



Food systems and COVID-19 in Latin America and the Caribbean: Impacts and opportunities in fresh food production

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1. Editorial



The health crisis caused by the COVID-19 pandemic has become the most considerable global economic crisis in the last hundred years. The agrifood sector fulfils a primarily social function; yet it has not been immune to the effects of the novel coronavirus, which have interrupted the normal functioning of food chains.

In the agrifood sector, unprecedented problems have led to unprecedented challenges. In Latin America and the Caribbean, food production has not stopped; workers, although in difficulty, are showing up at their workplaces. It could not be otherwise: food is essential. Today, if it were not for the people who work along the supply chain, we would not have anything to eat. It is worth recognising the work of these heroes from another front line.

Therefore, when we evaluate in detail the consequences of COVID-19 on primary production, it seems clear that these have not been critical. However, we cannot lose sight of the coming agricultural seasons, and we must monitor, with even more zeal, the disruptions in the sectors which are most vulnerable to this health, economic and social crisis. Furthermore, we must bear in mind that we do not know the duration and long-term consequences of the pandemic; nor do we know when outbreaks may occur, or when the dynamic of lockdown and deconfinement measures will end. In short, we do not know when and how things will return to normal.

We have been foolish and we have stressed every time we have been able to do so that this crisis is a magnificent opportunity to rethink our production models. Because of their importance, agrifood systems are a necessary starting point for the long process of recovery and transformation that lies ahead. Therefore, let us not miss the opportunity to do everything possible so that food chains become more and more inclusive and, also, more resilient to the impacts of climate change and health crises.

2. Key messages



- The effects of COVID-19 have had an impact on primary production, although without critical consequences.
- The main factors affecting primary production are: **lack of liquidity, availability of labour and availability and price of agricultural inputs.**
- The sectors most affected by the **lack of liquidity and availability of labour** are **fisheries, aquaculture and fruit and vegetables.**
- The lack of liquidity affects mainly small producers, while the availability of labour affects large producers.
- The sectors that have been **less exposed to COVID-19** are those with **low labour demand and high mechanization**, such as industrial soybean, grain and oilseed crops.
- It is necessary to support the most affected subsectors with immediate response measures, especially those focused on:
 - **Increasing liquidity** through cash transfers or credits.
 - **Reducing costs** through the extension or cancellation of public or private debts.
 - **Marketing support** through public procurement, for example.
- As for measures to **maintain the availability of labour**, we can mention:
 - Allowing **free transit** of national and migrant workers.
 - Promoting **prevention** so that workers avoid getting sick, and **protection** in case of illness.
- The crisis generated by COVID-19 opens a window of opportunity to **transform** primary production into a more sustainable and resilient economic sector, through the implementation of **technological innovations, nature-based solutions and improvements in the institutional environment.**



3. An approach to primary production in Latin America and the Caribbean



3.1. Family farming

Family farming in Latin America and the Caribbean is of the utmost importance: it accounts for nearly 81 percent of farms and generates 50 percent of employment in the agricultural sector in the region (FAO and IADB, 2007; FAO, 2012).

Today, because of restrictions imposed to prevent the spread of COVID-19, the main obstacle that family farming must overcome is not the availability of labour – small agricultural estates are, after all, self-employed family units – but the **lack of liquidity for producers**. Cash shortage is mainly due to a decrease in agricultural income (because of a lower demand for food), and non-farm income and remittances (both resulting from the global economic crisis).

A series of telephone surveys and structured interviews conducted by the Inter-American Development Bank (IADB) with small and medium-sized producers revealed a clear lack of liquidity: 65 percent have experienced a decline in sales, and 70 percent have resorted to selling assets, use of savings or credit requirements to solve the crisis (IADB, 2020).

3.2. Agribusiness

In Latin America and the Caribbean, agribusiness (agro-industries) has been consolidated in the last decade. This sector is responsible for a considerable number of jobs and makes a significant contribution to the basic food basket. Its influence is not limited to the region's most immediate radius, as it provides more than half of the world's exports of bananas, sugar and soybeans; and more than a quarter of global exports of coffee, beef, chicken and corn (IADB, 2018).

The sector has been hit by the pandemic, in particular as a result of **labour shortages** generated by lockdown and mobility restriction. According to some forecasts, this restriction will negatively affect planting and harvesting, especially in countries producing perishable items that are labour-intensive (such as fruits and vegetables) (Salazar and Muñoz, 2020).

3.3. Specialisation and its vulnerabilities

The international economic and trade system has encouraged many Latin American and Caribbean countries to produce a small number of agricultural products, according to their agro-climatic characteristics and comparative advantages. These dependencies are expressed as export concentration indices and are observed in both small island countries and large continental countries.

