border closures between EU Member States, occurrence of domestic consumption dominance, and the question about regionalism of production in the debate about the CAP and Green Deal as policy areas in which this balancing act takes place. Furthermore, we discuss implications for trading partners and developing countries.

While the threat of border closures was quickly addressed at the beginning of the pandemic, the issue of domestic consumption dominance emerged slowly. This latter issue could be classified as part of the debate about “local culinary food patriotism,” but the free and non-discriminatory flow of goods and whether and how better labelling of the origin of food products might contribute to that flow are topics that re-emerged with greater urgency during the pandemic and whose debate may continue during the period of “new normality.”

The same holds with the discussion about the proper balance between environmental goals and the level and intensity of food production that started with the presentation of the agriculture- and environment-related details of the Green Deal package. Currently, food security for the EU as a whole is not under threat and is not likely to be under threat in the future, but a debate about domestic production versus trade seems to be on the horizon. Given the achievements of multilateral trade agreements, the benefits of international trade, and the dependency of certain countries on functioning international markets, this debate over the merits of international agri-food trade may affect the interests of some EU trading partners and require further observation.

The pandemic revealed that the short-term (2-6 months) monitoring of market impacts is a difficult technical task, at least when the EU aggregate level and Member State level are considered at the same time. The established routines for data collection from Member State statistical offices to the EU statistical office span a longer period of time than 2-6 months. Out of this experience, the question arises, if and how a better short-term monitoring or alert system should be developed that spans the Member State and EU aggregate levels.

While policy reactions during the period March-November 2020 were fully devoted to the management of the Covid-19 crisis, other topics such as sustainability in production and consumption, a resource-efficient economy, and migration were put “on hold.” Together with the above discussed threats, these topics may be addressed when “building back better” after the end of the pandemic. Even then, it is plausible that the goals of short-term economic recovery and continuous Covid-19 containment of Covid-19 will continue to dominate the debate. The re-emergence of high Covid-19 infection rates in many European countries in the fall and winter of 2020/21 showed that the virus response will remain high on the political agenda, not only in the EU Member States but also globally.

1 Introduction¹

The Covid-19 outbreaks that have spread rapidly through Europe since the end of January 2020 have tested the resilience of food supply chains in the European Union (EU). The outbreak led to economic lockdowns and stay-at-home orders, followed by disruptions to the food supply in the form of production uncertainties, interruptions in input and food logistics, (seasonal) labour shortages, changes in food demand, and discussions about agriculture as being part of “critical infrastructure.” However, the impacts were very heterogeneous across food products, regions, and countries, as not only the severity and timing of the outbreak across countries but also the policy reactions regarding timing, length, and implementation strength differed.

The EU economy has been hit hard by the coronavirus pandemic. With a 12.1% decrease in Gross Domestic Product (GDP) in the Euro area² and an 11.7% decrease in the EU compared to the previous quarter, this is the sharpest decline ever observed since the start of common monitoring in 1995.³ Similarly, the Summer 2020 forecast of the European Commission for the whole year 2020 projected that the economies of the Euro area would contract by 8.7% in 2020 and then grow again by 6.1% in 2021; for the EU as a whole, the numbers were 8.3% and 7.7%, respectively. These economic forecasts are worse than what was projected in Spring 2020, and representatives of the Commission noted that the “economic impact of the lockdown is more severe than we initially expected.”⁴

For industrial production in the EU, the first two quarters of 2020 were like a roller-coaster ride: after decreases of 18.2% in April and 10.8% in March, industrial production increased by 11.6% in May and 9.1% in June. Overall, these changes add up to a total reduction in industrial production of 11.1% between February and June.

A similar observation can be made for the services sector: between February and April 2020, service production in the EU dropped by 22.2%. The strongest decline (77.5%) was recorded for hotels and restaurants. When looking at retail volumes across the different broad retail categories, the experience of the product category “food, drink and tobacco products” was different from the experience of non-food products. For food, drink, and tobacco products, sales increased in March, declined in April and again in May, and then increased in June. But by August 2020, total sales of food products in the 27 current Member States of the EU (EU-27) had risen back to around 98.7% of the pre-crisis level.⁵

¹ The authors acknowledge the research support of Marta Menardi, Rukayya Mahe, and Tristan Herrmann, all students at the University of Hohenheim.

² In the Euro area are 19 EU Member States: Belgium, Germany, Ireland, Spain, France, Italy, Luxembourg, the Netherlands, Austria, Portugal, Finland, Greece, Slovenia, Cyprus, Malta, Slovakia, Estonia, Latvia, and Lithuania. EU Member States that do not use the Euro are: Bulgaria, Croatia, Czech Republic, Denmark, Hungary, Poland, Romania, and Sweden.

³ Eurostat (2020). News release euroindicators 125/2020, August 14, 2020, Luxembourg.

⁴ Reference for this paragraph: EC (2020): Summer 2020 economic forecast: An even deeper depression with wider divergences; EC press release IP/20/1269., July 7, 2020, Brussels.

⁵ Eurostat (2020). Statistics explained. Impact of Covid-19 crisis on retail trade. Available at: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Impact_of_Covid-19_crisis_on_retail_trade.

These brief examples at the aggregate EU level show that the impact of the Covid-19 pandemic on the food supply chain and the agri-food sector was severe but not equally felt by all producers and processors, food products, retail outlet types, or service providers related to the processing, transporting, marketing, or serving of food.

It is the objective of this commissioned paper to describe and compare with a unified framework the EU trade and market impacts of the outbreak and to analyse the resulting national and European policy responses. This comparison is done for eight European countries: Belgium, Croatia, France, Germany, Italy, Netherlands, Poland, and Spain.

Following the introduction, in section two, we conceptually describe the impact pathways of the pandemic on food supply chains, and in section three, we analyse the timeline of Covid-19 outbreaks across EU Member States and describe the EU and national policy responses. In section four, information from the eight case studies is presented according to themes so that a comparison across Member States is easily accessible. The themes cover three broad topics: impacts on agri-food markets, impacts along the food chains, and national policy responses. In section five, implications of the national and EU response are critically discussed regarding alignment and coherence and regarding the impact on third countries. Section six concludes.

2 Pathways of the impact of the Covid-19 pandemic on food supply chains

The food systems of many countries, including those of the EU, have been extensively hit by this pandemic, with consequences for domestic and Global Value Chains (GVCs) and the different dimensions of food security: food availability, access, utilisation, and stability (FAO, 2020; WTO, 2020a).⁶⁷ Whereas in countries that were already food-insecure before the pandemic, the food security situation often worsened due to Covid-19⁸, in more developed countries, food security was not the biggest concern, but rather monetary consequences and access problems for producers and consumers.

The food system is susceptible to different types of shocks—some weather-related, others economic or political— which often affect every segment of food supply chains. The mechanism by which a shock affects different segments of the food value chain is the transmission pathways. Conceptually, the transmission mechanism of the food system shocks is through agri-food supply and demand channels from “farm to fork.”

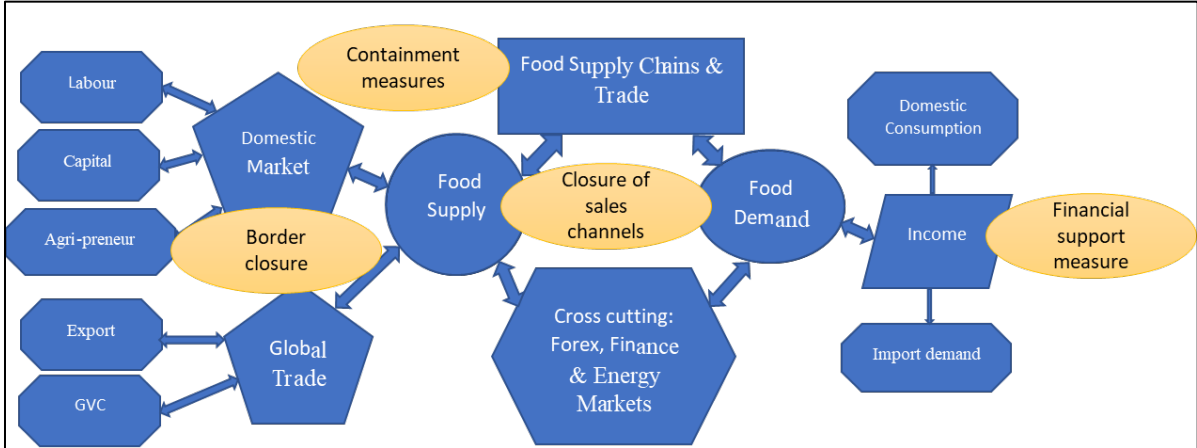
⁶ Food Agricultural Organisation (FAO), (2020). Agri-food markets and trade in the time of COVID-19. Rome. <https://doi.org/10.4060/ca8446en> (Accessed May 22, 2020).

⁷ World Trade Organisation (WTO) (2020a). COVID-19 and world trade. Available at https://www.wto.org/english/tratop_e/covid19_e/covid19_e.htm (Accessed June 25, 2020).

⁸ Baquedano, F., Christensen, C., Ajewole, K. and J. Beckmann (2020). International Food Security Assessment 2020-30, GFA-31, USDA Economic Research Service. August.

Reardon et al. (2020)⁹, GIZ (2020)¹⁰, and Glauber et al. (2020)¹¹ identify the macroeconomic transmission channels from the Covid-19 pandemic to the food system, while Schmidhuber et al. (2020)¹² extensively examine the pass-through from the conceptual perspective of food supply and demand, with extra layers of impact from exchange rates and energy and credit markets. Building on the Schmidhuber et al. framework, we illustrate the pathways of transmission of the impact of the pandemic on the food system in Figure 1, adding in the policy measures (in yellow) that were taken as a response to Covid-19.

Figure 1: The Covid-19 transmission pathways and policy entry points within a food system



Note: Yellow: policy measures; Blue: elements in food system

Source: Based on Schmidhuber et al. (2020).

The Covid-19 pandemic and the political response to it constitute an external shock to the food system, in which the transmission channel runs through the agri-food supply and encompasses marketing, trade, and demand. The agri-food supply transmission mechanism of the pandemic (an external shock) occurs through the factors of production including intermediate inputs and other channels such as exchange rates and energy and credit markets, as conceptualised in Schmidhuber et al. (2020) and GIZ (2020). The intensity at which countries use agricultural factors of production differ; while the food system in European and other developed countries is largely capital-intensive, that of the developing countries is labour-intensive (Reardon et al., 2020; Glauber et al., 2020). The factor intensity has been affected by the Covid-19 containment measures, though at different degrees across countries, which affects the cost and availability of factors.

⁹ Reardon, Thomas; Bellemare, Marc F. and Zilberman, David (2020). How COVID-19 may disrupt food supply chains in developing countries. IFPRI Blog: Guest Post. <https://www.ifpri.org/publication/how-covid-19-may-disrupt-food-supply-chains-developing-countries> (Assessed June 15, 2020).

¹⁰ Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH (2020). The Effects of COVID-19 on agricultural trade and food security. Sector Projects: Agricultural Policy and Food Policy and Agricultural Trade, Agribusiness, Agricultural Finance.

¹¹ Glauber, Joseph; Laborde, David; Martin, Will and Rob, Vos. (2020). COVID-19: trade restrictions are the worst possible response to safeguard food security. IFPRI Blog: Issue Post. <https://www.ifpri.org/blog/covid-19-trade-restrictions-are-worst-possible-response-safeguard-food-security>

¹² Schmidhuber, Josef; Pound, Jonathan; Qiao, Bing (2020). COVID-19: Channels of transmission to food and agriculture. Rome, FAO. <https://doi.org/10.4060/ca8430en>

One pathway for the transmission of the Covid-19 impact on the food system is through labour. The pandemic affects labour supply and its intensity in European and other countries, which mostly causes labour shortages due to the health consequences of the pandemic. In addition, the pandemic is having multiplier effects on labour productivity—particularly for the unskilled and seasonal/migrant workers—and labour-intensive food value chains. Labour availability in all segments of the food system is plummeting because the pandemic has had a *direct labour impact* by spreading to some workers, thereby affecting their health and production capability. For instance, in Germany and Italy, some workers in abattoirs have been infected with Covid-19. These illnesses in turn led to an *indirect labour impact*—the temporary closure of the firms with infected workers, which had an adverse effect on commodity supply. Border closures and lockdowns also have affected the availability of migrant workers in the EU, especially in labour-intensive food value chains such as meat processing and fruit and vegetables.

Another transmission mechanism is through production capital, which includes intermediate and fixed capital. Examples of intermediate inputs used in the food system include seeds, feeds, fertilisers, energy, refrigerators, silos, and cold chain equipment. The pandemic may have caused negative shocks to the supply of these intermediate inputs which in turn affects food supply, as production becomes more uncertain. However, the magnitude of the effect on supply depends on the intensity of the intermediate input in the food supply chains and across countries. Given that the food systems of the EU and other developed countries are integrated into GVCs, pandemic-induced disruptions in intermediate input supply will affect GVC-integrated countries more than others. For instance, this disruption affects the supply of cocoa, honey, oilseeds, and palm oil to EU firms. Schmidhuber et al. (2020) estimate that the share of intermediate inputs in the total output of the food system is 80% for developed countries and 10% for developing countries. In addition, fixed capital inputs such as repairs needed in factories or farms and spare parts for machinery could be affected by the pandemic, which might affect food production in the medium- and long-term if the pandemic persists.

Furthermore, the pandemic has consequences on countries' currency exchanges depending on whether the countries are net importers or exporters of food and other commodities. Given that the pandemic is negatively affecting global commodity prices such as crude oil, copper, platinum, palladium, and even some agricultural products (Schmidhuber et al, 2020), commodity-endowed countries have seen income reduction and exchange-rate depreciation. However, currencies such as the U.S. dollar and the euro appreciated during this period. The exchange-rate shifts affect the trade competitiveness of countries, including in the agri-food sector. Thus, the pandemic will affect countries differently based on whether they are: commodity exporters and net food exporters (negative effect), commodity exporters and net food importers (mixed effect), commodity importers and net food exporters (mixed effect), and commodity importers and food importers (positive effect) (Glauber et al. 2020; Schmidhuber et al, 2020; Reardon et al., 2020).

Moreover, Covid-19 has exposed the food supply to disruptions of trade and GVCs. Many net food exporters depend on trade for foreign earnings and income. Disruptions to international food supply chains and trade logistics through border closures thus affect the foreign reserves and national incomes of countries participating as exporters in international food trade. In

addition, since the food exports of developing countries are mostly labour-intensive, and even some food exports of developed countries—such as fruit and vegetables—are labour-intensive, Covid-19's shocks to labour supply have the potential to affect exports and threaten GVCs. However, the net food importers might gain from the lower prices due to the reduction in the international commodity prices, which will enhance their food accessibility. This gain might not be realized, however, as food processing plants and warehouses shut down, international food supply chains and logistics break due to pandemic containment measures that affect food imports.

Beyond the agri-food supply pathways, there are effects on food demand, which have consequences on domestic and import food demand through income reduction. Covid-19 has affected countries' incomes as estimated by the IMF (2020).¹³ Economic contractions are likely to have an adverse effect on people's purchasing power and access to food in Europe and elsewhere (Koutsokosta and Gauret, 2020¹⁴). Moreover, the different containment measures across countries will have consequences on domestic and imported food demand (WTO, 2020b),¹⁵ particularly for the low-income earners and net food-importing countries. Hence, economic slowdowns at the macroeconomic level will affect food consumption (Thomsen, 2020¹⁶). In response, countries—particularly developed countries—have tried to boost domestic demand through expansionary fiscal and monetary policies.

Therefore, in the agri-food sector, the main channels of transmission of the political response to the Covid-19 pandemic are along the axes of agri-food supply and demand. Because the pandemic affects people's income, food affordability and food access are challenged even if prices are relatively stable (GIZ, 2020). The disruption of the food system may also affect food safety, especially for perishable foods, as logistics and cross-border trade may be slowed.

3 Timeline of national Covid-19 outbreaks and political crisis management

3.1 Timeline of outbreaks across selected EU Member States

As the timeline of the selected EU case study countries shows (Table 1), Covid-19 arrived in Europe at the end of January 2020. The first case to be confirmed in the EU was in France, followed quickly by initial cases detected in Germany and Spain. Initially, Covid-19 was mostly

¹³ International Monetary Fund (IMF) (2020). World Economic Outlook. Washington D.C., United States of America.

¹⁴ Koutsokosta, Efi and Gauret, Fanny (2020). How has the EU responded to the economic crisis resulting from the coronavirus pandemic? <https://www.euronews.com/2020/04/01/how-has-the-eu-responded-to-the-economic-crisis-resulting-from-the-coronavirus-pandemic> (Assessed June 10, 2020).

¹⁵ World Trade Organisation (WTO) (2020b). Export prohibitions and restrictions: information note. Geneva: WTO. https://www.wto.org/english/tratop_e/covid19_e/export_prohibitions_report_e.pdf (Accessed on June 15th, 2020).

¹⁶ Thomsen, Poul M. (2020). Europe's COVID-19 Crisis and the Fund's Response. <https://blogs.imf.org/2020/03/30/europes-covid-19-crisis-and-the-funds-response/> (Accessed May 29, 2020).

viewed as a threat limited to human health for which the EU considered itself “well prepared,”¹⁷ but it soon became evident with the severe outbreaks in Italy, France, and Spain at the beginning of March that the pandemic threatened not just public health but broadly economic activities and the economies as a whole of the Member States.

Shortly afterwards, schools started to close; hotels, bars, and restaurants were ordered to close; and retail shops apart from supermarkets, other food outlets, pharmacies, and banks closed. Public events were cancelled, and private gatherings reduced to a small number of people, mostly from their own households. Some countries also imposed restrictions on the movement of people between EU Member States and even within countries, and as of 17 March, the Member States imposed temporary restrictions on non-essential travel from third countries into the EU.¹⁸ In Italy and Spain, two Member States severely hit by the virus at the beginning of the pandemic, all production deemed as “non-essential” was stopped. As Table 1 shows, most preventative measures were taken during mid March. Most of the measures lasted for about 4-6 weeks, and in May, several countries started to develop strategies to “re-open” again or at least reduce the measures in scope and severity. Since then, hygiene and safety protocols have been developed so that schools, businesses, restaurants, and the tourism sector could operate again under the new “corona-reality.”

Regarding the intra-European border closure for the transport of goods, Poland was one of the first countries to announce such a closure, followed by France, Italy, and other countries¹⁹. This border closure brought about a very swift reaction from the European Commission, as this presented a direct threat to the functioning of the internal common market and could have led to severe market disruptions. Already on March 16, the Commission published guidelines²⁰ to EU Member States on health-related border management measures to avoid border closures, and by March 23, a “green lanes” initiative was underway to ensure a continuous flow of goods across the EU.²¹ Only in October 2020, a traffic light system was established to coordinate further possible border closures between Member States. This system is based on more objective criteria such as the number of positive infections and will define areas of high risk across the EU accordingly.

¹⁷ Euractiv (2020). EU ‘well prepared’ to deal with coronavirus, says health expert. January 24; <https://www.euractiv.com/section/health-consumers/news/eu-well-prepared-to-deal-with-coronavirus-says-health-expert/>

¹⁸ EU Commission (2020). Covid-19: Temporary restriction on non-essential travel to the EU. COM(2020) 115, Brussels. See also and https://ec.europa.eu/info/live-work-travel-eu/health/coronavirus-response/travel-and-transportation-during-coronavirus-pandemic_en

¹⁹ <https://cms.law/en/fra/news-information/covid-19-restrictions-on-the-free-movement-of-goods>

²⁰ EU (2020). Guidelines for border management measures to protect health and ensure the availability of goods and essential services. C(2020) 1753 final. Brussels.

²¹ EU (2020). Covid-19 response – Transport related matters; Presentation by Matthew Baldwin, EU Commission.

Table 1 Timeline of outbreak related events (sorted by first confirmed Covid-19 case)

	First confirmed outbreak	Establishment national crisis management committee	Closure of schools	Closure of restaurants, hotels, shops	Contact restrictions imposed	Border closure for goods transport ^H	Travel ban	Closure of factories/ industries
France	24.1.20	26.1.20	12.3.20	17.3.20	17.3.20	16.3.20	17.3.20	n.a.
Germany	28.1.20	27.2.20	16.3.20	22.3.20	22.3.20	16.3.20-26.3.20	n.a.	n.a.
Spain^A	31.1.20 ^G	4.2.20	14.3.20	14.3.-21.6.	14.3.-21.6.	17.3.20-26.3.20	n.a.	14.3.-21.6.
Italy	23.2.20	1.3.20	4.3.20	11.3.20	9.3.20	22.3.20	9.3.20	22.3.20
Croatia	25.2.20	24.2.20	13.3.20 ^B	n.a.	19.3.20	n.a.	19.3.20 ^C	n.a.
Netherlands	27.2.20	13.3.20	15.3.20	15.3.20	12.3.20 ^D	n.a.	18.3.20	n.a.
Belgium	29.2.20	12.3.20	14.3.20	14.3.20 ^E	14.3.20	20.3.20-30.3.20	18.3.20	n.a.
Poland	4.3.20	6.3.20	11.3.20	11.3.20	24.3.20	15.3.20-24.3.20	24.3.20 ^F	n.a.

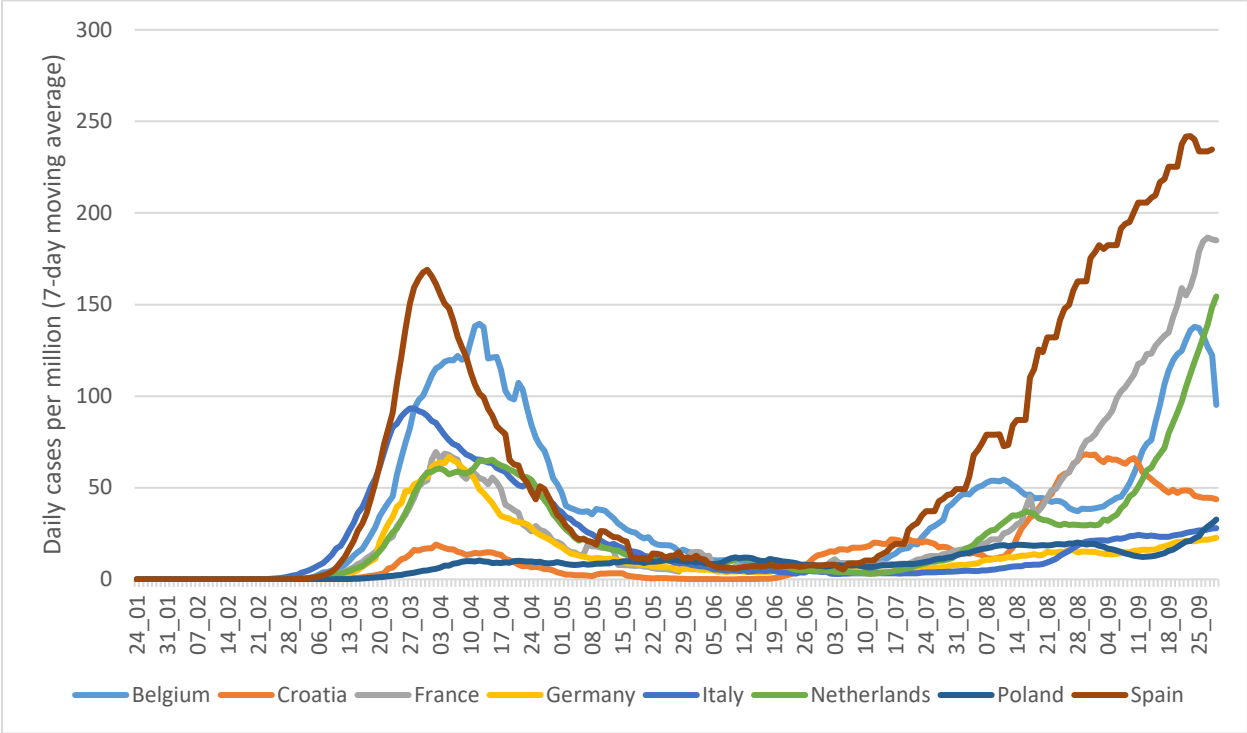
Notes:

- A 14.3.20 to 21.6.20 ‘Alarm state’; partial opening before end of alarm state possible dependent on the sanitary conditions of the region.
- B: for two weeks
- C: temporary ban on crossing border crossings
- D: In Noord-Brabant, the province with the highest number of confirmed Covid-19 cases), people with Covid-19 symptoms are urged to stay at home already on 6.3.2020
- E: only pharmacies, newspaper agents, gas stations, banks, postal offices, pet shops and supermarkets stay open – hairdressers also close on 24.03.2020
- F: Only Polish citizens can come back with 2-week-long quarantine.
- G: First case was a German tourist hosted at La Gomera in the Canary Islands. At the beginning of March, transmissions at the community level (e.g., local cases) spread up through the territory and the outbreak skyrocketed.
- H: Only initial reaction reported. In most cases only temporary and soon several different obligations were attached to it (e.g. hygiene and social distancing rules of the drivers). Information based on MS notification of the temporary reintroduction of border control at internal borders pursuant to Art. 25 and 28 et seq. of the Schengen Border Code.