According to data from FAOSTAT (FAO, 2020a), exports of soybeans, corn and livestock are crucial in South American countries bordering the Atlantic Ocean. As for South American countries bordering the Pacific Ocean, aquaculture and fruit production are fundamental. In Central America, on the other hand, exports of tropical fruits and seafood are essential. Finally, in the Caribbean, the concentration of trade is much more diverse, although exports of marine products, tobacco and alcoholic beverages are of primary importance in some countries. It is noteworthy that, in more than 90 percent of the Caribbean countries, three products account for more than 75 percent of agrifood exports.

Due to these high concentration rates, **many countries are dependent and highly vulnerable to conditions in international markets**. Thus, fluctuations in demand and prices for these exports have a profound impact on their income.

Additionally, a change in the restrictions of the destination markets could have severe consequences on the productive matrix, especially if commercial conditions are limited due to confinement, or if additional sanitary restrictions are imposed pursuant to **the economic effects of the pandemic**.

The recurrence of economic crises associated with health and climate crises makes it imperative to rethink the current production matrix, combining, for example, the competitive advantages of countries with the desire to strengthen local production and food supply chains for the population.

Figure 1/ Specialisation in agricultural exports in Latin American and Caribbean countries, 2020.







Source: FAO (2020a), modified by the authors. Conforms to UN World map, February 2020.

3.4. Characteristics and forecasts of the main food commodities

The Food and Agriculture Organization of the United Nations (FAO), in its Biannual Report on Global Food Markets (FAO, 2020b), mentions some aspects of the projection for the current agricultural and aquaculture season, as shown below.

Table 1/ Outlook (selected indicators) for the world food market, seasons 2019-2020 and 2020-2021.

Projections	Demand for labour	Main requested input	Major producers	Type of producer
Meat and meat products				
 <p>It is estimated that world meat production will decline by 1.7 percent by 2020.</p> <p>The contraction of the meat market is mainly due to animal diseases (such as African Swine Fever), disruptions associated with COVID-19, and the persistent effects of droughts.</p>	<p>Extensive livestock production</p> <p>Low</p> <p>Intensive livestock production</p> <p>High</p>	<p>Extensive livestock production</p> <p>Forage</p> <p>Intensive livestock production</p> <p>Animal feed (balanced feed)</p>	<p>Argentina Brazil Paraguay</p>	<p>Agribusiness</p>
Milk and milk products				
 <p>It is estimated that world milk production will grow by 0.8 percent in 2020.</p> <p>On the other hand, in the wake of fluctuating import behaviour, dairy exports are expected to contract by 4 percent in 2020.</p>	<p>High</p>	<p>Animal feed (balanced feed)</p>	<p>Argentina Brazil Mexico</p>	<p>Agribusiness</p>
Fishing and aquaculture				
 <p>The COVID-19 pandemic is expected to continue to have a negative impact on the seafood market for the remainder of 2020, especially on fresh produce and species which are popular in restaurants.</p> <p>On the supply side, fishing fleets are at a standstill, and aquaculture producers have drastically reduced fish stocking targets.</p> <p>Global shrimp and salmon production is expected to be the most affected by the pandemic.¹</p>	<p>High</p>	<p>Aquaculture</p> <p>Animal feed (balanced feed)</p>	<p>Fishing</p> <p>Chile Peru</p> <p>Bahamas Belize</p> <p>Aquaculture</p> <p>Chile Ecuador Honduras Nicaragua Venezuela (Bolivarian Republic of)</p>	<p>Industrial and artisanal fishing</p> <p>Small-scale fishing</p> <p>Industrial</p>
Sugar				
 <p>World sugar production is expected to decline – for the second consecutive year – and fall below the estimated level of global consumption, for the first time in the last three years.</p> <p>Also, initial forecasts indicate that world sugar trade will increase, due to lower prices and the rebuilding of stocks in some traditional importing countries.²</p>	<p>Medium</p>	<p>Fertilisers</p>	<p>Brazil Colombia Mexico</p>	<p>Agribusiness</p>

¹ In Asia, the shrimp farming season, which usually begins in April, has been delayed until June or July. In India, on the other hand, the production of farmed shrimp is expected to decrease by 30-40 percent (FAO, 2020b).

² The deficit in world sugar production projected for the 2019-2020 season has not helped to stabilize international sugar prices, which have been falling since mid-2017. They are also below the production costs for the vast majority of world producers (FAO, 2020b).