Source: Own compilation.

Figure 2 displays the new daily infections per 1 million inhabitants over the period January to September 2020. In this figure, one can see that most EU Member States followed a similar pattern, with a first wave of high rates of new daily infections starting in March which then decreased after containment measures were put in place. Over the approximate time span from June to August, the rate of daily infection was rather low but then started to rise again at the latest in September. In Spain, this increase started in August.

Figure 2 New Daily Covid-19 infections per 1 million inhabitants (January – September 2020)



Source: Own presentation based on “Our World in Data COVID-19 dataset” (<https://ourworldindata.org/covid-cases>).

3.2 Political response to the Covid-19 pandemic

The infection pattern shown in the previous section called for a political response. At the EU level, this political response can be roughly separated into three phases:

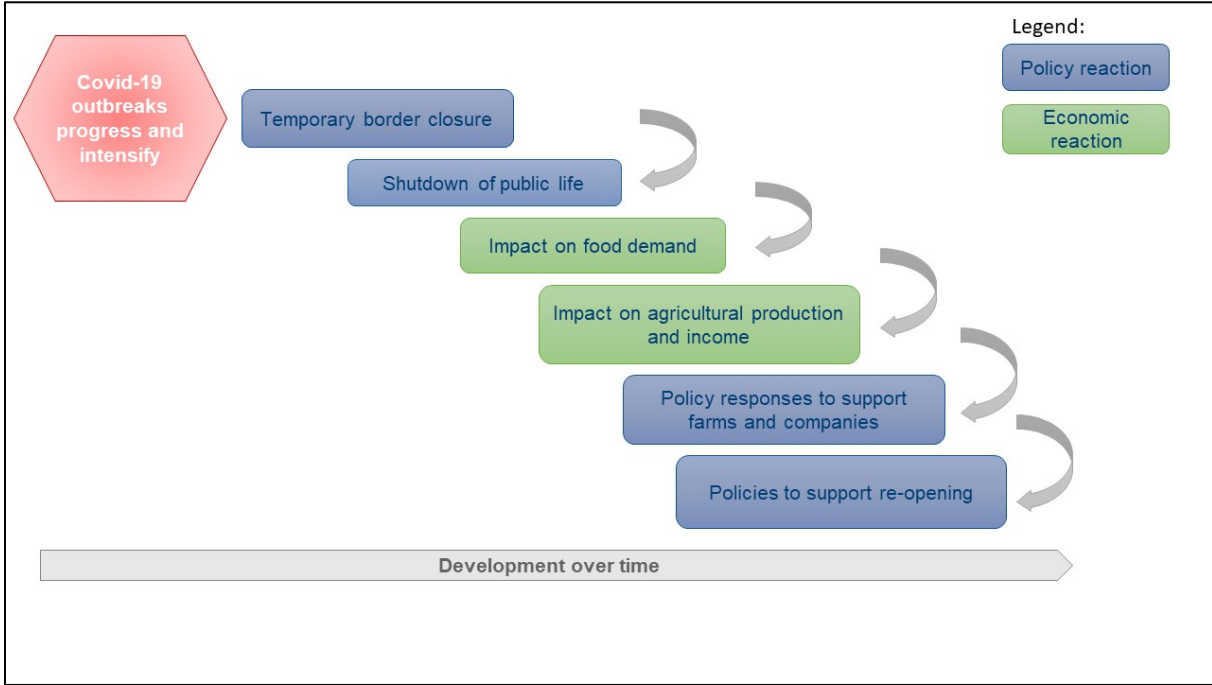
- *The first phase* focused on national ad hoc responses, such as border closures and economic lockdowns. After a while, the EU searched increasingly for a coordination mechanism across Member States, such as the European list for products requiring export authorization.
- *The second phase* can be understood as a return to Europe-wide answers, such as supporting the internal market by issuing guidelines to abolish border controls. This phase prepared the national attempts to end the national lockdowns.
- *The third phase* is the recent phase of a “new normality,” allowing for economic activities again by monitoring and reacting flexibly with protective and containing measures again (“hammer and dance”).

Across these phases, different policy measures in different policy areas were used both, at the EU and Member State level. The latter sometimes implementing EU regulations, but more often defining own national reactions. They are described in detail in sections 3.3 to 3.5.

Regarding the chronology of political reactions, first ad hoc, mostly national approaches were used during the first infection wave in March 2020. These were hardly coordinated at the EU level: all Member States implemented lockdowns, at different times and with different stringencies answering to national and local infection patterns—e.g., earlier, longer, and stricter in Italy, Spain, and Belgium than in the Netherlands and Germany.

In Figure 3, a stylized representation of the chain of policy responses and their related impacts on EU agri-food markets is shown. These nationally divergent lockdowns affected national agricultural sectors in different manners: starting from problems with local distribution over the closure of the hotel, restaurant, and catering (HORECA) sector and continuing through shifts in consumption patterns. As a result, agricultural production and income and food demand were all affected. In all countries, especially in the beginning of spring 2020, a change in the consumption basket towards more staple products could be observed. Due to border closures, many countries also suffered from less mobility for seasonal workers, which led to supply drops and price increases for some products—e.g., some vegetables in several countries.

Figure 3 Stylised representation of chain of policy responses and impacts on EU agri-food markets



Source: Own presentation.

Depending on the national relevance of both activities restricted in order to contain the pandemic (such as tourism or sports events) and products affected (such as vegetables), the overall economic impacts differed across countries. Similarly, certain food supply chains were directly affected, as Covid-19 infections appeared within food processing plants and on farms,

again with different severity and timing across the Member States. These individual cases incurred individual economic burdens and reactions.

At the same time (second phase of policy response), both the EU and its Member States reacted increasingly to negative side effects - for instance, by starting job platforms to recruit seasonal farmers or by creating “green lanes” for easier border crossings for agricultural products. Towards the end of March 2020, European coordination improved, and the first support measures to compensate for the negative effects of the containment approaches were initiated. A major objective of this more coordinated EU response was to adjust the diverging national approaches (e.g., on a joint timing for border closures and even more so, on the lifting of the temporary national border closures). It was particularly important to keep the EU Common Market free of internal borders, as this is the leading idea of the EU’s self-conception.

In some countries already in April 2020 and at the latest in May, national and EU policies toward the pandemic entered a third phase, turning toward the question of how to “re-open” closed businesses, hotels, schools, and so on. Jointly with this issue, the debate focused on how to organize the summer holiday season and its accompanying cross-country travel. This third phase has been labelled as “new normality” —i.e., the trial to open what was still closed (e.g., bars, discotheque, cultural and sports events), at least in some Member States, and regain normal work and school life after the summer break. A related economic incentive was to recoup some of the losses resulting from the lockdowns and travel restrictions. New hygiene rules, minimum distance rules, etc. were defined, and guidelines for different phases of epidemiological dynamics and related protection measures were put in place. This phase of “dancing,” a term within the approach called by epidemiologists as “hammer and dance,” is challenging, as one has to monitor epidemiological developments very closely and ensure that a potentially exponential increase in infections is detected early enough to allow for an adequate public health response. For the agri-food sector, this meant that the HORECA sector returned to a certain degree of normality, with a re-opening of most restaurants, business, and schools, but a move back to the growth path of pre-pandemic times is still far away.

With the end of summer 2020, the containment measures, hygienic rules, and minimum distancing are still in place, but infection rates are rising again (Figure 2). Hence a tightening of social distancing rules or even the imposition of partial lockdowns may eventually become a necessity in order to curve infection rates downward. Such actions would again lead to economic impacts on agri-food markets.

3.3 Timetable of policy responses at the EU level

Europe’s initial political reactions to Covid-19 took place in January 2020 when the alert notification on the Early Warning and Response System (EWRS) – relevant for all type of crises – was started. Only two weeks later, the EU crisis mechanisms were also invoked. The EU’s reaction to Covid-19 consists of a large set of initiatives taken in very different policy areas. The chronology of policy measures reflects this diversity.

Whereas most of the measures applied affect the economy in a broad way, some measures were defined specifically for agriculture and fisheries or at least have a specific impact on those sectors. Often, these agriculture- and fisheries-specific measures were defined as exceptions to general rules, allowing greater activity for agriculture as a “critical” or “essential” sector (table 2).

Table 2: Timetable of European milestones on Covid-19 responses (selection, focus on agriculture marked in grey)

When?	What area ?	Who?	What measures?
9 January	Crisis management	Commission	Alert notification on the Early Warning and Response System (EWRS)
24 January	First European Covid-19 case detected in France		
28 January	Crisis management	<ul style="list-style-type: none"> • Croatian Presidency • France and Commission 	<ul style="list-style-type: none"> • Integrated Political Crisis Response (IPCR) first phase • EU Civil Protection Mechanism
28 February	Health/Commercial Policy	Commission	First joint procurement of Personal Protective Equipment
2 March	Crisis management	Croatian Presidency	IPCR last level
13 March	Budget	Trilogue decision	Coronavirus Response Investment Initiative (CRII) package of 37 billion euro
15 March	Trade Movements/Travel	Commission	<ul style="list-style-type: none"> • Timely restricted export-limiting authorisation to medical products • Recommendation to restrict travel to the EU
16 March	<ul style="list-style-type: none"> • Budget • Trade 	<ul style="list-style-type: none"> • Eurogroup • Commission 	<ul style="list-style-type: none"> • Unlimited support promised • Guidelines for border management
18 March	Transport/Trade	Council, Ministers for traffic	Coordination of transport measures to avoid disruptions
19 March	Health	Commission	First strategic reserve of health products
23 March	Internal Market	Commission	Guidelines for green lanes
25 March	Food	Agriculture and Fisheries Ministers	Budget assistance
30 March	Food	Commission	Guidelines on free movement of critical workers
14 April	Fisheries	Council	Assistance to fishermen
15 April	Movement	Council + Commission	Joint European Roadmap to lift containment measures
22 April	<ul style="list-style-type: none"> • Food • Budget 	Council	<ul style="list-style-type: none"> • Support for fishermen • Flexibility on Cohesion funds
29 April	Transport/Trade	Commission proposal	Support measures to ensure trade; e.g., less port fees, drivers’ rest flexibility
15 May	Travel	Council	Repatiation of 600 000 people

When?	What area ?	Who?	What measures?
20 May	<ul style="list-style-type: none"> Budget Transport 	Council	<ul style="list-style-type: none"> Assistance of 3 billion euro on neighbouring partners Temporary flex. on port licences
5 June	Transport/movement	Council	National border controls lifted by 15 June
24 June	Food	Council	Increased agricultural emergency assistance
30 June	Travel	Council	Travel restrictions for third countries lifted
10 July	Budget	Council	MFF proposal and recovery plan
14 July	Health	Council	Simplifying rules for vaccine development
17-21 July	All	Council	Budget and recovery
30 July/7August	Traffic/Trade	Council	Lifting remaining travel restrictions
22 September	Health	Commission	Four new Member States join the rescEU medical reserve
25 September	Budget/Employment	Council	EUR 87.4 billion in financial support for member states under SURE
13 October	Traffic/Trade	Council	A common approach on COVID-19 travel measures
22 October	Travel	Council	Council lifts some travel restrictions with third countries
19 October	Health	Commission	EU interoperability gateway goes live, first contact tracing and warning apps linked to the system
11 November	Health	Commission	Fourth contract with pharmaceutical companies to ensure access to a potential vaccine
11 November	Health	Commission	Start to build a Health Union
12 November	Health/Development	Commission	Support access of low- and middle-income countries to vaccination

Source: Own presentation based on <https://www.consilium.europa.eu/en/policies/coronavirus/timeline/>.

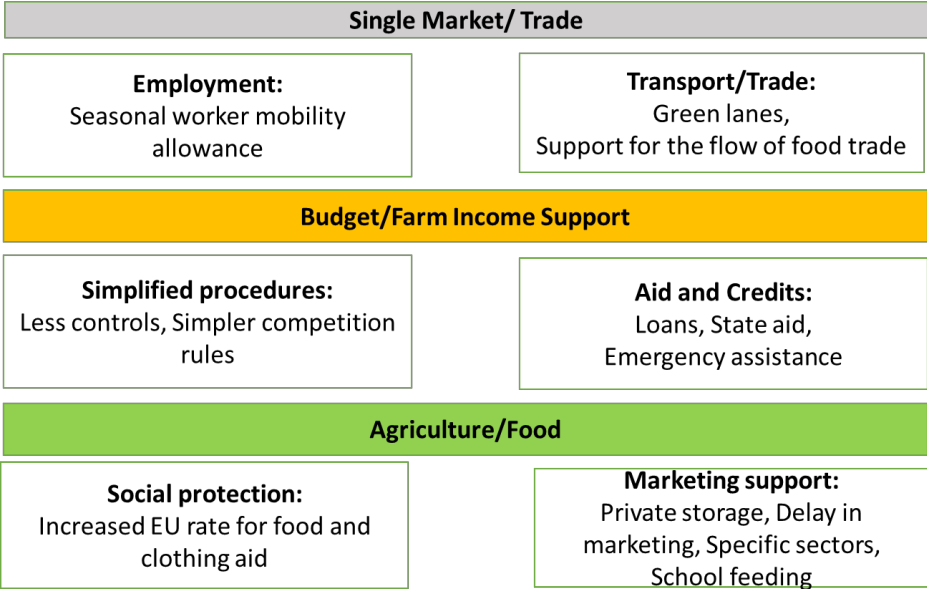
3.4 Political reactions at EU level

Different policy frames are being used to address the Covid-19 pandemic. They follow a range of often different competency patterns that influence the enforcing power of related measures and the involved actors.²² Whereas EU trade policy is characterized as a strong EU

²² Bettina Rudloff, Challenges for a coherent approach to food system resilience within the EU in: MigResHub (Migration Policy Centre, RSCAS, European University Institute), Commentary No. 2, November 2020, available at <https://migrationpolicycentre.eu/docs/migreshub/MigResHub-commentary-No2.pdf>.

policy and is immediately relevant in all 27 Member States, other crisis response tools depend on voluntary enforcement by individual Member States, which can hinder a fast and direct reaction. Common across all sectors are policy instruments and measures that focus on all types of crisis. They are described in section 3.4.1. Besides these general basic measures, other policy areas affect agriculture (Fig. 4). They are discussed in sections 3.4.2 to 3.4.5.

Figure 4 Overview on different policy areas affecting agriculture



Source: Own compilation.

3.4.1 Basis: Crisis Alert, Management and Civil protection

The general and initial basis at EU level of response for all type of crises (such as terrorism and natural disasters) builds a set of crisis management tools which are not explicitly linked to agriculture and food.

- The *Alert Notification on the Early Warning and Response System (EWRS)* was started by the Commission in response to the emerging Covid-19 pandemic in the beginning of January 2020. This platform monitors and coordinates information on cross-border health threats and supports the exchange of respective publications and data.
- The usual *EU civil protection mechanism* to coordinate civil protection is initiated by a Member State and coordinated by the Commission to provide technical support. It was called upon by France on 28 January, at that time mainly to address the repatriation of European citizens in Wuhan, China.
- At the Council level, the *Integrated Political Crisis Response (IPCR)* is based on the solidarity clause of Article 222 of the Treaty on the Functioning of the European Union (TFEU) and only can be evoked by the Council. There exist three levels of increasing efforts. The starting level was invoked by the Croatian Presidency on the same date as

the civil protection mechanism. On 2 March, the final step of full activation took place, leading to high-level political meetings.

- The *common strategic reserve system* (rescEU capacity) was extended to additional medical equipment in March 2020. A first delivery of some 90,000 protective masks arrived in Italy on 27 April. On 2 June, the Commission proposed to reinforce rescEU with 2 billion euro over 2021-27, in order to strengthen the EU's response capabilities in cases of cross-border emergencies in general. With four new Members in September, a total of six EU Member States support the rescEU medical reserve (Denmark, Greece, Hungary, and Sweden have joined Germany and Romania).
- *Critical Infrastructures* (CIs) are defined as goods and services essential for a vital society. At the EU level, so far only the areas of energy and transport are defined as CIs. The areas of health and food are not defined as CIs at the EU level, although they are defined as such in some national catalogues of CIs: in Germany, for instance, food services are defined as one of nine CIs. There is ongoing debate about whether to extend European CIs both by addressing additional sectors such as food and by developing a more European concept of the CIs.

3.4.2 Policy area “Single Market”

Although free movement of goods and persons is at the heart of the EU's common area, the initial phase of the EU's responses to the pandemic was characterized by the opposite: for instance, Germany and France instituted intra-European export embargos on personal protection equipment (PPE). This was a historically unique measure in contradiction to European solidarity. Towards third countries, nearly all EU Member States restricted respective exports, based on a new requirement of individual “export authorizations.” On food, only Romania established trade-restricting measures. More relevant for food were border closures restricting the movement of people in general and workers in particular. This led to some limitations for harvesting - e.g., vegetable harvesting in Germany, Italy, and Spain. The EU Commission reacted and supported trade and production by issuing guidelines for green lanes at the border to minimize transport times during the period of border closures. Farmworkers could finally move, after having been defined as “critical” workers (Table 2). Later, the Commission supported a joint and coordinated elimination of border closures up to the recent joint traffic light system to coordinate risk areas based on infection rates.

3.4.3 Policy area “Trade”

Several very early declarations at the multilateral level, also supported by the EU, focused on the importance of avoiding trade protectionism. Most of these declarations expressed support for open trade; however, they often mentioned the specific need for open trade in food products (G20²³, UNCTAD²⁴). Some declarations explicitly focused on agriculture, such as a proposal issued by the EU and like-minded WTO countries in late May 2020.²⁵

²³ <https://de.ambafrance.org/COVID-19-G20-Leaders-Statement>

²⁴ https://unctad.org/en/PublicationsLibrary/presspb2020d3_en.pdf

²⁵ https://www.wto.org/english/tratop_e/covid19_e/proposals_e.htm

Despite these efforts, a lot of newly notified trade measures appeared: in total, more than 300 Covid-19 related trade measures were established during the period March-November 2020. Most of these are protective measures that restrict trade, and most are linked to trade in goods (241), followed by those for services (93) and intellectual property rights (58).²⁶ The bulk of these measures is related to medical products, including protection materials; only 25 measures are linked to food – much less than what appeared in response to the so called agricultural price crisis of 2008. The EU and its Member States established around 30 measures, mainly limits on exports of medical goods. Only two measures were notified on agriculture: Romania established an export ban on several food products including cereals, while Poland announced a list of emergency products including food.

3.4.4 Policy area “Budget”

As ad hoc budgetary reactions, two general packages were adopted that had applications to agriculture:

- the *Coronavirus Response Investment Initiative (CRII)*, with a new 37 billion Euro. The bulk is foreseen for health-related investments.
- The *subsequent CRII +* focusses on administrative rules such as more flexibility mechanisms to use budgets across different sectors and the simplification of rules— for instance, flexibility for rural development programs I increased.

On long-term economic consequences for the upcoming budget 2021-27, a final conclusion was taken at the end of July 2020. The final decision with 1,074.3 billion euro lies below the initial proposals. In addition, the recovery programme “The Next Generation” was set at 750 million euros.²⁷ For agriculture, the share is set around one third, or 343 million euros.²⁸

3.4.5 Policy area “Agriculture”

Within the overall emergency budgetary framework, some specific measures were decided for agriculture, which can be amended by measures at the national level (see section 3.5).²⁹

In general, the following supportive approaches were applied to financial and credit supports, marketing aids, facilitation in administration, and social relief:

General *budget support* at different beneficiary levels:

- At the farmer’s level, immediate relief covered by the 2nd Pillar to those most affected by the crisis is authorized: EU countries can offer lump sums of up to 7,000 euro per farmer and 50,000 euro per small and medium enterprise (SME).
- The cash flow of farmers is supported by an advancement of the first and second pillar payments: Depending on whether the Member State agrees to speed up the

²⁶ https://www.wto.org/english/tratop_e/covid19_e/trade_related_goods_measure_e.htm

²⁷ <https://www.consilium.europa.eu/de/policies/the-eu-budget/long-term-eu-budget-2021-2027/>

²⁸ <http://capreform.eu/when-the-cap-budget-pendulum-finally-stopped-swinging/>

²⁹ https://ec.europa.eu/info/food-farming-fisheries/farming/coronavirus-response_en; and WTO (2020): Ad hoc report on Covid-19 measures taken by the EU (including by its Member States) in the agricultural sector, prepared for the special meeting of the regular committee on agriculture, G/AG/GEN/159, 4 June 2020 and subsequent addendums.

process, farmers may start to receive this year's payments in mid-October. For the first pillar payments, up to 70% instead of 50% can be paid in advance, and for certain second Pillar payments, 85% instead of 75% may be paid up-front.

- Economically poor citizens and consumers are generally supported by the Fund for European Aid to the Most Deprived (FEAD), which delivers food and clothing. Now this aid is extended to deliver PPE as well, and the usual requirement of cofinancing by the Member States has been abolished.

Further on, the following measures were put in place:

- *Loan facilitation (state aid)* via an additional option of 200,000 euro to cover operational costs is offered, along with additional state aid of up to 800,000 euro per processing company and 120,000 euro per farm.
- *Marketing and market stabilization: Private storage aid* and several forms of support for delayed *marketing* (including school schemes) is offered, especially for those products mainly affected by price drops due to lockdowns (e.g., dairy, meat, wine, fruit, vegetables). Specific stabilization programmes are established for products losing market opportunities due to shutdowns of large sports and cultural events (e.g., potatoes, cut flowers).
- *Simplification of administrative* and bureaucratic procedures is targeted by fewer on-spot controls and extended payment deadlines for applications.

3.5 Policy reactions at Member State level

Regarding the national policy measures that were implemented as a response to the Covid-19 crisis, we have to distinguish between general measures implemented by the national governments for all economic sectors affected and those that were specifically designed for parts of the agri-food sector. Only the latter type is listed here. In addition, national or regional measures should be separated from programs put into place by the EU (see footnote 29). In Table 3, national measures based on the EU response are noted in italics.

Across all observed case studies, most Member States initiated liquidity measures for farms and supported the entrance and employment of seasonal workers. The Covid-19 support options provided by the European Commission—for example, the advancement of direct payments—were not adopted by all the Member States analysed in the case studies.

Table 3 Sectors that were supported through the government

	Horizontal	Sectoral
Spain		<ul style="list-style-type: none"> • <i>Fruit & vegetables</i> • <i>Wine</i> • <i>Sheep & goat</i>
Germany	<ul style="list-style-type: none"> • Seasonal worker recruitment • Financial liquidity of farms • Protection against land lease dismissal • Flexibility in daily work restrictions 	<i>Carp fishing</i>
France	Seasonal workers	
Italy	<ul style="list-style-type: none"> • Subsidies for seasonal and self-employed workers • Financial liquidity of farms • Expansion of guarantees for agricultural credit 	<ul style="list-style-type: none"> • Fishery and aquaculture • Floriculture • Livestock • Wine • Agro-tourism
Croatia	<ul style="list-style-type: none"> • <i>Advancement of direct payments</i> • Financial liquidity of farms for SMEs • Worker protection in agri-food sector 	<ul style="list-style-type: none"> • Small dairies: market withdrawal and purchase and free distribution • Fattening cattle, pigs, and lambs for slaughter: temporary emergency aid • <i>Fishing sector</i> • Wood processing • Wine (secured credits)
Belgium (Flanders)	<ul style="list-style-type: none"> • Financial liquidity of farms 	<ul style="list-style-type: none"> • <i>Dairy: extension of milk collection interval</i> • <i>Support for potato growers</i> • <i>Support for floriculturalists</i> • <i>Fishing sector</i>
Netherlands	<ul style="list-style-type: none"> • Expansion of guarantees for agricultural credit for SMEs • 80% pre-payment of direct support by July 2020 	<ul style="list-style-type: none"> • <i>Horticulture</i> • <i>Floriculture</i> • <i>Potatoes</i>
Poland	<ul style="list-style-type: none"> • Re-establishing of export (demand & supply matching) 	<ul style="list-style-type: none"> • Beef cattle (beef) • Dairy cows • Pigs (piglets/sows) • Sheep and goat • Poultry for slaughter (chicken, geese, and turkeys) • Egg-laying poultry (chicken eggs) • Ornamental plants (under heated covers)

Note: *italic*: based on EU regulation; normal letters: national regulation

Source: Own compilation.

3.5.1 Belgium

The measures described in this section have been implemented by the Department of Agriculture and Fisheries in Flanders. They may not apply in the same way to the Wallonian agri-food sector, because policy responsibility for the agricultural sector is assigned to the regions (Flanders and Wallonia).

Entrepreneurs in the agricultural and horticultural sector can request a credit guarantee from the Flemish Agricultural Investment Fund (VLIF) to smoothen their access to loans for covering their operational costs. The maximum gross subsidy equivalent is 20,000 euros, and this amount cannot exceed documented, annual operating costs (Departement Landbouw en Visserij, 2020a).

For the dairy sector, the obligation to collect AA milk within two days has been extended to a maximum of three days.

Since May 4, the European Commission has granted a temporary derogation of the general competition law based on article 222 of the common market organization. This derogation applies to the dairy, potato, and floricultural sectors. The types of measures for which voluntary sector agreements are allowed on the basis of this derogation are: temporary planning of production (all three sectors); joint promotion activities (potatoes and floriculture only); removing product from the market and free dispensation (potatoes and floriculture only); transformation and processing (potatoes only); and storage (potatoes only).³⁰

In addition, the European market measure of private storage could be enacted for specific dairy products (skimmed milk powder, butter, and cheese) and meat products (beef, goat meat, and sheep meat). Requests for such private storage could be made to the Department of Agriculture and Fisheries until June 30. This measure was intended to restore the equilibrium between demand and supply in these sectors.

On July 10, the Flemish government approved special support measures for potato growers and floriculturalists to cover the damage caused by the Covid-19 pandemic. The potato sector will receive 10 million euro in support, with a maximum of 50 euro/ton for a maximum stock of 500 tons. The first 100 tons are not eligible for support. Floriculture will receive 25 million euro. Professional floriculturalists are eligible for support if they observed a loss in turnover of at least 30% (floriculture cultivars category A) or 50% (floriculture cultivars category B) in the period from 16 March to 30 May 2020, compared to the same period in 2017, 2018, and 2019. The payment is granted per area of the floriculture cultivar (in Euro per are) and is fixed per cultivar.³¹

³⁰ <https://lv.vlaanderen.be/nl/nieuws/corona-maatregelen-en-veelgestelde-vragen-voor-landbouw-tuinbouw-en-zeevisserij>

³¹ <https://vilt.be/nl/nieuws/dien-de-steunaanvraag-voor-aardappelen-en-sierteelt-in>

Open sea fisheries were allowed not to sail, because of the drop in demand for fresh fish. Support could be requested for each week that the fisheries were not active, with a maximum of three weeks in total in the period between 1 May and 31 August 2020.³²

Apart from sector-specific measures, farmers may also benefit from individual, general measures implemented by their national government for all economic sectors affected by the Covid-19 crisis:

- Temporary unemployment;
- Covid-19 nuisance premium (hinderpremie): a one-off payment of 4,000 euro for the forced closure of a business and a 160-euro premium per day after 5 April and as long as the business remains closed;
- Covid-19-compensation premium: businesses with a decline in turnover of more than 60% in the first month after the re-start are eligible for a premium of 2,000 euro;
- Transition credit (overbruggingskrediet): self-employed entrepreneurs who have to close their business (mandatory or voluntarily) can request compensation;
- Delayed repayment of loans and credit until 31 December 2020, without extra costs.

Fewer than 10% of farmers made use of these measures. A reason for this low share is that these measures target big problems in very specific situations (e.g., forced closing of shops and businesses in the HORECA sector).³³

3.5.2 Croatia

- Public procurement
- Financial assistance Introduction of two new financial instruments:
 - A “Covid-19 Loan” intended to provide additional liquidity to micro, small, and medium-sized enterprises affected by the pandemic
 - “Micro Loans for Rural Development” for small businesses in the agricultural, processing, and forestry sectors
- The support program for primary agricultural producers in the crop and livestock sectors in 2020 (worth HRK 53 million) due to Covid -19 aims to maintain employment and production on small farms in the fruit, vegetable, flower, and seed sectors, as well as in plant reproductive materials and the livestock subsectors of cattle, pig, horse, sheep, goat, and poultry.
- Modification of (EU) no. 508/2014 and (EU) no. 1379/2013 on specific measures to mitigate the effects of the outbreak of Covid-19 in the fisheries and aquaculture sector. The EU program includes support for the temporary cessation of fishing activities and compensation to breeders of freshwater and marine fish and shellfish for the temporary suspension or reduction of production.
- Establishment of a special program called *Working capital Measure Covid-19 for entrepreneurs in wood processing and furniture production* to provide more favorable

³² <https://lv.vlaanderen.be/nl/nieuws/corona-maatregelen-en-veelgestelde-vragen-voor-landbouw-tuinbouw-en-zeevisserij>

³³ <https://www.landbouwleven.be/8130/article/2020-05-31/ilvo-rondvraag-dalende-investeringsbereidheid-lagere-inkomsten-somberder>

working capital loans and co-financing of insurance premium costs for entrepreneurs who obtain at least 20% of their business revenues from exports.

- Secured credits from the Croatian Bank for Reconstruction and Development for winemakers and wine grape growers with an interest rate of 0.5% and free of charge.
- Exception of food and cosmetic products for everyday use from exceptional price control measures.

3.5.3 France

On 26 May, the French Ministry of Agriculture, Agrifood, and Forestry published the conditions under which seasonal workers from EU countries can come to France to work. Other nationalities (non-EU) are included and can be contracted if they are already on French territory. Several official documents are necessary for the seasonal worker to enter France (e.g., a signed work contract).³⁴ After arrival, the seasonal worker's movement is still restricted for 14 days to "the strict minimum" implying one of the following measures: (1) accommodation at the place of work without going out, or (2) in case of accommodation outside the place of work, movement is restricted to the journey between home and work.³⁵ The government started a program called "Action Logement" specifically addressing seasonal workers.³⁶ The program grants money to workers due to their additional costs for housing – 150 euro per month up to a limit of 600 euro for a total of up to 4 months. Workers are allowed to apply for that support 6 months after their contract begins.^{37,38}

Political responses before borders for EU citizens were opened:

- The French government tried to simplify labor recruitment by creating a platform together with "Pole emploi" for sectors in need of workers, with easy access for both candidate workers and employers. This platform should, according the Ministry of Agriculture, support and complete the one started by "wizi.farm" "des bras pour ton assiette."³⁹
- Also, there were facilitating measures for the non-employed or for persons with reduced employment to work in agriculture-- e.g., employees in partial employment.⁴⁰

As a support measure in the crisis, the milk sector itself set up a support program. The French Dairy interbranch organization (CNIEL) created a fund of 10 million euro (using its own

³⁴ <https://agriculture.gouv.fr/covid-19-les-conditions-dentree-sur-le-territoire-des-travailleurs-saisonniers-agricoles>

³⁵ <https://www.france24.com/en/20200407-sigh-of-relief-for-french-farmers-as-some-street-markets-reopen>

³⁶ <https://agriculture.gouv.fr/action-logement-et-le-ministere-de-lagriculture-mobilisent-une-aide-exceptionnelle-pour-les>

³⁷ Euractiv.de (2020). Available at: <https://france3-regions.francetvinfo.fr/provence-alpes-cote-d-azur/bouches-du-rhone-coronavirus-saisonniers-cfdt-perd-proces-face-entreprises-agricoles-1843434.html>.

³⁸ <https://agriculture.gouv.fr/action-logement-une-aide-proposee-au-secteur-agricole>

³⁹ <https://agriculture.gouv.fr/un-plan-de-soutien-aux-secteurs-agricole-et-agroalimentaire-pour-faciliter-les-regles-dacces-lemploi>

⁴⁰ <https://agriculture.gouv.fr/covid-19-les-conditions-dentree-sur-le-territoire-des-travailleurs-saisonniers-agricoles>

financial resources) to reduce the quantity of milk produced.^{41,42} The aim was to stabilize prices at 32c/l and reduce the quantity by 2-5% compared to April 2019.⁴³ This measure (approved by the EU⁴⁴) led to an approximate reduction of 48 million litres in the quantity of milk produced in April 2020. The fund compensates farmers who reduce their production, with 320 euro per 1,000 liters, calculated with the total amount of milk not produced. About 40% of producers reduced production while benefitting from the CNIEL fund. However, lower feed harvests resulting from dry weather in high production areas may also explain the reduction in milk production. The fund was increased to approximately 15 million euro in June 2020.⁴⁵

Wine sector:

The pandemic strongly affected the wine sector for two main reasons. First, there is the 25% tariff on wine exports to the United States, because of trade disputes between France and the United States. Second, Covid-19 affected exports negatively due to the closure of bars, restaurants, and local markets during the period of confinement.^{46, 47}

To support the wine sector, French authorities first announced support measures on 12th May consisting of:⁴⁸

- Exemptions from social security contributions for TPEs (Très petites entreprises, less than 10 employees) and PME (Petites et moyennes entreprises; less than 250 employees) in greatest need
- A crisis distillation scheme instrument worth 140 million euro
- A relaunch for the request of a compensation fund at the European level

On 29 May, the Ministry of Agriculture announced another support program for the sector consisting of the following points⁴⁹:

- Additional support of 30 million euros
- Opening of a private stockage aid measure of 15 million euro for 2 Mhl complementary to crisis distillation
- An increase in the crisis distillation envelope of 5 million euro for buying in prices set at different levels depending on quality categories: IGP/PDO wines (IGP = Indication géographique protégée; PDO = Protected Designation of Origin) at 78 euro/hl and VSIG (Vins sans indication géographique) at 58 euro/hl

⁴¹ <https://www.agriland.ie/farming-news/french-dairy-sector-sets-up-e10-million-fund-for-farmers-reducing-milk-supply/>

⁴² <http://www.europeanmilkboard.org/special-content/news/news-details/article/latest-developments-in-the-milk-sector-in-the-context-of-the-coronavirus-crisis.html?cHash=cd0cc55597176cb85955170db0102333>

⁴³ <https://agriculture.gouv.fr/action-logement-et-le-ministere-de-lagriculture-mobilisent-une-aide-exceptionnelle-pour-les>

⁴⁴ <http://capreform.eu/financing-emergency-aid-to-address-market-disruption-due-to-covid-19/>

⁴⁵ <https://www.reussir.fr/lait/covid-19-48-millions-de-litres-de-lait-non-produits-en-avril-seront-indemnisés>

⁴⁶ https://www.lemonde.fr/economie/article/2020/05/12/coronavirus-le-gouvernement-presente-un-plan-de-soutien-a-la-filiere-viticole_6039424_3234.html

⁴⁷ <https://agriculture.gouv.fr/filiere-viticole-le-gouvernement-annonce-un-nouveau-programme-de-soutien>

⁴⁸ <https://agriculture.gouv.fr/le-gouvernement-annonce-un-soutien-exceptionnel-la-filiere-viticole>

⁴⁹ <https://agriculture.gouv.fr/filiere-viticole-le-gouvernement-annonce-un-nouveau-programme-de-soutien>

- Aid to distilleries of 40 euro/hlap (hlap=hl pure alcohol) for a total of 10 million euro

Further support was announced by the Ministry of Agriculture on 5 August, with total support to the sector reaching 250 million euro. The distillation scheme was further increased to 155 million euro, for two million hectolitres. This helps to reduce the market quantity before the next harvest. In addition, private stockage aid of 15 million euro was promised. The distillation scheme allows producers to convert their wine distillery to produce pure alcohol, with compensation to both the farmer and the distillery. This reduces the supply overhang of wine and stabilizes prices.

In a joint statement to the government on 12 May, many organizations representing France's vine farmers wanted more support, with a total of 500 million euro.⁵⁰

Loss of local markets due to confinement measures:

- Different from the case of Germany, France also closed its open-air markets during the period of confinement.⁵¹ According to France24, the French overseas broadcasting service, the French government ordered street markets to shut down on 23 March; however, a few days later, the farmer's association renegotiated a partial reopening if strict sanitary measures were implemented.⁵²
- This led to the situation in which by the end of March, around 25% of local markets had reopened, often with fewer stands and greater distance between them.⁵³
- On 12 April, the minister for agriculture appealed to local mayors and authorities to reopen local markets if they complied with the relevant sanitary precautions. According to the minister of agriculture, around 30% of French fruit and vegetable production reaches the end consumer via such markets.⁵⁴

Support addressed to horticulture announced on 8 June:

- Support to the sector in the amount of 25 million euro; during spring 2020, producers had to destroy part of their production due to no demand. In response to this loss, the French government offered this support.⁵⁵

Support to riding schools, 24 June:

- Were not able to operate during confinement and were therefore in financial trouble.

⁵⁰ <http://cnaoc.org/plan-de-reliance-de-la-filiere-vitivinicole-un-budget-dau-moins-500-me/>

⁵¹ <https://www.euractiv.com/section/agriculture-food/news/france-calls-for-urgent-eu-help-for-its-crisis-ridden-farming-sector/>

⁵² <https://www.france24.com/en/20200407-sigh-of-relief-for-french-farmers-as-some-street-markets-reopen>

⁵³ <https://www.terre-net.fr/actualite-agricole/politique-syndicalisme/article/25-des-marches-alimentaires-vont-rouvrir-en-france-sous-conditions-strictes-205-167821.html>

⁵⁴ <https://www.terre-net.fr/actualite-agricole/politique-syndicalisme/article/le-ministre-de-l-agriculture-appelle-maires-et-prefets-a-rouvrir-les-marches-205-168199.html>

⁵⁵ <https://agriculture.gouv.fr/un-soutien-exceptionnel-de-25-meu-de-filiere-horticole>

- Each horse owner can get 120 euro per horse to compensate for the period of confinement (limited to 30 horses in total per owner).⁵⁶

General measures for the total economy⁵⁷ – more long-term:

France put in place several support measures for sectors that have struggled due to the Covid-19 crisis. The agricultural sector is eligible for some of these measures, including the following:

- Measures to defer social security charges
- Remission of direct taxes
- Deferral of rents, water, gas, and insurance bills
- Cash loans by the state
- Access to credit mediation and to company mediation in the event of conflict
- Partial unemployment scheme
- Access to the solidarity fund for companies particularly affected by the crisis (direct aid of up to 1500 euro, subject to eligibility)

Appeal from the French minister of agriculture to the EU to start support measures at the EU level:

- Both at the end of March⁵⁸ and in mid April,⁵⁹ official press communiques of the Ministry of Agriculture stated that the minister “demanded or supported” the start of supporting measures for the agricultural sector at the EU level.
- He demanded the activation of the instruments available within the organisation of the common market, mentioning private stockage aid for the dairy sector and the sheep, goat, and veal meat sectors, as well as measures for the fruit and vegetables sector. Also mentioned were the wine and horticulture sectors.⁵⁹

3.5.4 Germany

In March, the German Ministry of Food and Agriculture agreed on a package of support measures that contained the following elements:⁶⁰

- Eased restrictions for time of employment for seasonal workers
- Liquidity support⁶¹

⁵⁶ <https://agriculture.gouv.fr/une-aide-durgence-pour-les-centres-equestres-recevant-du-public-et-pour-les-poney-clubs>

⁵⁷ <https://agriculture.gouv.fr/covid-19-faq-agriculture>

⁵⁸ <https://agriculture.gouv.fr/conseil-europeen-agriculture-et-peche-le-ministre-de-lagriculture-plaide-pour-une-reponse-dampleur>

⁵⁹ <https://agriculture.gouv.fr/covid-19-didier-guillaume-demande-au-commissaire-europeen-lagriculture-la-mise-en-place-urgente-des>

⁶⁰ BMEL (2020): Press release. im Format Pressemitteilung Nr. 54/2020, 23 March,

<https://www.bmel.de/SharedDocs/Pressemitteilungen/DE/2020/054-coronapaket-der-bundesregierung.html>

⁶¹ <https://www.bmel.de/SharedDocs/Pressemitteilungen/DE/2020/066-corona-buergerschaftsprogramm-bmel-rentenbank.html>

- Temporary support for fisheries and aquaculture (over European Maritime and Fisheries Funds)
- Flexibility in income restrictions and side-income opportunities to increase the incentive to work in agriculture
- No land lease termination due to outstanding payments until the end of June 2020
- Increase and time extension of support payments for German shrimp fishers; financed through EMFF and German programs⁶²
- Support program for non-profit organisations (e.g. food banks)⁶³

3.5.5 Italy

In Italy, the government established the possibility to grant agricultural workers a wage supplement treatment in derogation for the duration of the suspension or reduction of the employment relationship (D.L. 18/2020). A similar allowance was also established for self-employed workers and fixed-term agricultural workers, and the deadline for submitting applications for agricultural unemployment benefits was extended from March 31 to June 1, 2020. Subsequently, the government established procedures to facilitate the payment of aid to the fishery sector and to promote the competitiveness of agri-food firms, created incentives to access to credit and loans, devoted funds to manage the market crisis affecting the livestock sector, and promoted actions to regularize seasonal workers (D.L. 23/2020 and D.L. 34/2020). Last but not least, in order to help the agri-food sector, the government provided funds to restaurateurs willing to purchase produce from the agricultural sector (D.L. 104/2020).

To support the wine sector, a leading part of the Italian agri-food sector, the government established incentives for wine distillation, aiming at reducing production (thereby indirectly supporting prices) and increasing sales.

3.5.6 Netherlands⁶⁴

General national measures:

- Support for businesses affected by Covid-19 (Tegemoetkoming Ondernemers Getroffen Sectoren Covid-19)
- Fiscal measures such as temporary suspension of taxation on energy and on the storage of sustainable energy
- Guarantee on entrepreneurial credit for Covid-19 operational capital (Garantstelling Ondernemingskredieten voor Corona-werkkapitaalkredieten)

Sector-specific national measures:

- Expansion of the measure of guarantees for agricultural credits to SMEs (Borgstelling MKB-Landbouwkredieten): expansion to fisheries and aquaculture; extension of the term of the guarantee; expansion of the level of the guarantee by the Ministry;

⁶² <https://www.bmel.de/SharedDocs/Pressemitteilungen/DE/2020/110-corona-hilfen-krabbenfischer-verdoppelt.html>

⁶³ <https://www.bmel.de/SharedDocs/Pressemitteilungen/DE/2020/108-bule-sondermassnahme.html>

⁶⁴ https://www.tweedekamer.nl/kamerstukken/brieven_regering/detail?id=2020Z08070&did=2020D17238

- Extra support measures for parts of the horticultural sector, floriculture, and potatoes (for french fries), totalling 650 million euro. 600 million is reserved to compensate producers in the horticultural and floricultural sectors who have observed more than a 30% decline in turnover; 50 million can go to potato producers to compensate for the volume of potatoes that they still have in storage.⁶⁵

National implementation of European measures:

- 80% pre-payment of the 2020 direct income support as of July 2020 (de-minimis support);
- Activation of measures to counter major market disruptions in the Common Market Organization: support for private storage of beef, sheep and goat meat, butter, skimmed milk powder and cheese; public intervention for butter and skimmed milk powder; temporary derogation of the general competition law for dairy, potato, and floriculture sectors allowing, for instance, temporary planning of production and joint promotion activities; and
- Support for temporary shutdown of fisheries based on a change in the directive in the European Maritime and Fisheries Fund. In addition, producer organisations of shrimp, lobster and plaice fisheries implement weekly measures to limit supply.

3.5.7 Spain

The sheep and goat sub-sector in Spain is very relevant for socio-territorial matters. Peak production takes place in April and May when lambs are born, peak demand is at Easter, and most sales occur through the HORECA sector. Under the “perfect storm” in which the pandemic began during peak market conditions, Spain’s national government decided to fund a lump-sum payment to avoid poor animal welfare conditions due to the overcrowding of animals in farms. This payment was articulated as a support complementary to the coupled payment.⁶⁶

For the wine sector, a delegated regulation of the Commission (EU) 2020/592 was adapted. The wine sector suffered from the closure of the HORECA sector and the cancellation of in-person celebrations of major life events such as weddings. The government implemented three measures, funded by the EAGF through the support programmes in the wine sector: (1) for the distillation of up to 2 million hectolitres of wine, with the resulting alcohol only for industrial purposes; (2) aid for crisis storage of wine up to 2 million hectolitres; and (3) an adaptation of the national support program for wine, with 10 million euro in 2020 and 2021 to compensate for green harvesting.

For the fruit and vegetables sector: there was also an adaptation of delegated regulations: COMMISSION (EU) 2020/592 and 2020/601. These adaptations provide greater flexibility to producer organizations of fruit and vegetable in terms of schedules and modifications of their operational plans and of eliminating maximum thresholds to crisis measures.

⁶⁵ <https://www.rijksoverheid.nl/actueel/nieuws/2020/05/07/aanmeldingen-steunmaatregelen-agrarische-sector- Alvast-mogelijk>

⁶⁶ Decree 508/2020, 5 May.

In April 2020, the government issued a decree that established a set of “flexibilization measures” intended to avoid labor shortages in the fruit and vegetable sector.⁶⁷ First, the regulation aimed at mobilizing unemployed Spanish nationals to perform agricultural activities, making them compatible with unemployment benefits.⁶⁸ Second, migrant workers whose labour permit ended after 14 March received an automatic extension of their permit. Also, third-country nationals aged 18-21 with legal residence status were allowed to work in agriculture. These young people could then accede to 2+2 years extension of their residence permits, without sectoral or geographical limitations. One condition for workers to benefit from these flexibilization measures is that their residence should be close to the farm, in the general aim of minimizing moves during the crisis.