Projections	Demand for labour	Main requested input	Major producers	Type of producer
Oilseeds				
 <p>Both global supply and demand for oilseeds and their derivatives are expected to decline in 2020-2021, due to a significant contraction in production.</p> <p>Besides, initial forecasts indicate that there will be a tight balance between supply and demand for oilseeds and their derivatives in the 2020-2021 season.</p>	Low	Seeds Fertilisers Agrochemicals	Argentina Brazil	Agribusiness
Cereals				
 <p>Despite the uncertainty generated by the COVID-19 pandemic, initial forecasts indicate that cereal production will easily meet demand in 2020-2021.</p> <p>In Latin America and the Caribbean, early forecasts indicate a record cereal harvest in 2020: 280 tonnes, 11 percent above the average of the last five years.³</p>	Low	Machinery Seeds Fertilisers Agrochemicals	Argentina Bolivia (Plurinational State of) Brazil Paraguay	Agribusiness
Fruit				
 <p>Banana</p> <p>Assuming normal climatic conditions and no further spread of banana plant diseases, banana production is forecast to grow by 1.5 percent per year, reaching 132.6 million tonnes in 2029.⁴</p> <p>Tropical fruits</p> <p>The world production of tropical fruits has grown steadily over the last decade. Approximately 99 percent of tropical fruit production originates in low-income countries and is mainly produced on a subsistence basis by small-scale producers.</p> <p>Subtropical and Mediterranean fruits</p> <p>The 2020-2021 crop season presents normal productive conditions, given the availability of water for irrigation and the agro-climatic perspectives in the producing areas (except for specific cases of areas with prolonged drought).</p>	High (at harvest time)	Fertilisers Agrochemicals	Central America South America	Agribusiness Family farming

Source: FAO (2020b), modified by the authors.

³ This phenomenon is mainly due to an explosive growth in corn production of the main producers in South America – Argentina and Brazil –, spurred by high domestic prices and increased exports (see Figure 1), and to a substantial improvement in wheat production.

⁴ During the current season, outbreaks of Fusarium wilt have been reported in Colombia and were first detected in Latin America and the Caribbean in 2019. These could affect yields per hectare (FAO, 2020c).

4. Impact of COVID-19 on agricultural inputs and production factors

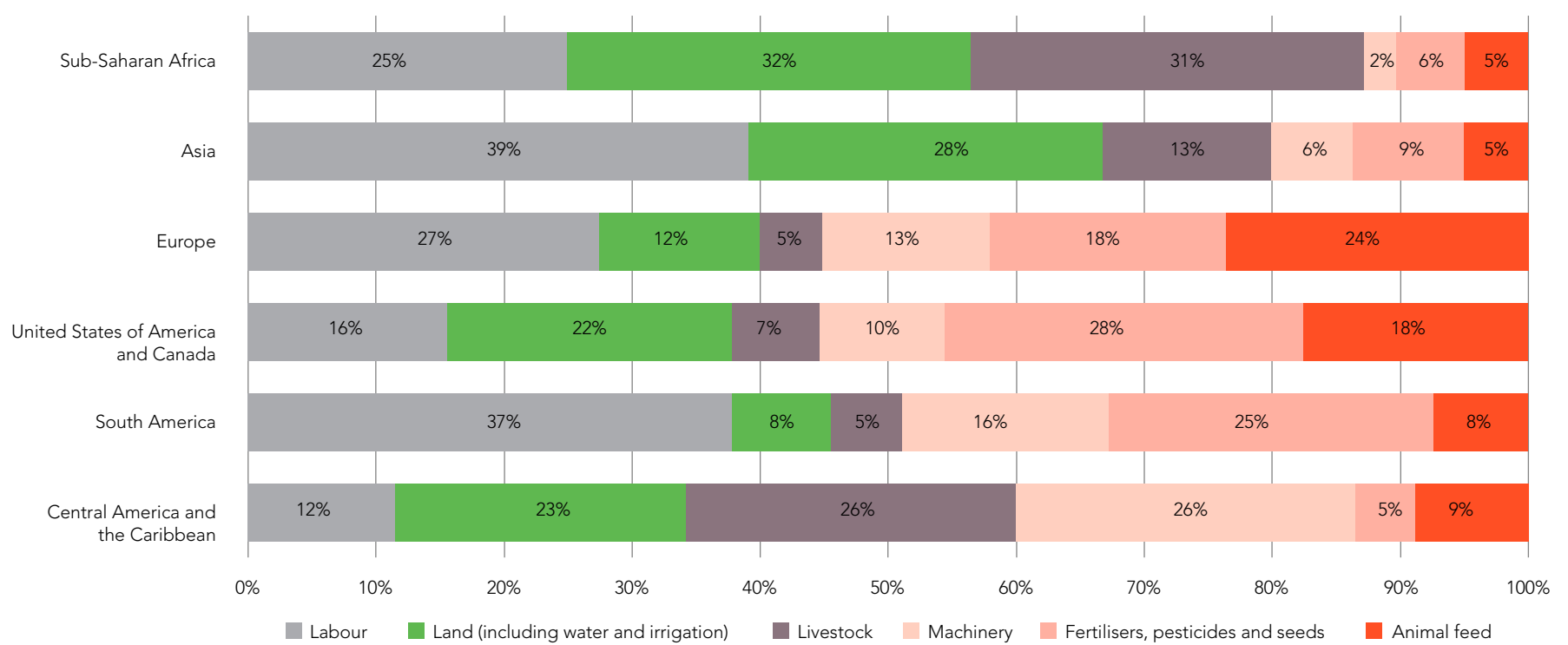


The vulnerability of a productive sector can be assessed according to the dependence and flexibility of its access to the production inputs – such as working capital, labour, seeds, fertilisers, phytosanitary products, animal health products and feed, among others – that affect the structure of the production cost.