3.5.8 Poland

Government export support (horizontal, not sectoral)

In order to meet the increased needs of buyers and sellers of agricultural and food products as they search for business partners, Poland’s Ministry of Agriculture and Rural Development created a new page on its website. This informational resource presents a list of industry organizations associating agricultural producers and processing and trading companies. The offices of these organizations could be contacted by potential foreign contractors interested in importing food from Poland, as well as by the Foreign Trade Offices of the Polish Investment and Trade Agency. In this way, the organizations will be able to obtain both information about the possibilities of purchasing agri-food products in Poland and first-hand information about Polish producers and the natural, structural, and legal conditions of production, which are of increasing importance in a highly competitive global market. In addition, Polish ambassadors inform where food may be lacking by sending information from around the world, creating opportunities for establishing export cooperation.⁶⁹

Government anti-crisis shield (horizontal, not sectoral)

As part of the anti-crisis shield covering the entire economy, aid is granted in the form of co-financing for the activities of enterprises (PLN 5,000 – around 1,250 euro, one-off), to subsidize the salaries of employees (30-40% for 3 months), and to reduce financial burdens; e.g., with social insurance or by subsidising partly the interest rate of liquidity credits. A significant part of agri-food processing took advantage of this aid.

Facilitations for the agri-food sector.

The government introduced special facilitation of working conditions in processing plants where it is not possible to maintain a distance of at least 1.5 meters between workers in order to meet requirements related to worker safety and not lead to situations that would require a factory to be closed. An example of a workplace where separation of 1.5 meters is not

⁶⁷ Decree 13/2020 published in the Spanish Official Journal on 8 April 2020 and a subsequent extension on 26 May 2020.

⁶⁸ To be more precise, a “temporary non-employed” status was defined for workers whose firms had to suspend activity after the outbreak and expected to resume it as soon as possible. These workers were not considered unemployed; however, they received some temporary benefits to alleviate their situation. These workers were also eligible under the flexibilization measures.

⁶⁹ <https://www.agrofakt.pl/pomoc-finansowa-dla-gospodarstw-poszkodowanych-przez-covid-19/>

possible is a meat cutting belt where one worker has to stand next to the other. The special facilitation also made it easier for foreign workers to be tested for Covid-19 and be socially distant from others. Unique working conditions were established for those employed in agriculture: quarantine takes place on the farm itself, it is possible to continue to work on the farm under quarantine, and the costs of Covid-19 testing are borne by the government.⁷⁰

Financial support is also provided to agricultural producers who experience at least one of the following events:

- Suffered damage caused by drought, hail, hurricane, torrential rain, spring frost, or flood in 2019, amounting to at least 30% of a given crop
- Applied for de minimis drought aid but did not receive this aid due to the exhaustion of the national limit
- Lost liquidity due to the negative effects of Covid-19

Farmers will receive overdue money for drought and Covid-19 if they submit an application to the appropriate district office of the Agency for Development and Modernization of Agriculture. Agricultural producers applying for financial support related to Covid-19 must acknowledge the loss of liquidity by submitting a declaration.

Farmers affected by Covid-19 will receive financial support from support sectors:

- Beef cattle (beef)
- Dairy cows (cows)
- Pigs (piglets / sows)
- Sheep
- Goats
- Poultry for slaughter (chickens, geese, and turkeys)
- Laying poultry (production of chicken eggs)
- Ornamental plants (under heated covers)

To qualify, farmers must meet certain conditions for the minimum number of units. The amount of the grant, paid as a lump sum, depends on the number of herds or crops and will not exceed 7,000 euro to cover losses caused by Covid-19.⁷¹

Since the Covid-19 epidemic has not yet ended, the government is extending the deadline for receiving the care allowance for farmers and their families from the agricultural social security system (KRUS)— i.e., a subsidy for farmers that to some extent compensates for lost income. The care allowance for farmers was extended until the end of July, but it is not known if this is the last extension.⁷²

⁷⁰ <https://www.agro fakt.pl/wywiad-z-ministrem-ardanowskim/>

⁷¹ <https://www.gov.pl/web/rolnictwo/covid-19--maksymalna-pomoc-dla-rolnika--7000-euro>

⁷² <https://www.agro fakt.pl/zasilek-opiekunczy-dla-rolnikow-przedluzony-do-konca-lipca/>

4 Economic impacts on EU agri-food markets and along EU food supply chains

The Covid-19 crisis affected European agri-food production and trade extensively, even though the impact differed substantially across the Member States in the case studies. Most activities carried out in the agri-food system were considered “essential” and thus, overall, continued operating. This means that food production and the transformation, transport, and wholesale and retail sales of food and beverages could continue, albeit in the face of the closure of restaurants and schools, home-office orders and lock downs, and uncertainty about the economic outlook.

Food value chains in particular are sensitive to market disruptions such as border closures or short-term changes in demand or supply because of the high share of perishable products, high requirements regarding food safety and transport logistics, and the often short-term stockholding of products. Hence, the onset of the Covid-19 pandemic in mid March led to a severe stress-test for Europe’s food supply chains, but for the final consumers, no significant supply shortages occurred, on average. Notwithstanding this, at the individual consumer level, there were reports that food banks were in high demand, indicating that the lack of income (and also the lack of school meals in some countries) led to problems for some Europeans with food access and thus food insecurity. Analysis of this important question goes beyond the scope of this study.

4.1 Data collection for Member State case studies

The eight case study countries are, from west to east: Spain, France, Italy, Belgium, Netherlands, Germany, Croatia, and Poland. The case studies are structured around two themes: impacts on agri-food markets and impacts along food supply chains. Each theme is further divided into several topics, such as shift in consumption patterns and changes in consumer prices, as these fields were addressed in each national case study. In addition, for each topic, a section entitled “Member State observations” was added that contains additional information that was deemed relevant, but where no common trend across several Member States could be identified.

The data presented in the qualitative case studies are based on literature and newspaper articles. A systematic literature review using pre-defined search terms such as “Covid-19” and “food supply/production” was performed using Google Scholar in the national languages of the case-study countries. But given the topicality of the issue, most of the information in this paper is drawn from the news media, newly released data (if available), and “anecdotal evidence” from industry representative, government officials and other stakeholders. The information provided in this section is accurate to the best of our knowledge, but given that we are still only seven months into the pandemic at the time of writing, data from statistical offices and other governmental information sources are often still preliminary and will likely be subject to revision.

4.2 Economic impact on agri-food markets and prices

4.2.1 Production, imports, exports

Overview

Table 4 shows that the pandemic adversely affected either agricultural production or agricultural trade in all the case-study countries, particularly for fruit, vegetables, meat, and livestock. The food processing industry was also severely hit, as was seen in France, Germany, and Croatia. In part, this was due to disruptions in the cross-border flow of goods. There were reports of decreased food exports by several of the case-study countries to neighbouring countries (for example, German exports to Italy and France) and to third countries.

The pandemic also affected the transport sector, creating logistical challenges for agri-food shipments. In Germany, an index of truck toll collections decreased beginning in mid March (from 114 to about 95 index points) and increased slowly from mid May onward, but without a recovery to pre-March levels.⁷³ In Belgium, decreased availability of cargo ships was reported for export-oriented sectors.⁷⁴ In France, the transport cost of cereals increased by 15-30%, mainly due to the fact that empty return trips of trucks could not be used as usual for agri-food transports across the EU.⁷⁵

⁷³<https://www.destatis.de/DE/Themen/Querschnitt/Corona/Wirtschaft/kontextinformationen-wirtschaft.html#LKWMAut>

⁷⁴ <https://www.landbouwleven.be/8151/article/2020-06-03/vlaamse-landbouw-en-corona-welke-sectoren-voelen-de-zwaarste-klappen>

⁷⁵ Commission of Economic Affairs of the French Senat (2020). "Note de la Cellule de veille Agriculture et Alimentation". Available at: http://www.senat.fr/fileadmin/Fichiers/Images/commission/affaires_eco/Covid-19/AFFECO_2020_0103_Note_Relance_ne_pas_oublier_l_agriculture.pdf (p.5).

Table 4 Agri-food sectors where production, import, or exports were strongly affected by Covid-19, by case-study country

	Agri-food sectors affected	Trade effects
France	Horticulture, plant nurseries, wine sector, potato producers, agro tourism, riding schools; dairy (especially for cheese under quality labels); poultry (foie gras; small-scale producers of ducks, pigeons, guinea fowls, quails, chicken of Bresse); wine, beer, and cider ⁷⁶	Exports of less processed products (wine)
Germany	Meat (swine, beef), potatoes, dairy; food processing industry	Less exported products
Spain	Fruit, vegetables, meat	Relevance of agri-food exports to economy went up
Italy	Floriculture, dairy sector, agritourism	Lower exports of several products: fruit and vegetables, olive oil, rice, pasta, coffee, chocolate, and wine. Lower imports of fish and aquacultural products
Croatia	Slaughterhouses and meat processing; wine; dairy; shellfish farming; catching, breeding, and distribution of fish; industrial mariculture ⁷⁷	
Netherlands	Floriculture (cut flowers, other floricultural exports) Potatoes Livestock	Floriculture (cut flowers, other floricultural exports) Potatoes Livestock
Belgium	Floriculture (cut flowers, other floricultural exports) Potatoes Livestock	Problem: availability of cargo ships Floriculture (cut flowers, other floricultural exports) Potatoes Livestock
Poland	Horticulture, meat (swine, beef, poultry), fresh fish. Production slowed down but continued.	Less meat exports

Source: Own compilation.

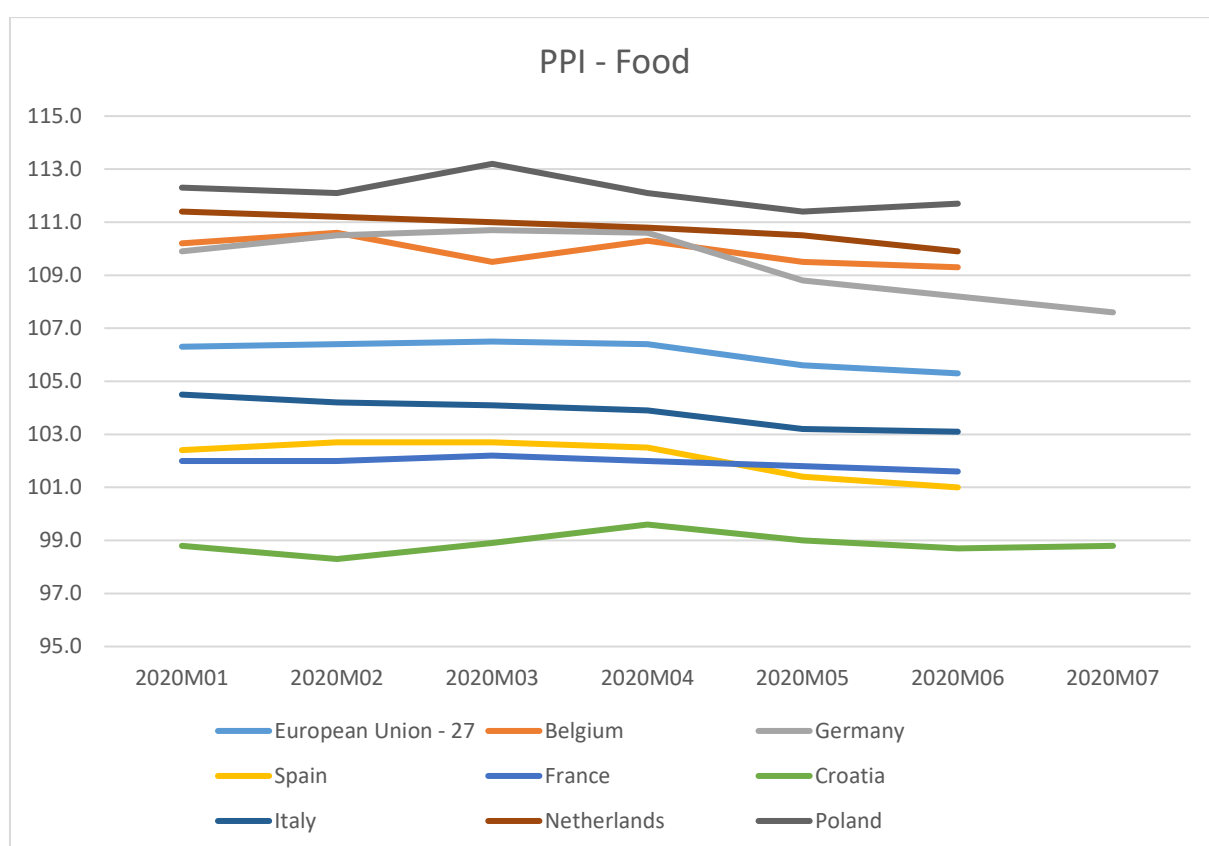
⁷⁶ http://www.senat.fr/fileadmin/Fichiers/Images/commission/affaires_eco/Covid-19/AFFECO_2020_0103_Note_Relance_ne_pas_oublier_l_agriculture.pdf

⁷⁷ <https://morski.hr/2020/04/29/u-krizi-najvise-stradalo-skoljkarstvo-a-ulov-uzgoj-i-prerada-ribe-ce-se-donekle-oporaviti/>

A farmers' survey in Belgium identified the following impacts of the Covid-19 epidemic⁷⁸:

- 65% of farmers reported that they experienced a negative or very negative effect from the Covid-19 crisis (44% for short chain farmers);
- 73% are faced with lower prices for their products;
- 76% have lower turnover (51% for short chain farmers; 20% of short chain farmers have witnessed a higher turnover, mainly due to an increase in sales volume);
- 52% have to pay higher prices for inputs such as seed material and animal feed and medicines;
- 37% are selling lower quantities of their product.

Figure 5 Development of producer price index for selected countries (January -July 2020)



Note: 2015 = 100.

Source: Eurostat – Food Price Monitoring.

A recent survey of Italian entrepreneurs in the agri-food sector⁷⁹ showed that the pandemic affected two-thirds of the total number of firms in that sector.

⁷⁸ <https://www.landbouwleven.be/8130/article/2020-05-31/ilvo-rondvraag-dalende-investeringsbereidheid-lagere-inkomsten-somberder>

⁷⁹ The survey, conducted by Confindustria, is available at: <https://www.confindustria.it/wcm/connect/93fdb38-d1c2-40b7-aecb-8d063e9362d9/Risultati+relativi+all%27indagine+sugli+effetti+del+Covid-19+per+le+imprese+italiane.pdf?MOD=AJPERES&CACHEID=ROOTWORKSPACE-93fdb38-d1c2-40b7-aecb-8d063e9362d9-n4nAi-N>

This downturn of agricultural production prospects are reflected in changes in agricultural producer prices—as seen in Figure 5, where the producer price index (PPI) for agricultural commodities, collected from Eurostat’s Food Price Monitoring statistics, is reported. Stating in April 2020, for the EU-27, the PPI is going downwards. In some Member States (e.g., Germany), this trend is more pronounced than in others.

Member State observations

Germany

In April, the food processing industry started to be affected by the negative impacts of the pandemic in the form of decreasing levels of production, exports, and turnover (see table in the Annex). These decreases were observed after increases in the last quarter of 2019 and the first quarter of 2020. The processing industry, however, benefitted from some “panic buying” in March.⁸⁰

Belgium

Several agricultural sectors have been affected by the Covid-19 crisis. Sector-specific effects are presented in Appendix 7.1.1. In the pork sector, the drop in prices experienced in the first weeks of the crisis was compounded by Covid-19 outbreaks in major slaughterhouses in Germany and the Netherlands. Moreover, China (a major export market for pork) has placed a ban on pork imports from slaughterhouses with confirmed Covid-19 infections. Prices for pork collapsed from 1,779 euro per kg before the crisis to 1,227 euro per kg in mid-July (a decrease of 30%).⁸¹ In the poultry sector, depressed prices led to meat being frozen for storage, but freezing deteriorates the quality of the meat. In addition, frozen poultry meat will have to compete with imported poultry from Brazil and other countries outside the EU.⁸²

Netherlands

Agri-food sectors that deliver mainly to the foodservice sector have witnessed a major drop in demand due to the closure of HORECA establishments, the ban on events and conferences, and stay-at-home orders. Moreover, export-oriented agri-food sectors are affected by similar measures taken in third-country markets and by higher transport costs due to the decline in cargo transport on passenger flights and the increased cost of shipping containers (Schouten, 2020).

The horticultural sector is one of the agri-food export sectors most affected by the Covid-19 pandemic. The sector witnessed an 11% decline in exports in April 2020 compared to April 2019. Appendix 7.1.2 shows that the largest drop in exports occurred in cut flowers (-35%), followed by other floricultural products (-18%). Fruit exports increased slightly in April (+2%), but this increase was much lower than in previous months. All horticultural sectors observed decreasing export growth from January to April 2020 (CBS, 2020).

⁸⁰ <https://www.bve-online.de/presse/pressemitteilungen/pm-20200821>

⁸¹ <https://www.landbouwleven.be/8542/article/2020-07-17/varkensprijzen-ineengestort>

⁸² <https://www.landbouwleven.be/8151/article/2020-06-03/vlaamse-landbouw-en-corona-welke-sectoren-voelen-de-zwaarste-klappen>

The drop in demand has caused major income losses in the agri-food sector. On the one hand, supply cannot be adjusted in the short term (due to growing seasons and animals' life cycles). On the other, the perishability of food products does not allow for long-term storage or alternative (high-value) uses, leading to the deterioration and destruction of harvests and stocks (Schouten, 2020).

For livestock, the sectors affected most by the decrease in demand and the subsequent decreases in price are poultry meat, dairy products, goat and sheep meat, veal, eggs, and mink furs (Schouten, 2020). Appendix 7.1.3 indicates the price effects for some of these sectors since the start of the Covid-19 measures. Producer prices for pigs, butter, and skimmed milk powder decreased sharply in the period March-April 2020. Prices for broilers and cheese also decreased but to a lesser extent.

Italy

The pandemic had a severe impact on food sales in Italy, with losses of 40% in the HORECA marketing channel, for a total decrease around 34 billion euros. Retail sales, in contrast, increased, due to an increase in domestic consumption of around 6% compared to 2019. The overall impact on total domestic and non-domestic agri-food expenditure in 2020 is estimated to be a year-to-year reduction of around 10%, or about 24 billion euros (ISMEA⁸³). There also has been a reduction in value added by agri-food production (-0.9% for the primary sector and -1.4% for the food industry).

Italy's agri-food trade balance in the first half of 2020 was positive (+710 million euro), against a negative balance (1.2 billion euro) registered in the first half of 2019 (ISMEA). Such an unexpected result is the result of two opposing dynamics: on one hand, strong growth in exports during the first two months of 2020 (+ 10.8%) and the restart of exports in June (+ 3%), when the restrictions of the Covid-19 emergency were relaxed; on the other hand, agri-food imports declined by 5.1% during the first half of 2020, as compared to the same period of 2019.

After the drop in agri-food exports in April (-1.5% compared to the same month of 2019) and May (-10.2%), Italy's agri-food exports increased, demonstrating the sector's anti-cyclical qualities. The most significant contributions to this increase in terms of value came from cereals and their derivatives (+ 13.8%), fresh and processed vegetables (+ 8.8%), fresh and processed fruit (+ 4.0%), and milk and dairy products (+ 1.0%); on the contrary, wine, while remaining Italy's second leading export, suffered a decline in exports of 4.1% (see Table in the Annex).

The EU remains the first destination market for Italy's agri-food exports (64% of national exports for 14.3 billion euro). With the exception of Spain (-0.5%), exports to all European destinations increased. Performance in non-EU markets has been also good (+ 4.6% for 7.9 billion euro): particularly positive results have been registered for Japan (+ 17.3% on an annual basis), Canada (+13.7 %) and China (+ 13.3%).

⁸³ Source of the report by ISMEA:

<http://www.ismeamercati.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/10821>

Spain

Spain's agri-food sector has performed reasonably well during the Covid-19 crisis. Out of Spain's three main exporting sectors (automobiles, capital goods and agri-food), the agri-food sector was the only one to record satisfactory exports during the period March to May 2020. Hence, agrif-food's share of Spain's total exports has climbed over 20%, while usually it tends to be around 15-17% (see section 7.1.2 in Annex). During each of these three months, Spain's agri-food sector maintained a trade surplus, with strong performances by fruit, vegetables, and meat and the worst results in fishery products and tobacco. However, as section 7.2.1 in the Annex shows, the situation seems to have worsened in May. Data revisions and trade data for the coming months can confirm or reject these trends.

Reductions in output were reported for spring fruits whose harvest began at roughly the same time as the onset of the Covid-19 crisis (-11.8% for plums, -16.9% for cherries, -3.1% for apricots, and -1.3% for peaches). Some types of vegetables also registered a decrease in production compared to 2019: Tomato production fell by 17.8%, and potato production fell about 9%. For other fruit and vegetables harvested in the spring, some increases in production were reported, such as the case of onions (+9.3%).

Another part of the value chain that was severely affected by the outbreak is Spain's MERCA system. MERCAs consist of semi-public, wholesale markets located near cities, where producers—or middlepersons representing several producers—meet their customers. These customers are mainly specialised retailers and the HORECA sector. The MERCA system plays a significant role in fresh food distribution in Spain, accounting for 65% of the market share in fresh fruit and vegetables, 55% in fresh fish and seafood, and 45% in fresh meat (Alimarket, 2020). Closure of the HORECA sector and especially the concentration of food sales to final consumers in supermarkets at the expense of specialised retailers (see below) resulted in severe damage to the MERCA marketing channel.

Croatia

Given that the agri-food sectors of Croatia and Italy are closely connected, the Covid-19 crisis in Italy affected Croatia's agri-food exports. Large negative impacts on Croatian exports were observed for fish (over 50 million euro of fresh or frozen fish are normally exported by Croatia to Italy annually), beef (normal exports to Italy of almost 15 million euros a year), and sugar.

Vegetables: This year's vegetable prices in Croatia are 12-20 % lower than last year. The price of potatoes at wholesale markets in June 2020 was as much as 22.39 % lower than at the same time last year. Lower prices in June were also observed for melons, watermelons, white peppers, oblong green peppers, tomatoes, cherries, green cabbage, red cabbage, carrots, lettuce, white beans, colorful beans, potatoes, new potatoes, red onions, beans, champignons, red radishes, radishes, and parsley. Only a few types of individual salad greens and garlic had higher prices.

Potatoes: in the first three months of 2020, Croatia imported all types of potatoes (seed, young, and late) in the total amount of 16,064 tons and a total value of 8.03 million euro, which is almost half of the total value of potato imports in all of 2019. In calendar year 2019,

potato imports (all types) totaled 30,462 tons, worth 16.68 million euro, which confirms that there was an explosion of potato imports due to the Covid-19 crisis.⁸⁴

Changes in agri-food trade were observed for Croatia's 5 top agri-food trading partners:⁸⁵

- Italy: exports to Italy remained almost the same as in previous years, while imports from Italy increased by 5.7%.
- Slovenia: compared to the first three months of 2019, exports to Slovenia grew by 3.6%, and imports from Slovenia increased by 9.2%.
- Bosnia and Herzegovina: exports to Bosnia and Herzegovina grew by 9.3%, but imports from there grew by as much as 27.6%.
- Germany: compared to the same period last year, exports to Germany grew strongly by 36.7%, and imports from Germany increased by as much as 111.7%.
- Austria: no observable changes in total agri-food exports or imports.

France

“Le chambre d’agriculture” states in its May 2020 publication that the agri-food sectors most affected by the Covid-19 crisis were horticulture, plant nurseries, wine, potato growers, agri-tourism, riding schools, and the seasonal workforce.⁸⁶ It was also reported that milk collection was affected at the local level. This led to a reorganisation of milk collection and markets—in particular, by mobilising some big collecting companies, especially cooperatives.

In the dairy sector, small cheese-producing companies and dairy farmers were affected, especially for products with geographical indication (GI), which have a high regional importance. This is due to the loss of markets from the closure of the restaurant sector and other markets, and a shift in consumption towards goods of basic necessity and fewer festive purchases, all of which resulted in fewer purchases of GI products.⁸⁷ As the crisis coincided with the natural production peak for milk in April, additional pressure on the market was observed.

The Covid-19 crisis hit agri-food trade particularly hard. In comparison to April 2019, the agri-food trade surplus went down by 312 million to 562 million euro. Intra-EU agri-food trade was also affected; France’s agricultural trade balance is in deficit at -237 million euro, a deterioration of 138 million euro over one year. Agri-food exports declined by 14% compared to the previous year. Three quarters of the drop in exports was due to processed products; exports of wine (particularly to Germany) and of meat and slaughter products fell by 91 million and 62 million euro, respectively.⁸⁸ The downward trend in agri-food exports continued in

⁸⁴ <https://smarter.hr/veliki-rast-uvoza-krumpira-od-pocetka-godine-u-tri-mjeseca-stigla-polovica-ukupnog-lanjskog-uvoza/>

⁸⁵ <https://smarter.hr/korona-kriza-dodatno-utjecala-na-rast-uvoza-hrane-i-povecala-deficit-poljoprivrede/>

⁸⁶ <https://chambres-agriculture.fr/publications/toutes-les-publications/la-publication-en-detail/actualites/covid-19-sortie-de-crise-queles-actions-a-court-terme/>

⁸⁷ www.senat.fr/questions/base/2020/qSEQ200415359.html

⁸⁸ https://agreste.agriculture.gouv.fr/agreste-web/download/publication/publie/IraCex2079/2020_79inforapcommerceext.pdf and <https://agreste.agriculture.gouv.fr/agreste-web/disaron/IraCex20100/detail/>

May 2020, with exports to EU countries of wine and spirits and of meat and slaughter products falling by 92 million and 64 million euro, respectively.⁸⁹

Poland

The food industry in Poland is based mainly on raw materials supplied directly by Polish farmers, and the country's production of agricultural raw materials and food products is higher than internal consumption.⁹⁰ Therefore, Poland's food security was not threatened by the pandemic. Due to the fact that certain basic food supply chains (meat and dairy) lie entirely within Poland, the availability of agri-food products during the pandemic was and remains good. This outcome also translated into the maintenance of earlier price levels. In the case of some products, however, prices fell as a result of difficulties with domestic and foreign sales.

According to the Central Statistical Office (GUS), in April and May 2020, there were decreases in the value of agricultural and food products sold in Poland of 12.7% and 6.8%, respectively.⁹¹ Before the pandemic, a significant part of Polish meat production was exported (80% of beef and approximately 50% of poultry meat, mainly to other EU Member States). Covid-19 caused these exports to drop significantly—mostly because of the stop of the HORECA market throughout the EU, which meant that high-value meat cuts such as sirloin, roast beef, and entrecote stopped selling. Polish poultry producers also found themselves in a difficult situation. The decline in foreign demand for Polish meat affected the prices of live poultry, which fell by approximately 30% for turkey and 6% for chicken.⁹² In addition to meat, in the period March-June 2020, exports of dairy products and eggs also decreased (-8.1%), as did exports of fish and seafood (-12.4%).⁹³ Producers were only partially able to compensate for the loss of exports with sales to the domestic market.

Analysis of information from the member organizations of the Federation of Industry Associations of the Agricultural Producers and from the integrated agricultural market information system of the Ministry of Agriculture and Rural Development shows the following consequences and threats in individual industries.

In the first phase of the pandemic (March-April), one of the immediate effects on cereal producers was the full or temporary closure of buying points, but during the harvest season, these buying points reopened so that purchases could be carried out smoothly. The epidemic had a paralyzing effect on logistics in the markets for mineral fertilizers and plant protection products. In the first months of the pandemic, farmers had a big problem with the availability of these crucial inputs, and orders were processed with a delay of several weeks. This created huge problems in the normal functioning of farms due to the inability to meet the recommended dates of chemical applications. Limitations in the supply of fertilizers and plant protection products also increased the price level.

Fortunately, the opening of the economy caused wheat exports in the period January-May 2020 to be four times higher than in the previous year (2.4 million tons versus 596,000 tons). Destination markets responsible for this increase included Saudi Arabia, South Africa,

⁸⁹ <https://agreste.agriculture.gouv.fr/agreste-web/disaron/IraCex20100/detail/>

⁹⁰ <https://biznes.wprost.pl/handel/10313525/jak-koronawirus-wplynie-na-rynek-spozywczy-analiza-eksperta.html>

⁹¹ <https://www.agrofakt.pl/rynek-spozywczy-a-koronawirus-prognozy-i-perspektywy/>

⁹² Data from the Ministry of Agriculture and the Countryside Development – available at <https://agronews.com.pl/artukul/rynek-miesa-drobiowego-notowania-z-okresu20-26-07-20r/> accessed 06.08.2020

⁹³ <https://www.agrofakt.pl/rynek-spozywczy-a-koronawirus-prognozy-i-perspektywy/>

Germany, Tanzania, Cuba, and Morocco. Probably, these purchases were motivated by a desire to increase stocks in case a food shortage resulted from the Covid-19 pandemic. Imports in the same period (January-May) were also higher in 2020 than in 2019 (378,000 tons versus 241,000 tons). Similar changes occurred in the international trade of barley (exports of 43.7 thousand tons in 2020 versus 5.9 thousand tons in 2019; imports of 91.4 thousand tons in 2020 versus 92.6 thousand tons in 2019) and maize (exports of 585,000 tons in 2020 versus 351.3 thousand tons in 2019; imports of 118,000 tons in 2020 versus 231,000 tons in 2019).⁹⁴

The meat and dairy industries are responsible for 40% of the Polish food sector's revenues and 32% of food exports from Poland.⁹⁵

In the beef sector, significant problems arose with exports, especially to Italy and Spain. As shown in the chart in the Annex, beef cattle prices in March-June 2020 were significantly lower in March-June 2019. Only at the end of June did prices in 2020 exceed the level from 2019. In addition, prices were significantly lower throughout 2020 compared to 2018. This is a significant problem for cattle producers. If the crisis deepens, interventions on the beef market will be necessary soon. It would also be desirable to open the Turkish market to live cattle exports and the Chinese market to Polish beef to facilitate the shipment of surpluses outside the EU.

The poultry industry was particularly hard hit by a significant drop in prices for both chickens and turkeys. Price drops ranged from 6%-30% depending on the product category (e.g., carcasses, breast fillets). Polish exports of poultry meat in the period January-May 2020 decreased by 6.2% compared to 2019, while imports decreased by nearly half.⁹⁶ The poultry meat market customarily operates on low margins. Thus, the combination of lower turnover and lower prices constituted a serious economic threat to the poultry sector.

In the pork market, domestic prices have declined since March 2020, falling from a higher level than in 2019. As a result, prices in May 2020 equalled those of May 2019. Since May, however, the decline in prices has deepened, reaching in mid-July a level lower than that of 2018 and 2017. In terms of mass, Poland's pork exports were also adversely affected by the crisis. In the period January-May, total Polish pork exports decreased by 35% between 2019 and 2020, and Polish pork exports to EU countries declined by 38%. Poland's pork imports increased by 4.9% over the same period. In terms of value, however, pork exports were slightly higher (4.67 million euro in 2020 versus 4.54 million in 2019), due to increased prices in foreign markets.

⁹⁷

In the dairy sector, the biggest turmoil generated by Covid-19 concerned milk powder, whose price fell by almost 32% year-to-year for the period January-July. Poland is a significant producer of skimmed milk powder and whey; therefore, this price drop greatly affects the country's dairy sector. For the period January-May, the price of milk saw a year-to-year drop of 4.5%. The Covid-19 crisis also affected the prices of butter (-12% for the period January-

⁹⁴ Data from the Ministry of Agriculture and the Countryside Development – available at <https://agronews.com.pl/artykul/rynek-zboz-notowania-z-okresu-20-26-lipca-2020-r/> accessed 06.08.2020

⁹⁵ <https://www.wiadomoscihandlowe.pl/artykul/koronakryzys-to-szansa-dla-polskiego-przemyslu-spozywczego-czy-bedzie-ja-potrafil-wykorzystac>

⁹⁶ Data from the Ministry of Agriculture and the Countryside Development – available at <https://agronews.com.pl/artykul/rynek-miesa-drobiowego-notowania-z-okresu-20-26-07-20r/> accessed 06.08.2020

⁹⁷ Data from the Ministry of Agriculture and the Countryside Development – available at <https://agronews.com.pl/artykul/rynek-miesa-wieprzowego-za-okres-20-26-07-2020-r/> accessed 06.08.2020

July) and cheese (-6 to -10%). The vast majority of Polish dairy products are exported. Covid-19 has influenced not the volume of dairy product exports (January-May 2020) but rather their value, which was 12% lower in 2020 than in 2019 (January-May). Poland's dairy product imports were 15% lower during the same period in terms of both value and volume.⁹⁸

In the beekeeping market, the pandemic has made it impossible to implement projects under the Bee Product Support Mechanism within the time limits set by the National Center for Agricultural Support. Any delay in insemination or the transport of bees, beekeeping equipment, or drugs will have a huge impact on the timing of projects. Moreover, within the framework of the mechanism, unions organize trainings that are currently being carried out, and the problem of paying for these trainings will arise, especially since preparation costs have already been incurred. With the introduction of the prohibition of movement, there was also a problem with "wandering apiaries," which are set up in fields, orchards, and forests at considerable distances from human settlements. This problem has since been resolved; however, uncertainty remains due to the intensification of the pandemic in Poland in August.

Horticultural and flower growers suffered huge losses because they could not sell their product during the period March-May. Flowers deteriorate quickly, which forces producers to bear the cost of disposing product that they cannot sell. From March to May, the flower trade was brought to a complete standstill, which hit gardeners and flower growers as well as wholesale and retail companies. As a result, the Polish floricultural industry suffered huge losses. Preliminary analysis of data from 7 out of 24 wholesale markets participating in the Polish Wholesale Markets Association (SPRH) showed that losses in the period March-May 2020 exceeded PLN 300 million per month. If the epidemic continues, the industry is in danger of completely collapsing and liquidating many companies. Similarly bleak scenarios were outlined by the Polish Horticultural Association, whose data show that economic losses experienced by the roughly 5,000 flower-producing farms operating in the country have already reached PLN 1 billion (about 250 million euro).⁹⁹

Fur breeders and producers also suffered from the pandemic. Almost all raw hides from fur animals are sold through auction houses in Copenhagen and Helsinki. The buyers are mainly from China, other Asian countries, and Russia. Due to the pandemic, auctions in these auction houses did not take place as usual, resulting in a lack of income during the period March-May 2020 and even later, as many foreign auction houses only started operating in June or July. Breeders, wanting to continue further breeding, had to incur debt in order to cover their running costs and make loan payments.

The Covid-19 outbreak has had a huge, negative impact on inland and lake fishing. Demand fell dramatically in March-May 2020, mainly due to the closing of the HORECA sector. As a result of this downtime, the fishing sector experienced a problem with the sale of stocking material and fish during this period. The situation improved significantly in May-July with the economic recovery and re-opening of the HORECA sector.¹⁰⁰

⁹⁸ Data from the Ministry of Agriculture and the Countryside Development – available at <https://agronews.com.pl/artykul/rynek-mleka-notowania-z-okresu-3-9-08-2020r/> accessed 17.08.2020

⁹⁹ https://www.sadyogrody.pl/z_innej_skrzynki/141/fbzpr_duze_straty_producentow_kwiatow_przez_koronawirusa,21593.html

¹⁰⁰ <http://podr.pl/wp-content/uploads/2020/05/WP%C5%81YW-KORONWIRUSA-NA-RYNKI-ROLNE.pdf>

4.2.2 Shift in consumption patterns due closure of offices, schools and hotels, restaurants, and catering

Overview

The Covid-19 crisis had consequences on food consumption patterns for two different reasons. First, limitations on the movement of people and the closure of the HORECA sector gave impetus to the purchase of food and its preparation at home. Second, the economic slowdown that came with the outbreak marked the beginning of an unexpected economic crisis whose scope and length is still unknown.

Table 5 Shift in consumption patterns: common observations across case studies

Common observations
<p>In March, at the peak of the pandemic, initiation of contact restrictions and lockdowns:</p> <ul style="list-style-type: none">• Supermarket sales increased, as individual consumers concentrated most purchases at a single shop or store.• Higher food purchases.• Some hoarding, with a focus on non-perishable food items in some cities and supermarkets.• Less frequent shopping trips: problem for perishable products (e.g., fruit and vegetables, fresh juices).• No shift in diets, but more food preparation at home.• Less demand for flowers and floricultural products.

Source: Own compilation

The first observed change was that for most households, food purchases took place less often than before the crisis, as containment measures restricted the local movement of people. This also led to the observation that supermarket sales went up as individuals tended to do most of their purchases at a single shop or store. In March, some hoarding was observed, with a focus on non-perishable food items. This, together with less frequent visits to points of sale, explains why in particular producers of fruit, vegetables, fresh juices, and ready-to-eat salads suffered. In Spain, for example, Nielsen data reported an unprecedented 71%-increase in supermarket sales.¹⁰¹ In Germany, the food processing industry reported a 10.7%-increase in sales volume in March 2020.¹⁰² In Spain, a consumption panel reported that purchase quantities in March 2020 were 15.4% larger than in March 2019, and in Italy, there was an 11%-increase in retail sales.

In France, the National Institute of Statistics and Economic Studies (INSEE) reported an overall increase in sales of agricultural products in big supermarkets of 6.2% between February 1 and May 1 compared to the previous year.¹⁰³ The increase in sales was driven by groceries and fresh produce (+15%), fruit and vegetables (+32%), and meat products (+8%). Moreover, the crisis led to disaffection of French consumers for foodstuffs handled by a third party-- e.g.,

¹⁰¹ See press release at <https://www.efe.com/efe/espana/economia/las-ventas-del-supermercado-se-disparan-el-71-record-historico-por-covid-19/10003-4202605>

¹⁰² BVE (2020). Lebensmittelkonjunkturreport.

¹⁰³ French National statistics Office (INSEE) (2020). Available at: <https://insee.fr/fr/statistiques/4497245>.

bakery products and delicatessen, butchery, and fishery products—a change in preferences that resulted in lower sales of these products.¹⁰⁴

Regarding online sales, in Spain, Nielsen and other data indicated peaks in online sales, especially for supermarkets. In Poland, small local shops and online shopping have become more very popular: In the first days after the Covid-19 restrictions were imposed, the smallest shops reported a 72% increase in turnover.¹⁰⁵

In Spain, the crisis seems to have amplified the observed trend of specialised retailers losing market share for consumer goods to other marketing channels such as supermarkets, as shopping becomes more concentrated in a smaller number of physical retailers, quite often only one “big” weekly purchase in a single supermarket. In fact, evidence indicates that family purchases became more concentrated in supermarkets: We can conclude that the increment of sales in supermarkets has taken place at the expense of specialised retailers (such as green grocers, bakers, butchers, and fishmongers serving fresh product) and open-air markets, which tended to be visited less frequently than was the case before the pandemic. The case of open-air markets was controversial in Spain, as some local authorities did not permit them to open or restricted their hours of operation during the first days of the confinement.

The crisis seems to have induced changes not only to shopping behaviour, but also the valuation of the domestic agricultural sector: A recent nutrition report published by the German Federal Ministry of Food and Agriculture showed that in Germany, about 39% of the people surveyed responded that the importance of the German agricultural sector had increased; among youth and young adults, 47% indicated that agriculture had become more important.¹⁰⁶

Member State observations

Spain

According to the consumption panel from Spain’s Ministry of Agriculture, Fisheries, and Food, households bought more food in March 2020 compared to March 2019.¹⁰⁷ The purchased quantity increased by 15.4%, while prices increased by 0.5%. This meant that household food expenditures increased by 16.1%. While this increase in expenditures may be the result of more meals being prepared at home due to the closure of the HORECA sector, it may also be associated with increased hoarding.

Across types of foods, the main increases in expenditures occurred in meat products (16.3%, with a 38.3%-increase for frozen meat) and preserved fish (+21.1%). Expenditures on potatoes

¹⁰⁴ Commission of Economic Affairs of the French Senat (2020). “Note de la Cellule de veille Agriculture et Alimentation”. Available at: http://www.senat.fr/fileadmin/Fichiers/Images/commission/affaires_eco/Covid-19/AFFECO_2020_0103_Note_Relance_ne_pas_oublier_l_agriculture.pdf

¹⁰⁵ <https://retailmarketexperts.com/aktualnosci/raport-pmr-rekordowy-wzrost-rynku-e-commerce-w-2020-roku-spowodowany-epidemia-covid-19/> accessed 23 September, 2020, <https://www.dlahandlu.pl/detal-hurt/wiadomosci/koronawirus-napedza-sprzedaz-w-malych-sklepach,86372.html> accessed 23 September, 2020, <https://biznes.wprost.pl/gospodarka/10311307/na-koronawirusie-zyskuja-male-sklepy-niewyobrazalne-wzrosty-sprzedazy.html> accessed 23 September, 2020

¹⁰⁶ BMEL (2020). Nutrition report (Ernährungsreport). Berlin.

¹⁰⁷ „La alimentación mes a mes. Marzo 20.” Ministry of Agriculture, Fisheries and Food.

grew by 36.3%, with significant increases in quantities purchased reported for other vegetables such as onions and lettuce. Other products that saw double-digit-percentage increases in expenditures were citrus fruit, pears, and apples. Protein seed saw a 61.1%-increase in expenditures, with spending on products of animal origin such as eggs (+21.5%) and liquid milk (+19.9%) also growing significantly.

Despite these many changes in food expenditures, people did not change significantly the composition of their diets, according to the food habits survey.¹⁰⁸ However, about 45% of survey respondents indicated that they were stocking more food than usual. This behavior seems coherent with the consumption panel mentioned above and with observations by retailers, as reported in specialised media.

Italy

The almost total closure of the catering marketing channel has had a particularly important role in changing food consumption patterns in Italy. Food consumption outside the home (i.e., non-domestic consumption) equaled 86 billion euro in 2019, a 1.6%-increase from the previous year. Against this trend, the prospects for non-domestic food consumption for the whole of 2020 are of the opposite sign, with a projected 40% decrease for food sold through the HORECA marketing channel, equal to around 34 billion euro (ISMEA).¹⁰⁹ Part of this drop in consumption is offset by the growth of retail sales, for which an increase of 6% is projected, as compared to 2019 (ISMEA). Overall, the impact on total domestic and non-domestic agri-food expenditures should consist of a reduction of around 10% for 2020, equal to approximately 24 billion euro (ISMEA).

Belgium

An increase in retail prices has been observed in several supermarket chains in Belgium. A major factor explaining this increase is the decision of Belgium's National Security Council to abolish all promotions and discounts in supermarkets. This measure was taken to discourage the hoarding that was observed in the first week of the lockdown 'light' (Test Aankoop, 2020a). Appendix 7.1.3 shows that the extent of the price increase differed across supermarkets, with the highest increase observed in Colruyt, Collect&Go, and Carrefour Hyper markets. Almost no change in prices was observed in Aldi.

In the beginning of April, the ban on promotions and discounts was lifted. Nevertheless, prices of product baskets did not immediately, or fully, return to the level prevailing before the start of the pandemic. Appendix 7.1.3 shows the price evolution for consumer goods in Belgian supermarkets during the period from March until August 2020.

Poland

The demand for canned food, pickles, milk, flour, groats, ready meals, and feeds increased, while the demand for meat, sea fish, and bread decreased. Over the long term, it is likely that the economy will be affected. Despite the defrosting of the economy and the partial removal

¹⁰⁸ Survey on food habits during the confinement, carried out in May and June 2020 by the "No food waste network"

¹⁰⁹ Source of the reports by ISMEA: <http://www.ismea.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/11036>

of restrictions, the HORECA sector in Poland continues to grow at a slower pace than before the outbreak of the pandemic (data as of August 13, 2020). Only a few percent of the sector's capacity are currently being used. Everything seems to indicate that food demand will not return to "normal" (pre-pandemic) levels in the coming months. This unfavourable trend will be felt especially by meat producers, the dairy sector, and producers of processed fruit and vegetables and is of concern to both producers for the domestic market and exporters. In many cases, a pandemic-induced decline in demand has driven prices down, which further reduced profitability and deepened losses.¹¹⁰

France

At the beginning of the crisis in March, consumers shifted away from fresh products to long-life and frozen products. For example, Interfel, the organisation of French fruit and vegetable producers, reports a 40% drop in sales in wholesale markets. In addition, Lidl reports that nearly no flowers and plants were sold during that period and that fruit and vegetable sales dropped by 20-30% in March.¹¹¹

Despite the increase in demand for products of primary necessity in big supermarkets, producers were not compensated for the loss of other markets. Usual consumption pathways via restaurants and open markets were disrupted, markets where farmers were usually able to sell high-value products, sometimes with GIs. In some cases, farmers needed to sell products in less remunerative markets. For example, producers of high-end meat products for restaurants had to shift their production toward lower-valued products such as ground meat.¹¹²

Croatia

Analysis conducted by the Nielsen agency of customer behavior in Croatia during the Covid-19 epidemic showed that the largest sales growth occurred in the second week of March and that consumers passed through six phases of shopping during the crisis. At that time, retail chains achieved an average of 65% higher growth in the total value of sales in the food and drugstore categories compared to the same week in 2019.

The first phase is proactive shopping, with the aim of protecting one's own health and well-being. That phase, according to Nielsen, began in late February 2020. The first case of Covid-19 in Croatia was confirmed on February 25, and already that week (February 23-29), significant jumps in sales were noticed compared to the same week in 2019 for certain products. For example, sales of canned fish rose 159 percent, pasta 114 percent, flour 108 percent, and rice 97 percent. The highest sales growth was achieved in the second week of March (March 9-15), when retail chains achieved an average increase of 65 percent in the total value of sales in the food and drugstore categories compared to the same week in 2019.

¹¹⁰ <https://www.agrofakt.pl/eksport-miesza-spada-producenci-skazani-na-ogromne-straty/>

¹¹¹ <https://www.retaildetail.eu/en/news/food/french-supermarkets-lend-their-support-french-agriculture>

¹¹² Commission of Economic Affairs of the French Senat (2020). "Note de la Cellule de veille Agriculture et Alimentation". Available at: http://www.senat.fr/fileadmin/Fichiers/Images/commission/affaires_eco/Covid-19/AFFECO_2020_0103_Note_Relance_ne_pas_oublier_l_agriculture.pdf

Customers then entered the second phase of consumer behavior: stock preparation. In the week of March 9-15, 2020, compared to the same week in 2019, sales of flour increased by as much as 410 percent, rice by 301 percent, powdered cake products (e.g. yeast, baking powder, pudding) by 221 percent, pasta by 210 percent, and ready-made sauces by 191 percent. Nielsen states that the third week of March (March 16-22) brought an easing of sales growth due to fewer customers going to stores, with additional measures prescribed by the government to limit the operation of retail outlets. However, Nielsen notes that less frequent visits to stores did not significantly lower consumption but resulted in larger baskets of purchases and less frequent visits to stores. In that week, the entire basket of food and drugstore categories recorded a growth of 46 percent compared to the same week in 2019. Triple-digit year-to-year growth rates were recorded for a handful of products, including flour (313 percent), soap (231 percent), powders for cake preparation (dry yeast, 216 percent), rice (206 percent), and fresh yeast (177 percent).

According to Nielsen, buyers then entered the third phase: preparation for life in quarantine. Customers are increasingly discovering the opportunities and benefits of online shopping, and retailers and local manufacturers are turning to each other to find better answers to their customers' needs. Currently, Nielsen believes that we are in the fifth phase—limited living—which is marked by online demand where everything depends on high standards of delivery.

4.2.3 Change in consumer prices

Overview

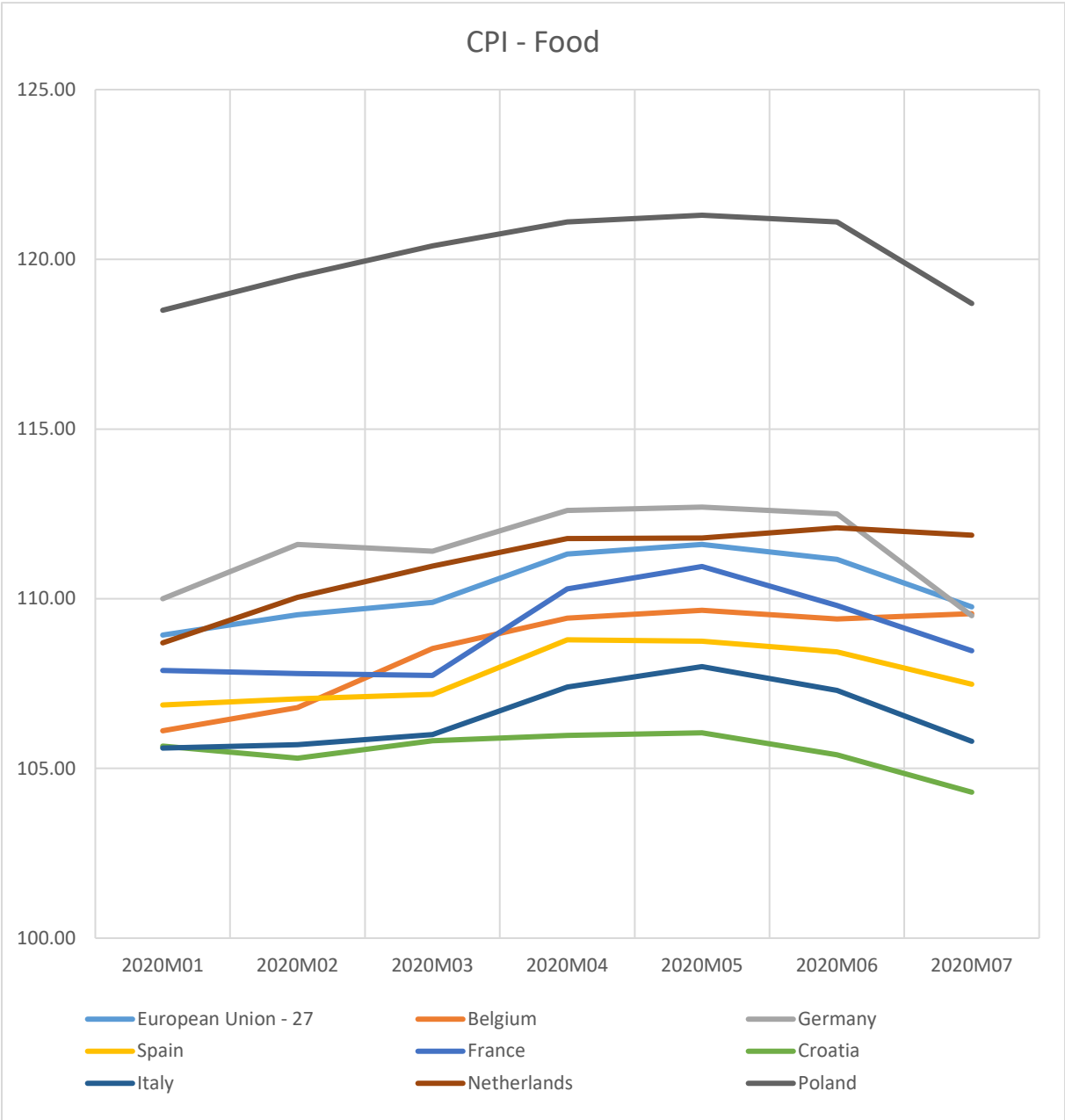
In the processed food sector, consumer prices were less affected by the Covid-19 crisis than sales volumes and turnover. When looking at the consumer price index (CPI) as reported by Eurostat (Fig. 4), a slight increase in the first quarter of 2020 was reported, with a peak in May and a slow decrease in the following month. For France and Italy, the increase was somewhat more pronounced but similar to the other case study countries, the peak was reached in May and afterwards, a slight or stronger (PO, DE) decrease was observed.

When focusing on individual food products, Germany's Federal Statistical Office reported rising prices for fresh products such as fruit and vegetables and also for fresh meat products and sausages and dairy products for final consumption. Prices for oils and fats, in contrast, went down.¹¹³ A similar observation was made in the Netherlands, where individual product CPIs also showed some peaks (e.g., for meat products in February/March 2020 and for fruit and vegetables in the period April-June).¹¹⁴

¹¹³ Topagrar (2020), based on information from Destatis (2020).
<https://www.topagrar.com/panorama/news/lebensmittelpreise-erhoehen-sich-ueberdurchschnittlich-12112851.html>

¹¹⁴ See Figure in appendix 7.1.3.

Figure 6 Consumer price index for selected countries, January-July 2020



Source: Eurostat – Food Price Monitoring.

4.3 Economic impacts along food chains

In this section we focus on the impacts of the Covid-19 crisis along the food supply chain. We separate the discussion into four sections: (1) impacts on management practices along food supply chains; (2) impacts of larger outbreak events observed in food production that occurred regardless of the prevention measures; (3) impacts of the lack of seasonal labour, one of the consequences of the travel ban and border closures; and (4) the large boost that the pandemic provided to digitalisation in the agri-food sector, as the closure of retail outlets, the HORECA sector, and other marketing channels called for new marketing approaches.

4.3.1 Change in management practices to cope with disease transmission and spread

The Covid-19 pandemic led to several changes in management practices along the food chain. From the case studies, it seems that the most impactful changes occurred at the farm and retail levels, whereas in food processing, strict hygienic conditions and protocols were already followed before the pandemic. However, at least for the slaughtering industry, it seemed that these conditions and protocols were not enough to prevent severe Covid-19 outbreaks.

For farm production, both the transport of workers (for example, for the harvest) and on-farm operations had to put into place a number of new practices in order to compartmentalize potential outbreaks, including creating stable working teams, not switching workers from one team to another, and limiting as much as possible physical contacts within the team. In addition, farmers needed to register addresses and other contact information of each worker in order to track possible contagions.

Table 6 Management practices: common observations across case studies

Common observations
<p>New hygiene rules to avoid widespread contagion among workers</p> <ul style="list-style-type: none"> • Organisation in small work teams • Application of 1.5-meter minimum distance rule • Measures to track contacts among workers • Use of masks at the workplace • Use of acrylic panes to separate the “airspace” between workstations

Source: Own compilation.

A minimum distance of 1.5 meters between workstations and in transport was set to limit physical contact. Moreover, hygiene measures such as frequent cleaning and disinfection of areas and the availability and use of protective measures and hygienic products such as hydro-alcoholic gel were adopted to limit the risks of contagion. If a person tested positive for Covid-19, that person would be isolated from the rest of workers, and the persons belonging to the same working group would be quarantined. These types of protocols were reported in different case studies (e.g., Spain, Germany).

In Spain, there was a particularly strict obligation that only workers performing essential activities were permitted to go to their workplaces in person, with only one person in each vehicle. The same rules were applied in Italy. The rule of one person per vehicle was reported not to have been followed by some workers, who often shared cars in order to get to fields or warehouses and lacked alternative transport arrangements such as public transport. There was a swift government reaction to complaints from the farm sector, and traffic agents and police officers were instructed to permit farmworkers to share cars as long as they fulfilled the minimum distance requirement and used masks.

Even though Covid-19 is not a foodborne disease, the food industry was better equipped to cope with the crisis due to its previous knowledge and protocols on coping with food diseases, through hazard analysis and critical control points (HACCP) and other hygiene practices. These practices were strengthened and complemented with other actions, such as the 1.5-meter

minimum distance between workstations and control of access to the workplace in order to avoid overcrowding at the entrance and to detect possible cases of Covid-19. In addition, workers had to fill out daily a health form to monitor their condition. Under these precautions, only production and supervision personnel could access the workplace, with the postponing of visits by external agents unless those visits were indispensable.

Similar precautionary rules applied to workers in the distribution channel. Examples include strengthened hygiene and additional protective measures, such as methacrylate screens at the checkout. To prevent crowding and to protect the health of customers, the maximum capacity in every shop was lowered, with distances between customers marked in checkout lines. In addition, handwashing with hydro-alcoholic gel prior to entrance and mask use were made compulsory. Many supermarkets, shops, and open-air markets shortened their hours of operation to permit the daily replenishing of stocks and the more thorough cleaning of their facilities. In addition, in some of the case-study countries (Spain is one example), some supermarkets established fast-track and other special shopping hours for the elderly.

As indicated above, the transport of food products was permitted, as long as the general rules of minimum distance and strengthened hygiene practices were followed. In Spain, a temporary general exception was allowed for the transport of live animals, whose drivers did not have to respect the minimum resting time for animal welfare reasons. This exception lasted from mid-March to the beginning of June.

4.3.2 Covid-19 outbreaks in the food industry

In spite of the preventative measures described above, several Covid-19 outbreaks occurred in which a large number or large share of workers at a particular company or farm got infected (Table 5). These outbreaks had drastic repercussions for the individual companies and farms and the employed workers, but the overall food supply was never threatened due to these events. However, regional shifts in slaughtering numbers did occur. For example, when Germany's largest slaughterhouse, the company Tönnies in Rheda-Wiedenbrück, had to close from June 20 to July 17, 2020 due to a large Covid-19 outbreak, a strong regional shift in the number of slaughtered pigs was observed. In the Federal State of Nordrhein Westfalen (NRW), where Tönnies is located, the production of pig meat decreased by 9.8% compared to the first quarter of 2020. Some pigs were moved to neighbouring Federal States: pork production increased by 2.0% in Niedersachsen, the biggest producing State, and by 12.9% in Sachsen-Anhalt. As there were big problems for the farmers to get their fully fattened pigs to be slaughtered, the price for slaughtered pigs went down by about 10% due to this closure. The price did not really recover until the beginning of September 2020.¹¹⁵

Slaughterhouses and farms that need a lot of manual labour seem to be particularly prone to larger outbreaks. In many cases, crowded and poor housing conditions and non-compliance of minimum distance requirements during transportation to the field seemed to be reasons

¹¹⁵ <https://www.agrarheute.com/markt/tiere/schliessung-toennies-drueckt-deutsche-fleischproduktion-571679>. Unfortunately, African Swine Fever (ASF) was detected in a dead wild boar cadaver in a forest in eastern Germany for the first time, and producer prices were even further reduced.

for infection clusters.¹¹⁶ In addition, slaughterhouses and other meat-processing firms seem to provide specific conditions in the workplace—low temperature, humidity, and an insufficient supply of fresh air—that create a favourable environment for the persistence and transmission of the Covid-19 virus.

Table 7 Outbreaks in food industry

	Slaughterhouses	Fruit & vegetable farms	Fruit & vegetable processing	Mink farms
Spain	X	X		
Germany	X	X		
France	X ¹¹⁷	X		
Netherlands	X ¹¹⁸			X ¹¹⁹
Belgium	X ¹²⁰			
Italy	X	X		
Poland	X ¹²¹		X ¹²²	

Source: Own compilation.

The food industry has been (and continues to be) the site of Covid-19 outbreaks. In Italy, several cases have been reported in slaughterhouses, where work conditions tend to favour the insurgence of outbreaks (because while the number of livestock has remained constant during the last decade, the number of livestock farms is decreasing more and more). Several outbreaks have been also registered in fruit and vegetable processing industries. In Spain, conditions in certain encampments of migrant workers have been denounced as potential loci for massive contagion due to overcrowding and a lack of proper sanitation, fresh water, garbage disposal, and general hygiene services. In some cases, local or regional authorities have prepared provisional shelters with better hygiene conditions for these workers or allocated money for improving their current shelters. Also in Germany, housing conditions for seasonal workers in slaughterhouses were suspected to contribute to not only the size of

¹¹⁶ WHO (2020): Covid-19 and Food Safety: Guidance for Food Business: interim guidance. WHO reference number: WHO/2019-nCoV/Food_Safety/2020.1.

¹¹⁷ 17.05.2020: Covid-19 outbreak in two slaughterhouses, one close to Orléans and the second close to Saint-Brieuc, with more than 100 positive cases [25].

¹¹⁸ Vion Groenlo (May 21, 600 employees); Van Rooi Meat Helmond (May 29, 1,700 employees); Vion Bostel (June 2, 1,900 employees) (BD, 2020a, b; AD, 2020a)

¹¹⁹ Around 1.3 million animals had to be culled on a total of 27 mink farms (AD, 2020d)

¹²⁰ 6 August 2020: Covid-19 outbreak Westvlees slaughterhouse (West-Flanders). First affected slaughterhouse in Belgium. Slaughterhouse remains open. <https://vilt.be/nl/nieuws/westvlees-getroffen-door-corona-uitbraak>

¹²¹ Covid-19 outbreak in meat processing plant in Jarosław – 130 employees infected – <https://nowiny24.pl/koronawirus-w-zakladach-miesnych-w-jaroslawiu-sanepid-uspokaja-wirus-nie-przenosi-sie-przez-zywnosc/ar/c1-15079097> accessed September 23, 2020, in Animex Food in Starachowice 38 people infected <https://foodfakty.pl/38-przypadkow-covid-19-w-animex-food-zaklad-zapewnia-ze-zywnosc-jest-bezpieczna> accessed September 23, 2020

¹²² 15 employees infected in the food & vegetable processing company – Bracia Urbanek in Łowicz - <https://www.portalspozywczy.pl/owoce-warzywa/wiadomosci/firma-bracia-urbanek-jednym-z-trzech-ognisk-koronawirusa-w-powiecie-lowickim,188438.html> accessed September 23, 2020, <https://www.topagrar.pl/articles/aktualnosci-branzowe-swinie/koronawirus-u-duzego-producenta-wedlin/> accessed September 23, 2020

outbreaks but also their spread from one plant to another, as several batches of workers at different meat plants in the same region were infected.¹²³ Similar observations were made in southern France: in June, there was an outbreak with 250 positive cases in the Bouches-du-Rhône region, close to Marseille. This outbreak sparked public discussion about the living conditions of these seasonal workers. Several agricultural organizations were accused of taking insufficient measures to protect their workers and were sued, albeit unsuccessfully, in the aftermath of these outbreaks.¹²⁴

4.3.3 Lack of seasonal labour

Overview

The Covid-19 pandemic coincided with the peak in demand for seasonal agricultural labour. The large variety of measures taken in countries through which these workers have to travel poses challenges to the transit and arrival of seasonal workers. Great uncertainty was caused by the Covid-19 measures, as migrant workers were not allowed to leave their home countries or to cross the borders between their home countries and the countries where their workplaces are located. Theoretically, cross-border movements of migrant workers were allowed as an essential economic activity, but in practice, misunderstandings occurred, as was the case in Belgium.¹²⁵

In some countries (e.g., France, Germany, Belgium, the Netherlands, Poland, and Spain), the shortage of migrant workers was somewhat relieved by employing local workers who had become temporary unemployed due to Covid-19.

Seasonal labour shortages were reported in Germany, Poland, Spain, Belgium, Italy, and France. Only the Netherlands, also dependent on foreign seasonal workers, did not report a shortage.¹²⁶

Table 8 Seasonal labour: common observations across case studies

Common observations
Restricted traveling at the beginning of the pandemic posed challenges
Efforts to mobilise national workers with varying success: Germany, Spain, Italy
Seasonal labour shortages from March to May were reported in Germany, Spain, Belgium, Italy, and France

Source: Own compilation.

Individual observations

Germany

¹²³ RKI (2020). Epidemiologisches Bulletin: Infektionsumfeld von erfassten COVID-19 Ausbrüchen in Deutschland. Nummer 38/20.20, 17.9.2020 (online vorab).

¹²⁴ <https://france3-regions.francetvinfo.fr/provence-alpes-cote-d-azur/bouches-du-rhone-coronavirus-saisonniers-cfdt-perd-proces-face-entreprises-agricoles-1843434.html>

¹²⁵ Trends, 2020

¹²⁶ https://www.tweedekamer.nl/kamerstukken/brieven_regering/detail?id=2020Z08070&did=2020D17238

German agriculture employs about 286,000 seasonal workers, based on statistics for 2016.¹²⁷ These workers are primarily involved in the production of fruit (strawberry, tree fruit, wine) and vegetables (asparagus, cucumber, etc.), and most come from either Romania or Poland. To ensure an adequate supply of agricultural labor in the face of the pandemic, the German government issued special travel permits in April and May 2020, so that each month, about 40,000 workers could arrive via specially arranged direct flights. Germany's Federal Ministry of Food and Agriculture and the German Farmers Organisation were also involved in this activity.

Croatia

During the peak of Croatia's social distancing and movement restrictions, the Crisis Headquarters of the civil protection authority in cooperation with the Ministry of Agriculture issued electronic passes via the Whatsapp and Viber platforms to agricultural producers who have agricultural land or facilities for agricultural production, processing, and storage and to all seasonal agricultural workers who were working outside their area of residence.¹²⁸

Italy

The pandemic decreased the number of seasonal workers available to Italian agriculture and created great difficulties for the portion of the sector that relies on such workers (e.g., floriculture, perishable vegetables). Under normal circumstances, about 220,000 farms in Italy employ agricultural labor. The total number of agricultural workers is about 1.20 million: of these, 1.05 million are temporary (i.e., seasonal), while the remainder are permanent. Of the total number of agricultural workers, about 370,000 come from other countries.

Spain

The Covid-19 crisis coincided with the seasonal surge in farm labour demand in Spain at the beginning of the spring harvest season for several types of fruit and vegetables. Usually, the number of workers in Spanish agriculture climbs from March to June and peaks in May (see Fig. in Annex). Because of the pandemic, fewer seasonal workers were employed by the sector in 2020 than in 2019.

Spain's agricultural sector usually relies on foreign workers to overcome the seasonal peak in labour demand. Some of the foreign workers come from EU countries—mostly from Romania and other eastern countries. Workers from third countries are also hired, some through a legal arrangement known as “contract in origin.” This contract consists of a collective signature of a number of labour contracts between one employer and some workers, when workers are still in their respective home countries. In this fashion, workers are granted in advance a temporary permit of work and residence. The contract specifies the tasks to be carried out, labour conditions, and the wage, and employers (farmers) have to pay for the workers' trip to

¹²⁷ <https://www.spiegel.de/wirtschaft/service/saisonarbeiter-in-deutschland-wer-die-spargel-und-erdbeerernte-rettet-a-b557bb06-a520-44d2-a8cf-9627a0a47733>

¹²⁸ <https://gospodarski.hr/casopis/izdanja-2020-casopis/broj-7-od-15-04-2020-izdanja-2020-casopis/rad-u-poljoprivredi-u-doba-koronavirusa/>

Spain and provide them with adequate housing. This contract is widely used to recruit Moroccan women for the harvest season for berries.

Figures show that the number of national workers in agricultural activities declined less than the number of foreign workers in the sector between April and June 2020, compared with the same months in the preceding year (see Table in Annex). This outcome suggests a greater mobilisation of national workers compared to foreign workers.

France

In France, a similar situation as in Germany was observed. Overall, according to the *Chambre d'agriculture*, the sector needed to replace around 200,000 workers.¹²⁹ French farmers rely mostly on seasonal workers from eastern Europe and North Africa, and many of those workers did not come to France in 2020 due to the outbreak. Stricter confinement measures in France—compared to Germany, for example—led to more difficulties for the distribution of produce (e.g., closure of local markets) and limited the mobility of workers within France. In addition, a lack of labour in the dairy sector was observed in some regions.¹³⁰ One incident was even reported in May 2020 in which seasonal workers from Bulgaria and Spain were sent back after arriving at a French airport.¹³¹

Poland

Poland's fruit and vegetable growers encountered a serious lack of seasonal workers in the Spring of 2020. Legal adjustments (such as allowing quarantines to be implemented on the farm) and the timely withdrawal of the Covid restrictions made it possible for temporary workers from Ukraine, Belarus, Georgia to rescue the harvest season in Poland, at least in part; without the farm labour of Polish workers who had lost other jobs due to the Covid, the losses would have been even bigger. Nevertheless, the number of seasonal workers in Poland in September and October 2020 was equal to that of the same months in 2019.

4.3.4 Digital innovations

Closure of the HORECA sector and the greater concentration of purchases by households in supermarkets constituted an earthquake-like disruption for some agents in the food value chain. Two main marketing channels were affected. First was the direct sales channel. Some farmers sell directly to restaurants—for example, in the cases of top-quality beef or vegetables. Besides, certain rural areas benefit economically from weekend tourists who visit the countryside and purchase local food products as a part of their touristic experience. In peri-urban areas, consumer-supported agriculture has flourished in recent years through consumer groups or the distribution of boxes containing seasonal produce. Movement restrictions and the shutting down of hotels and restaurants greatly reduced food sales through these direct channels.

¹²⁹ <https://www.france24.com/en/20200407-sigh-of-relief-for-french-farmers-as-some-street-markets-reopen>

¹³⁰ <https://www.ouest-france.fr/economie/agriculture/coronavirus-lait-10-millions-d-euros-pour-reduire-les-volumes-6798369>

¹³¹ <https://www.euractiv.fr/section/agriculture-alimentation/news/agriculture-les-frontieres-vont-elles-enfin-souvrir-pour-les-saisonniers/>

Second, new digital channels for marketing were developed on extremely short notice, along with new recruitment channels for seasonal workers. Examples for these new channels can be found in France, Spain, Germany, Italy, Poland, and Croatia.

Table 9 Digital tools became more widely used as a response to the coronavirus crisis

Digital tool	Member States
Internet-based platform to recruit local labor force	Germany ¹³² , France ¹³³
Distribution of produce directly from farms in “boxes”	Spain, Germany ¹³⁴ , Italy
Home delivery and carry-out services by restaurants	Germany ¹³⁵ , Poland, Italy, Spain
Establishment of internet platforms for (produce) sales for farmers	Croatia ¹³⁶ , France ¹³⁷

Source: own compilation.

In France, for example, it was reported that the new labor recruitment platform resulted in around 50,000 inscribed job candidates by the beginning of April.¹³⁸ However, it was also reported that because of some uncertainties, farmers were reluctant to contract workers without prior experience in agriculture and because their availability was not clear after the confinement period (when the contracted workers would be allowed to go back to their usual jobs).¹³⁹

Box 1 Spain: A win-win initiative of advertising for SME

At the beginning of April 2020, the national online newspaper “eldiario.es” opened a new ad platform dedicated to SMEs and cooperatives, at very affordable prices starting from 1,000 euro. The idea arose from Viver Cooperative, a producer of mostly top-quality olive oil, wine, and nuts. Its manager, Fernando Marco, was aware that big firms were cutting advertising expenses during the Covid-19 crisis. At the same time, the cooperative was suffering a sharp reduction on sales. They were doing an advertising effort in “traditional” online media such as Google ads and Facebook but could not afford a countrywide advertising campaign in general media. Thus, Mr. Marco proposed that the newspaper open a new online platform to serve smaller firms. After the platform was implemented and the campaign started, the cooperative increased its online sales by 300% in April compared to the pre-crisis period.

In Spain, an online newspaper creating a new advertising platform for SMEs and cooperatives to market their food products (see box 1 Spain for details). A similar approach arose from

¹³² <https://www.daslandhilft.de/>

¹³³ <https://desbraspourtonassiette.wizi.farm/>

¹³⁴ <https://gastgewerbe-magazin.de/lieferdienst-und-ausser-haus-verkauf-starten-als-alternative-in-der-corona-krise-28374>

¹³⁵ <https://www.lecker-durch-die-krise.de/heinsberger-boxen.html>

¹³⁶ Establishment of Tržnica.hr. A national internet market of domestic products, which in one place enables the purchase and sale of domestic products from fields, farms and fish farms from all over Croatia. (source: <https://trznica.mps.hr/>)

¹³⁷ The French Chamber of Agriculture states in its publication “Covid-19 Way out of the Crisis – which short-term actions to take: “To compensate for the loss of certain outlets, some regions have already taken initiatives to market regional products, in particular through the development of digital platforms to bring producers and buyers/consumers together”. Available at: <https://chambres-agriculture.fr/publications/toutes-les-publications/la-publication-en-detail/actualites/covid-19-sortie-de-krise-quelles-actions-a-court-terme/>.

¹³⁸ <https://www.france24.com/en/20200407-sigh-of-relief-for-french-farmers-as-some-street-markets-reopen>

¹³⁹ Euractiv.de (2020). Available at: <https://france3-regions.francetvinfo.fr/provence-alpes-cote-d-azur/bouches-du-rhone-coronavirus-saisoniers-cfdt-perd-proces-face-entreprises-agricoles-1843434.html>.

several specialised retailers and their associations, which bolstered their online sales and delivery channels.

5 Discussion: Substantial economic and political threats due to Covid-19 responses

In the first half of 2020, policy making and market management were focused on finding the right reactions to the challenges of the Covid-19 pandemic. Nevertheless, policy developments reaching beyond Covid-19 also took place and need to be considered in the context of the pandemic. In the next two sections, we first discuss EU internal policy topics and then focus on the external implications of EU agri-food market impacts and policy.

5.1 Threats to European solidarity and sustainability

Threats to the common market

As was presented in the beginning of this paper (Fig. 2), at least at two stages, the functionality of the common market was under threat.

The *first threat by border closures* was resolved within a short period of time, as all Member States quickly understood that closing the borders was not just potentially damaging to foreign countries but also to themselves if supply chains for agri-food products and other goods such as medical products were severely slowed down or temporarily interrupted. Agri-food markets in the EU are so strongly interlinked, that for all Member States, a disruption of the flow of goods provides at least as many negative impacts as potential benefits. Hence, rationalization of such a drastic reaction as a border closure may become increasingly difficult.

The *second threat by domestic consumption – dominance* to the common market emerged slowly. In April 2020, the Bulgarian government issued a decree that required the country's retailers to source more than half of their product from local producers, justifying this measure with necessary support for local agriculture. The governments of the Czech Republic, Austria, and France considered similar actions, advocating for consuming more domestically produced products, buying more from local farmers, and even announcing the need to “rebuild French agricultural independence,” but did not go so far as to develop national legislation along these lines as a response to the crisis.¹⁴⁰ The European Commission and Member States warned against “consumption nationalism,” and the Commission underscored

¹⁴⁰ Calling on the patriotism of French consumers and the supermarkets, France's Economics Minister Bruno Le Maire asked supermarkets to stock more French products (<https://www.retaildetail.eu/en/news/food/french-supermarkets-lend-their-support-french-agriculture>). Supermarkets responded to this call to a certain degree. For instance, Lidl only sold strawberries and asparagus from France in its French stores, and Spanish variants were even taken off the shelf and donated. Other supermarkets also gave priority to French products (<https://www.france24.com/en/20200328-france-issues-call-to-buy-french-as-coronavirus-erodes-single-market>).

that the internal market is “our strongest asset in ensuring supplies across the EU.”¹⁴¹ However, when Germany took over the EU Presidency for six months at the beginning of July 2020, the German minister of agriculture carefully differentiated the matter by arguing that “local culinary food patriotism” is acceptable but that “consumption nationalism” is not.¹⁴² Given this development, the topic became one of the items to be discussed at the informal gathering of the EU’s ministers of agriculture at the beginning of September 2020.¹⁴³ The topics of regionalism of production, the free and non-discriminatory flow of goods, and whether and how better labelling of the origin of food products might contribute to these objectives are among those that have re-emerged with greater urgency from the period of crisis, and their debate may continue during the period of “new normality.”

Threats to CAP reform and Green Deal ambitions

The Covid-19 crisis interfered with discussions about the reform of the EU’s Common Agricultural Policy (CAP) and legislative proposals of the Green Deal “package”: the Farm-to-Fork strategy and the Biodiversity strategy. Questions arose about the right timing of these reforms and the “primacy of food security over environmental concerns.”¹⁴⁴ This debate came up at the height of the first wave of Covid-19 infections, when lockdown measures were still in place and the Commission presented its first draft of the Farm-to-Fork and Biodiversity strategies. Copa-Cogeca highlighted in a press release from May 2020 that these strategies may “endanger strategic interests in food security, agricultural competitiveness and farming income” which have already been “heavily impacted by the Covid-19 crisis.”¹⁴⁵ These concerns were voiced again on the occasion of the informal gathering of agricultural ministers gathering at the beginning of September, highlighting that the key priorities for recovery and the CAP should be “EU food security, farming competitiveness and decent income of farmers.”¹⁴⁶ Hence, this debate, previously presented as being about food or “consumption nationalism,” became centered additionally on questions of “food sovereignty” or “food resilience” within and for the EU. Currently, food security for the EU as a whole is not under threat and is not likely to be under threat in the future, but a debate about domestic production versus trade seems to be at the horizon. Given the achievements of multilateral trading agreements, the benefits of international trade, and the dependency of certain countries on functioning international markets, this debate over the merits of international agri-food trade may affect the interests of some EU trading partners and require further observation.

¹⁴¹ <https://www.euractiv.com/section/agriculture-food/news/commission-warns-against-shift-towards-protectionism-in-agri-food-sector/>

¹⁴² BMEL (2020). Pressemitteilung Nr. 115/2020, January 7.

¹⁴³ https://www.bmel.de/SharedDocs/Downloads/EN/Farming/diskussionspapier-rat-koblenz.pdf?__blob=publicationFile&v=2

¹⁴⁴ EPRS (2020). European Union Food System. EPRS Ideas paper. Brussels.

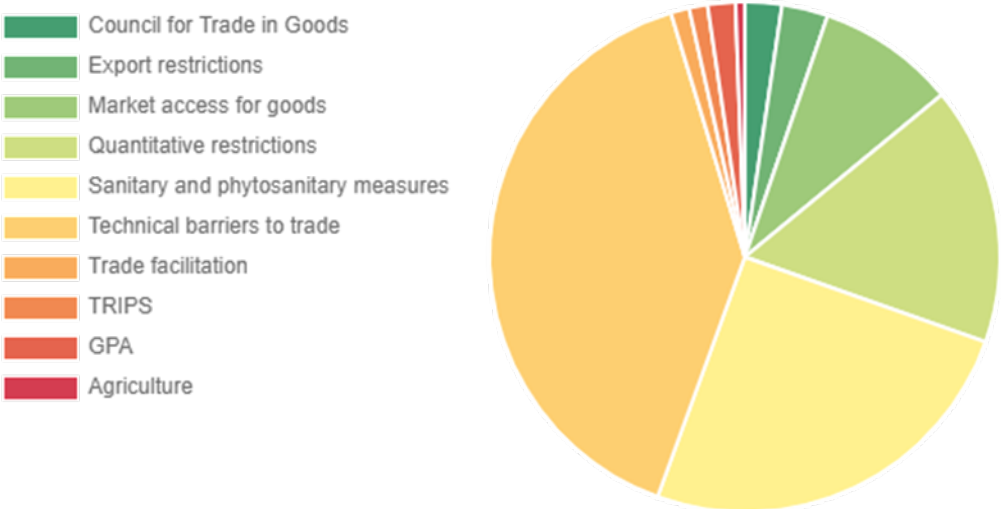
¹⁴⁵ Copa Cogeca (2020). Press release, May 20. Brussels.

¹⁴⁶ Copa Cogeca (2020). Press release, January 9. Brussels.

5.2 Threats to global sustainability

As was already discussed in the previous section, Europe’s economies are far from being back on the path that was observed prior to the pandemic. Agri-food exports are still below the levels observed previously, and the prospects of the EU’s agri-food sector still depend on pandemic-related developments in major export destinations. The containment measures put in place were not only a problem for the EU’s domestic producers but also for all foreign producers and traders dependent on the EU market.¹⁴⁷ Contrary to the EU producers, however, foreign producers were not benefitting from EU support packages but instead were dependent on support measures assembled by their own national governments.

Figure 7 Covid-19 related trade measures (March-October 2020, total of 271)



Source: WTO¹⁴⁸

On the other side, the EU and some Member States (e.g., France, Germany, Spain, and Italy) were rather active in organising a global Covid-19 response; for example, by co-hosting and strongly supporting a global pledging event on May 4 at which 7.4 billion euro were collected for Covid-19-related research prevention, diagnostics, and treatment.¹⁴⁹ Apart from that, EU institutions (and Member States) together with partner countries were active in re-organising and prioritising support measures to tackle Covid-19 challenges in partner countries. Until July 2020, about 500 million euro were provided for emergency preparedness measures, about 3.222 billion euro for strengthening the response and capacities of healthcare systems, and about 16.500 billion euro for economic measures to partner governments that allow those governments to deliver essential services, provide loans, and boost economic activities.¹⁵⁰

¹⁴⁷ Obviously, this observation applies to other markets relevant for exporters from low income countries. For the U.S. market, the economic impacts of the Covid-19 outbreaks, including trade, can be found in: CAST Commentary (2020): Economic Impacts of Covid-19 on Food and Agricultural Markets. QTA 2020-3

¹⁴⁸ https://www.wto.org/english/tratop_e/covid19_e/notifications_e.htm

¹⁴⁹ EU (2020). Coronavirus global response summit: External response factsheet. Brussels.

¹⁵⁰ https://ec.europa.eu/international-partnerships/topics/eu-global-response-covid-19_en

These latter activities are support measures that governments may use to tackle problems resulting from economic downturn and containment measures.

Apart from the effects on trade volumes, trade destinations, and the prospects for trade, there is also a political dimension to the impact of the European policy response on partner countries. Many countries throughout the world have put in place trade-related measures in response to the pandemic. The WTO counts for the period March-October 2020 a global total of around 300 Covid-19-related measures. Most of these measures limit the export of medical goods and services; however, some 10% limit food exports (Fig. 6). Even though the EU is among the top 10 countries which have implemented new and Covid-19-related measures, except for Romania, no EU Member State used any trade-restricting measure on agriculture. Such measures were typically implemented by Asian countries and by non-EU countries in Eastern Europe.

Several low-income countries rely greatly on food exports. Hence, the Covid-19 crisis has hit them hard twice and may have negative economic effects that continue until the crisis is over in the destination countries for their agri-food exports, such as the EU. For this reason, another policy debate has arisen at the EU level: In addition to aid measures, is it possible to revive trade flows from these countries, and how may this best be achieved?

A group of nearly 40, mainly developing, countries stressed at the WTO recently the risk of being hit by envisaged strengthened EU standards in terms of lowered maximum residue levels as part of the “From farm to fork” Strategy. At the end of October 2020, these countries asked for suspending respective plans as an additional burden within the Covid-19 crisis.¹⁵¹ So far, the EU rejected this request beginning in November 2020 by referring to public health as now even more relevant.¹⁵²

6 Conclusion

This paper analyses how national and European policies responded to the Covid-19 pandemic and how the pandemic affected agri-food markets in terms of production, income, trade, and demand. Even though the first outbreaks of Covid-19 in EU Member States (France and Germany) were observed in January, the full impact of the pandemic only started to emerge in March 2020. Thus, as of November 2020, the pandemic is still a relatively recent development in the EU, since the first outbreaks only happened about ten months ago.

Overall, it is difficult to get a clear comparative picture of the pandemic’s impact on the EU Member States, as statistics at EU level have a certain time lag. National data collections also require time; hence, this study is mostly based on evidence sampled from newspaper articles and national press releases from ministries, associations, and organisations. Out of this research, at a technical level, the question arises if a better short-term monitoring or alert system would be useful and necessary and how this could be developed.

¹⁵¹ See https://www.wto.org/english/tratop_e/covid19_e/notifications_e.htm

¹⁵² See https://www.wto.org/english/tratop_e/covid19_e/notifications_e.htm

Generally, we can distinguish three phases in the EU response to the Covid-19 pandemic. The early phase took place in March, when Member States individually tried to react to accelerating transmission rates with strict lockdowns, school and business closures, and social distancing measures, with the objective of interrupting and reducing the dynamics of the outbreak. The second phase started with better coordination of measures EU-wide and included the design of the first support packages. In the third phase—starting in the end of April or the beginning of May, depending on the Member State—a slow re-opening of schools, businesses, and in particular, the heavily affected HORECA sector occurred, in preparation for the economically important summer holiday season. Since then, Member States have tried to find a “new normal” in which restrictions due to necessary sanitation and social distancing rules are balanced with operational flexibility so that most sectors may operate relatively normally. As of September 2020, we seem to have moved into a fourth phase, as infection rates have started to rise once again (Fig. 2).

While there has been no food shortage at any point during the Covid-19 crisis across EU Member States, there were certainly food access issues, as prices of certain goods increased, fresh and seasonal produce suffered from logistical challenges, and low-income groups were strained by higher prices and tighter budgets. Agri-food markets saw drastic shifts in demand and consumption patterns in March and April, mostly due to the closure of businesses in the HORECA sector. Since then, under new consumption patterns, markets started to normalize again. In particular, consumer prices increased, but not by enough to offsetting losses for the agricultural and food processing sectors, as many markets in the EU and abroad declined due to market closures, decreases in consumer income, and a downturn of the global economy. These effects will be felt longer term, as the pandemic is still not contained, and by September 2020, a second wave of Covid-19 infections seemed to be rising in the EU. Moreover, incomes have not yet recovered, and another year of economic contraction is forecasted for 2021.

A positive factor contributing to the displayed resilience of the EU food system is that overall, there are plenty of geographically distributed producing and processing companies, and food production is rather decentralised. For most products, output is not very concentrated, with many small and medium-sized processors located across all EU countries. An exemption may be the slaughtering industry in central Europe, heavily concentrated in several EU countries, but even here, the supermarkets’ supply of meat products was not threatened at any time.

Regarding the policy dimension, we observed that national governments first scrambled to hold pace with the developing outbreak, defining the necessary health and sanitation rules and trying to contain the economic impacts of the resulting measures. These actions largely took the form of unilateral domestic measures, and concerns over collateral damages to neighbouring countries and trading partners—for example, due to border closures for goods and travel bans—were pushed to the background given the severity and dynamic nature of the outbreak. However, at least EU-wide, the issue of how to maintain the cross-border transit of goods was resolved quickly and cooperatively, and the functionality of the common market was restored. Afterwards, EU Member States managed to better coordinate the “re-opening,” and approaches to evaluating and containing the pandemic became somewhat comparable across Member States, such that (air) travel, holidays abroad, larger gatherings, etc., were possible again. For the future, it would be recommendable if EU Member States could agree

upon common guidelines and the harmonisation of containment and social distancing rules so that travel, work, and study within the common borders of the EU become manageable and predictable again.

Given the substantial income losses that occurred to the agri-food sector and the limited possibilities to provide policy support to domestic farmers and agri-food businesses, the debate about the economic benefits of local consumption popped up again, as did a debate about an alleged dichotomy between environmental protection and agri-food production. There are good reasons why agri-food trade increases the efficiency and sustainability of the agri-food sector, but obviously there are arguments that support a more localised approach. This debate is not new, and it has gained traction again during the pandemic. Former EU trade commissioner Hogan advocated in one of his last speeches in June 2020 a model of “open strategic autonomy” for the EU. This meant, referred to the global scale, that the EU should achieve the right balance between a Europe that is “open for business” and a Europe “that protects its people and businesses.”¹⁵³ However, observing the debate that emerged within Europe during the pandemic regarding “consumer nationalism” versus better regional differentiation of European agri-food products, it seems that a similar strategic discussion is necessary within Europe, thus, on the EU scale.

With the world about seven months into the pandemic and the realisation that Covid-19 will be around for a while, greater coordination is needed at the European level: a harmonisation of containment measures may be useful; for example, with similar reaction parameters regarding at which stage of an outbreak dynamic a particular type of containment measure should be put into place and how stringent that should be defined, and when a region may be considered “safe” for tourism and travel to resume without travellers needing to quarantine after returning home.

To conclude, the Covid-19 pandemic and its impacts on agri-food markets are unprecedented, and it will take a while to fully capture the explicit and implicit transformations that were induced by to the pandemic’s market disruptions. While the last three quarters of 2020 were fully devoted to the management of the Covid-19 crisis, it is clear that other topics will eventually need to move back to the forefront of attention and will do so; examples include increased sustainability, a resource-efficient economy, and labour migration. The challenge of the next years will be how to attend to these policy areas within the difficult context of a global economy fighting the health, food, and nutrition security crisis that the pandemic unleashed.

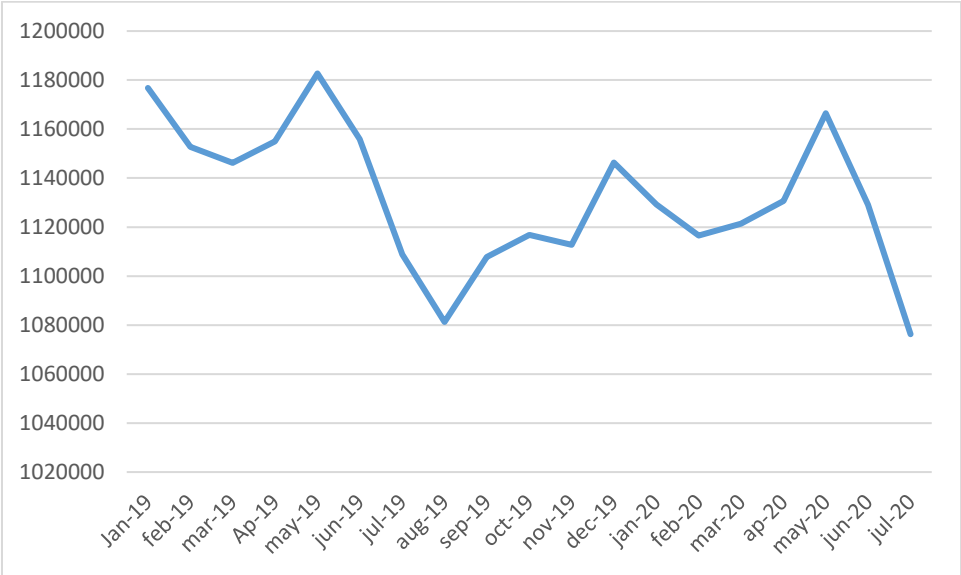
¹⁵³ Speech by then trade Commissioner Phil Hogan at launch of public consultation for EU Trade Policy Review; EUI Florence, June 16, 2020.

7 Annex: Supporting evidence from national case studies

7.1 Impacts on agri-food markets

7.1.1 Production

Spain: Monthly number of workers in Spanish agricultural sector, July 2019 to July 2020



Source: Own calculations based on average number of monthly registered workers in social security under the agricultural regime.

Spain: Percent change in number of national and foreign workers in Spanish agriculture, spring months 2019-20

	National workers	Foreign workers
April	-2.06%	-2.35%
May	-0.68%	-2.37%
June	-3.78%	-7.78%

Source: Own calculations based on number of monthly registered workers in social security under the agricultural regime, end of month data.

Germany: Developments in food processing industry, March-June 2020; changes in percent against corresponding month last year

	February	March	April	May	June
Production index	-1.0%	-3.5%	-15.6%	-13.3%	-3.0%
Turnover	+6.9%	+15.5%	-5.1%	-8.4%	+3.6%
Prices in Germany	+4.5%	+4.8%	+3.2%	+1.4%	+0.5%
Prices abroad	+3.7%	+3.2%	+1.1%	-0.4%	-0.7%
Price index for imported food products	+7.9%	+6.9%	+5.4%	+4.2%	-3.4%
Export	+6.4%	+1.5%	-7.7%	-11.2%	3.5%

Note: With "abroad" and "export," all sales outside Germany are included.

Source: Own compilations based on "Lebensmittelbarometer," various editions, BVE.

Belgium: Price changes in main agricultural sectors between week 11 (start of covid-19 measures) and week 22

Sector	Price change	Caused by:
Dairy: - Butter - Skimmed milk powder (SMP) - Full milk powder (FMP)	-13% -10% -3.6%	- Decrease in demand (closure of HORECA sector and decreasing export demand) - Seasonal peak in supply
Pork: - Piglets - Pork meat	-47.7% -27.6%	- Continued decrease in pork prices - Pressure on EU market due to oversupply - Pork exports depressed due to Covid-19 but also because of the presence of African Swine Fever (ASF) in Belgium and the subsequent closing of Asian export markets.
Beef: - For domestic consumption	+5%	- Annually recurring phenomenon linked to slight decrease in supply due to the production cycle of beef. This seasonal effect coincided this year with higher demand from wholesale and butchers and the barbecue season.
Lamb:	Sharp decrease	- Demand for lamb meat is highly dependent on the HORECA sector
Poultry:	-10.6%	
Potatoes:	Severe price drop, all market transactions ceased	- Potato sector is highly dependent on export market (e.g., 90% of all frozen potato chips are destined for export) - Cancellation of major events such as the Olympic Games and the European Championship soccer
Fruit & vegetables: - Lettuce, cucumber, tomatoes - Apples, pears	- Price decrease - Prices stable	- Drop in demand from HORECA sector
Floriculture:	- Severely affected	- Closure of garden centers and flower shops - Loss of demand for spring festivities such as Easter and Mother's Day - Loss of export market

Source: <https://www.landbouwleven.be/8151/article/2020-06-03/vlaamse-landbouw-en-corona-welke-sectoren-voelen-de-zwaarste-klappen>

7.1.2 Trade

Spain: Data on agri-food exports, March-May 2020

	Export value (millions of euro)	Trade balance (millions of euro)	Share in overall trade	Sectoral annual variation (%)	All the sectors annual variation (%)
March	4,764.3	1,682.7	21.9	12.9	-14.5
April	4,366.0	1,648.0	29.0	+5.5	-39.3
May	4,164.1	1,586.0	23.8	-7.0	-34.4

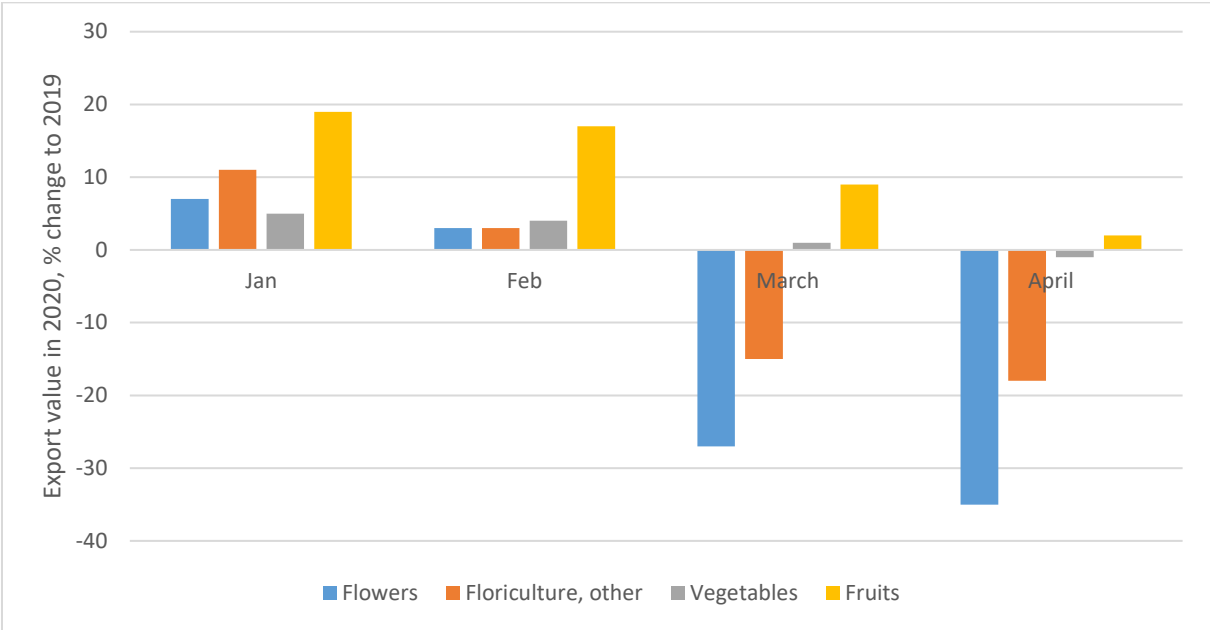
Source: Own calculations based on Ministry of Industry, Trade, and Tourism data.

Italy: Exports (millions of euro, 2020 compared to 2019)

	2019	I semester 2019	I semester 2020	Var. I semester 2020 / I semester 2019
Sectors				
Cereals	6.573	3.116	3.545	13,8
Wine	6.434	3.015	2.892	-4,1
Vegetables	4.043	2.184	2.377	8,8
Fruit	4.410	1.888	1.962	4,0
Dairy	3.531	1.703	1.720	1,0
Meat	3.102	1.477	1.469	-0,5
Drinks	2.907	1.407	1.312	-6,8
Fats and oils	1.881	936	989	5,7
Industrial crops	1.830	804	986	22,7
Floriculture	894	614	538	-12,4
Fish	736	355	354	-0,2
Forage	199	94	112	19,6

Source: ISMEA and ISTAT

Netherlands: Change in export value in the horticultural sector, 2019-20

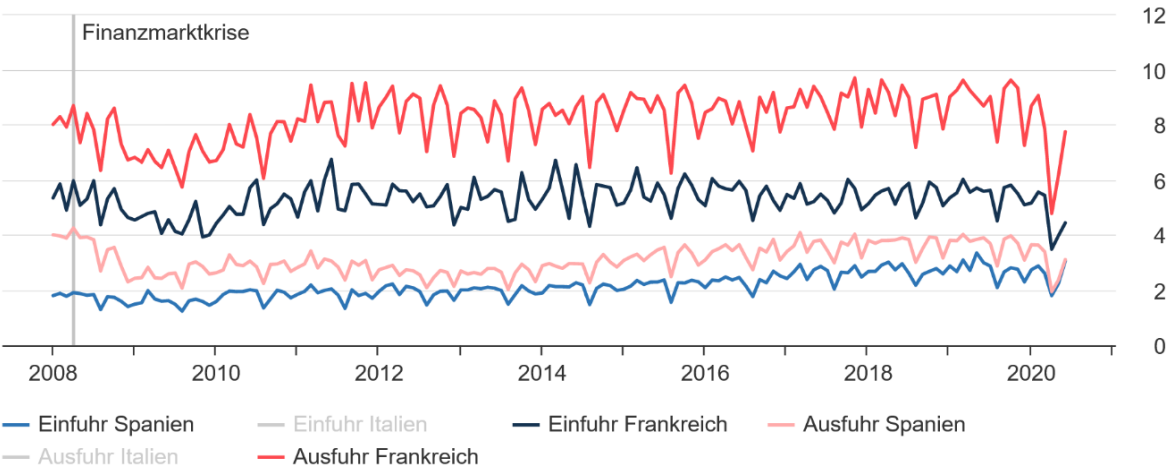


Source: Based on Centraal Bureau voor de Statistiek (CBS) (2020a), “Daling export tuinbouwproducten in april 2020,” June 25, 2020, <https://www.cbs.nl/nl-nl/nieuws/2020/26/daling-export-tuinbouwproducten-in-april-2020>

Germany: Trade with France, Spain, and Italy (2008-20)

Außenhandel mit Frankreich, Spanien und Italien

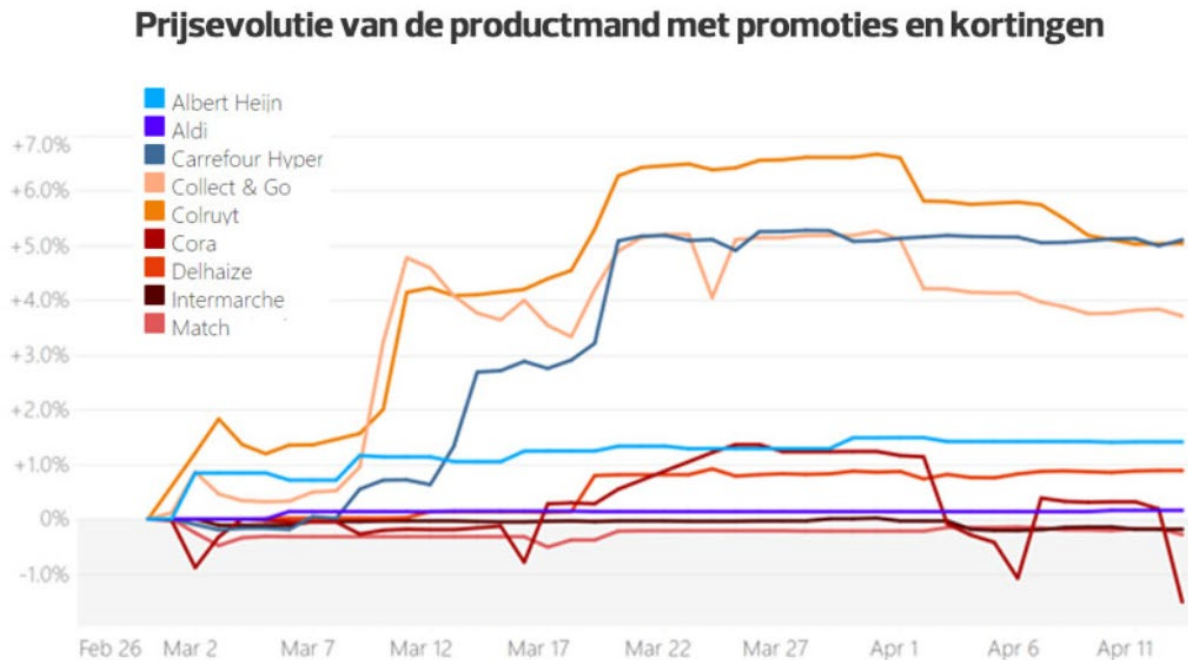
In Mrd. Euro



Source: Destatis (2020).

7.1.3 Prices

Belgium: Price evolution in the product basket with promotions and discounts, March – April 2020.

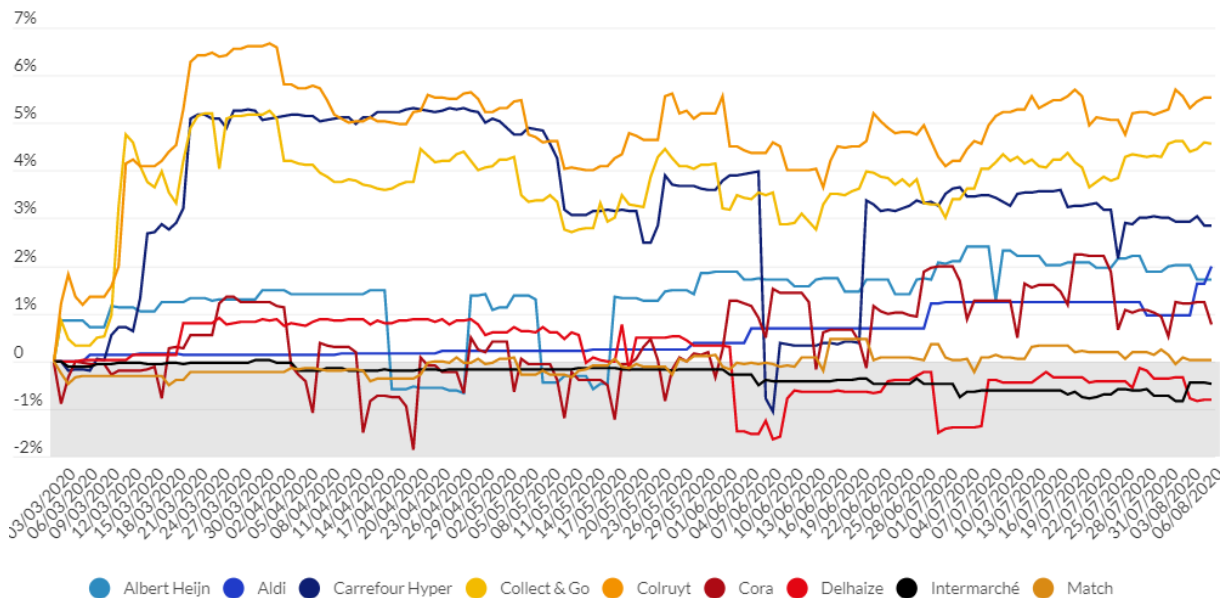


Note: This figure is based on the price monitoring tool of Test Aankoop (the Belgian consumers organization). The tool uses a basket of 267 products from various categories of consumer goods (staples, cosmetics, drinks, dairy etc.). Fresh products such as meat, fruit, and vegetables are not included in the basket because prices of these products may change on a daily basis. This figure only shows price changes and does not reflect the average price level in each of these supermarket chains.

Source: Test Aankoop (2020a), "Corona-effect op de supermarktprijzen: tot ruim 6 % duurder," April 14, 2020.

Belgium: Price evolution in the product basket with promotions and discounts, March – July 2020.

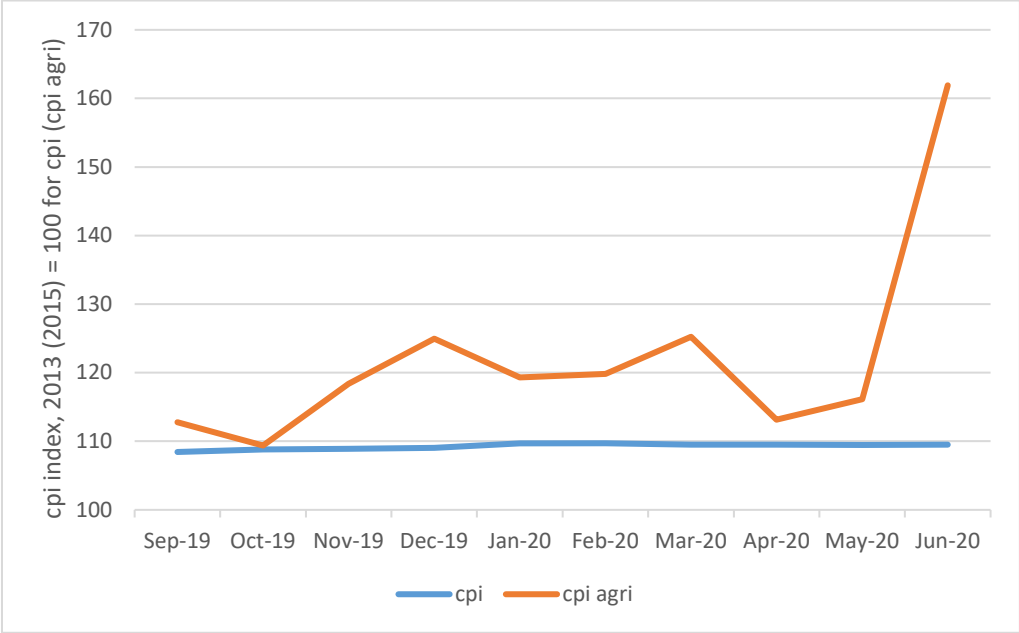
Prijsevolutie van de productmand met promoties en kortingen



Note: This figure is based on the price monitoring tool of Test Aankoop (the Belgian consumers organization). It uses a basket of 267 products from various categories of consumer goods (staples, cosmetics, drinks, dairy, etc.). Fresh products such as meat, fruit, and vegetables are not included in the basket because prices of these products may change on a daily basis. Note that this figure only shows price changes and does not reflect the average price level in each of these supermarket chains.

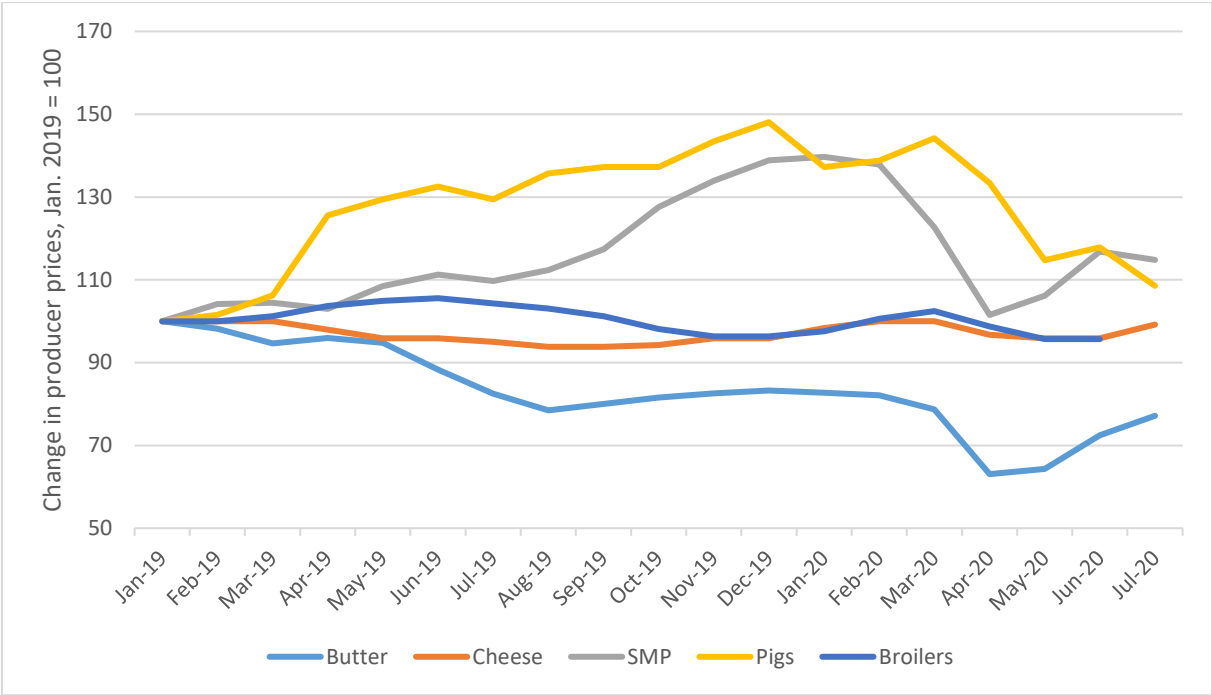
Source: Test Aankoop (2020b), "Zo evolueren de prijzen in de supermarkten," July 31.

Belgium: Consumer Price Index (cpi) and Consumer Price Index for agricultural and horticultural products (cpi agri), 2019-20



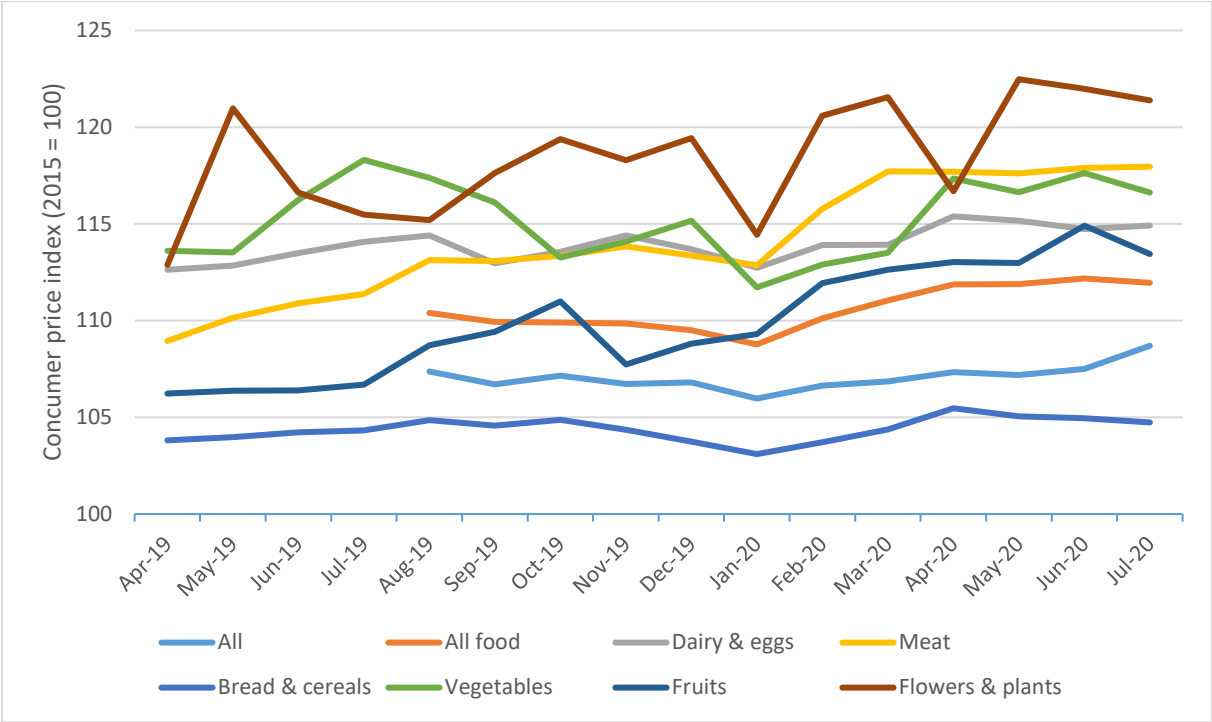
Source: STATBEL (2020), <https://bestat.statbel.fgov.be/>

Netherlands: Farm-gate prices (pigs and broilers) and wholesale prices (butter, cheese and skimmed milk powder [SMP])



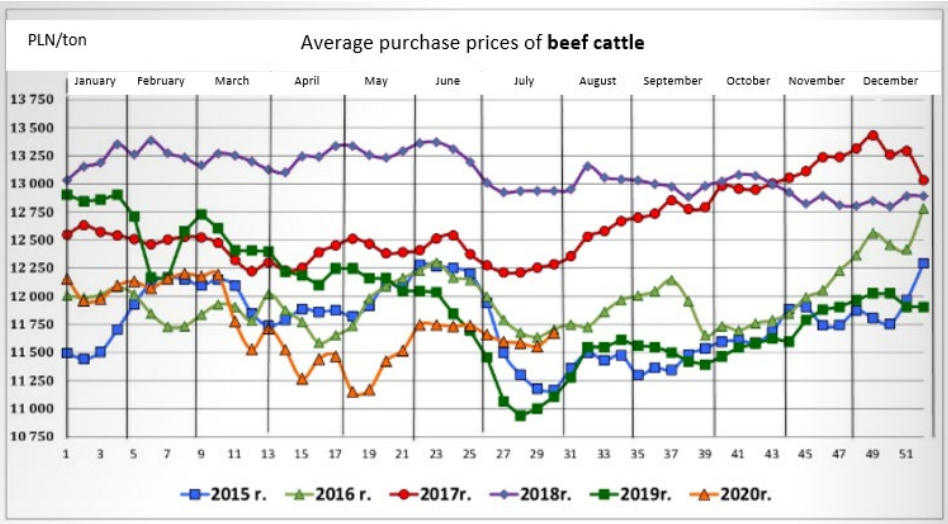
Source: Own representation based on Agrimatie (2020), "Agricultural prices," Agro&Food portal, Wageningen University & Research, <https://www.agrimatie.nl/Prijzen.aspx?ID=15125>

Netherlands: Consumer price index for different agri-food categories, 2019-20



Source: CBS (2020b) “Consumentenprijzen; prijsindex 2015=100,” Centraal Bureau voor de Statistiek (CBS), August 6, <https://opendata.cbs.nl>

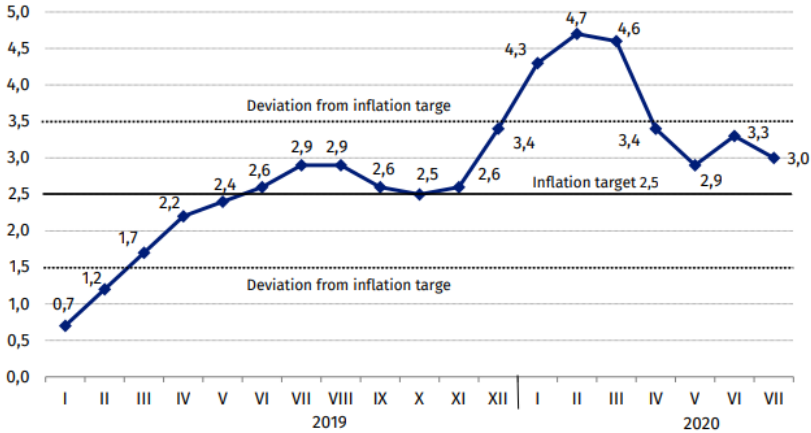
Poland: Average purchase prices of beef cattle (2015-20)



Source: Data from Ministerstwo Rolnictwa i Rozwoju Wsi (Ministry of Agriculture and Countryside Development) — available at <https://agronews.com.pl/artukul/rynek-wolowiny-i-cieleciny-notowania-w-okresie-20-26-07-2020r/>, accessed August 6, 2020.

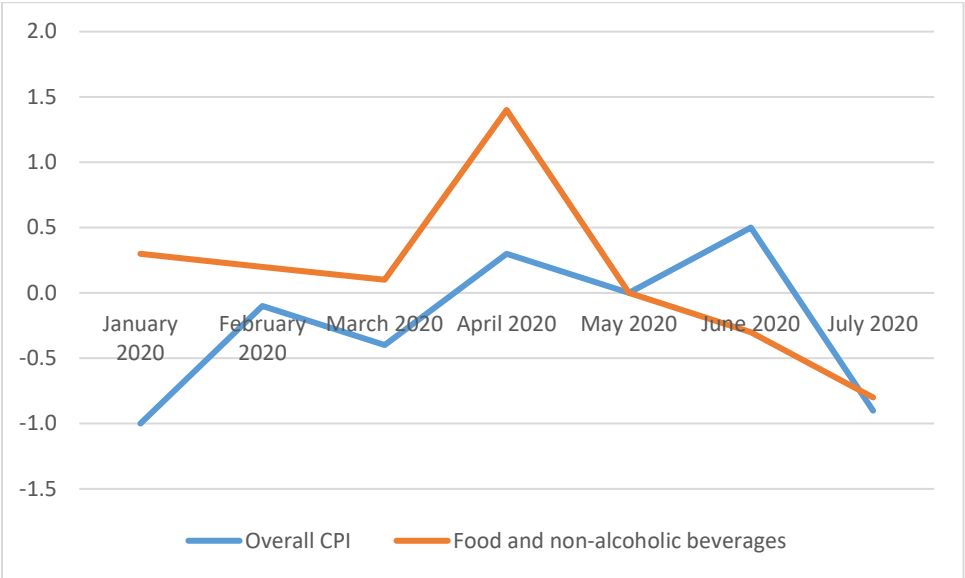
Poland: Consumer price changes

Chart 4. Consumer prices (change in % compared with the corresponding period of the previous year)



Source: Statistics Poland. Consumer price indices in July 2020.

Spain: Evolution of the monthly variation of Consumer Price Index (CPI), January-July 2020.



Source: National Statistics Institute (INE)