According to the above, the first thing that can be observed is that the region is heterogeneous in productive terms. However, two major patterns of agricultural cost structure emerge; one is characteristic of South America, and the other is typical of Central America and the Caribbean. In South America, the cost structure shows a high dependence on productive inputs such as fertilisers, pesticides and seeds (25 percent), as is the case in the United States of America and Canada (28 percent) and Europe (18 percent). Besides, the cost of labour (37 percent) is the second-highest in the world, being only surpassed by Asia (39 percent) (see Figure 2).

In Central America and the Caribbean, on the other hand, production units are less dependent on labour (12 percent) and production inputs such as fertilisers, seeds and pesticides (5 percent). The highest costs are for active assets such as land (23 percent), livestock (26 percent) and machinery (26 percent).

Figure 2/ Estimated cost structure, various factors (%), by region, 2011-2020.



Source: FAO, based on USDA (2020).

4.1. Disruptions in the availability of liquidity

The health and economic crisis triggered by the COVID-19 pandemic has a significant impact on the availability of liquidity. There are two major trends associated with reduced liquidity:

- Exports linked to agribusinesses have been stopped or interrupted.
- Domestic demand for the production of family farmers is lower than usual.

Although the lack of liquidity has affected both large and small producers, family farming has been most stricken, whether due to a decrease in local demand or greater difficulty in accessing markets.

Unfortunately, this phenomenon occurs even though countries have made significant efforts to implement mitigation measures to safeguard the functioning of agrifood systems value chains (FAO, 2020h).

The decline in sales revenue has enormous consequences on farmers. On the one hand, reduced liquidity is likely to force them to postpone input purchases, labour hiring, or both. If this happens in the harvest season, the most certain result is a partial or total loss of crops and food loss. On the other hand, if the lack of liquidity occurs at sowing time, it is more likely that sowing capacity will decrease. As it could be observed in the previous section, then, lower liquidity would have decisive effects on the available labour force in South America (because of its high cost) as well as on the acquisition of fertilisers, pesticides and seeds (because of their extended use).



Fisheries and aquaculture: represent 38 percent of primary production for international trade (FAO, 2020e). Artisanal and small-scale fisheries provide livelihoods of at least 1.8 million families in Latin America and the Caribbean. This sector represents 85 percent of the fish and seafood that reach the tables in our region (UN, 2019).

The greatest threat to this subsector is the disruption to transport and marketing caused by the closure of global markets and food services in tourism and hotels (which is a particularly pressing issue for the Caribbean countries, whose economies are highly dependent on tourism). Many fish farmers have been unable to sell their products, and have been forced to keep large quantities of fish or shrimp alive, increasing production costs (FAO, 2020i). On the other hand, artisanal fishers have also seen their sales decline. For example, artisanal fishermen in Osorno, Chile, estimate that their economic losses are close to 100 percent of their usual production, due to the reduction in wholesales (Salgado, 2020).



Livestock: as in aquaculture, the closure of live animal markets not only reduced producers' income but also increased their feed costs, as they could not sell their animals. Besides, reduced demand for dairy and meat products appears to be a correlate of the decline in income for most households. For example, in the region of Serra Dourada, Brazil, several producers have had to discard 15 000 liters of milk daily because of an almost total absence of demand (CanalRural, 2020). In Mexico, the dairy industry expects a drop of between 10 and 15 percent in demand, which will cause the disappearance of many small producers, who represent 88 percent of the dairy industry in that country (Sanchez, 2020a).

Informal businesses, which process and sell up to 90 percent of the volume of meat and dairy products traded locally in developing countries, have also been affected, especially small-scale producers (FAO, 2020g). Large producers, on the other hand, have faced logistical disruptions due to the temporary cessation of international trade, which has affected meat exports to Europe and China, as has happened in Argentina. However, this situation tended to normalize over time.



Industrial crops: primary production of industrial crops such as wheat, corn, soybeans or other cereals had a record harvest, which ensures their income for the current season. Additionally, demand favours these products, as consumers are opting for carbohydrate-based diets, which are cheaper but less nutritious and healthy. Prices, after a moderate fluctuation, are returning to the level of June 2019. Given that this sub-sector is mainly in the hands of exporting agribusinesses, if prices of exported crops remain stable, their income will not be affected and some are even likely to make higher profits.

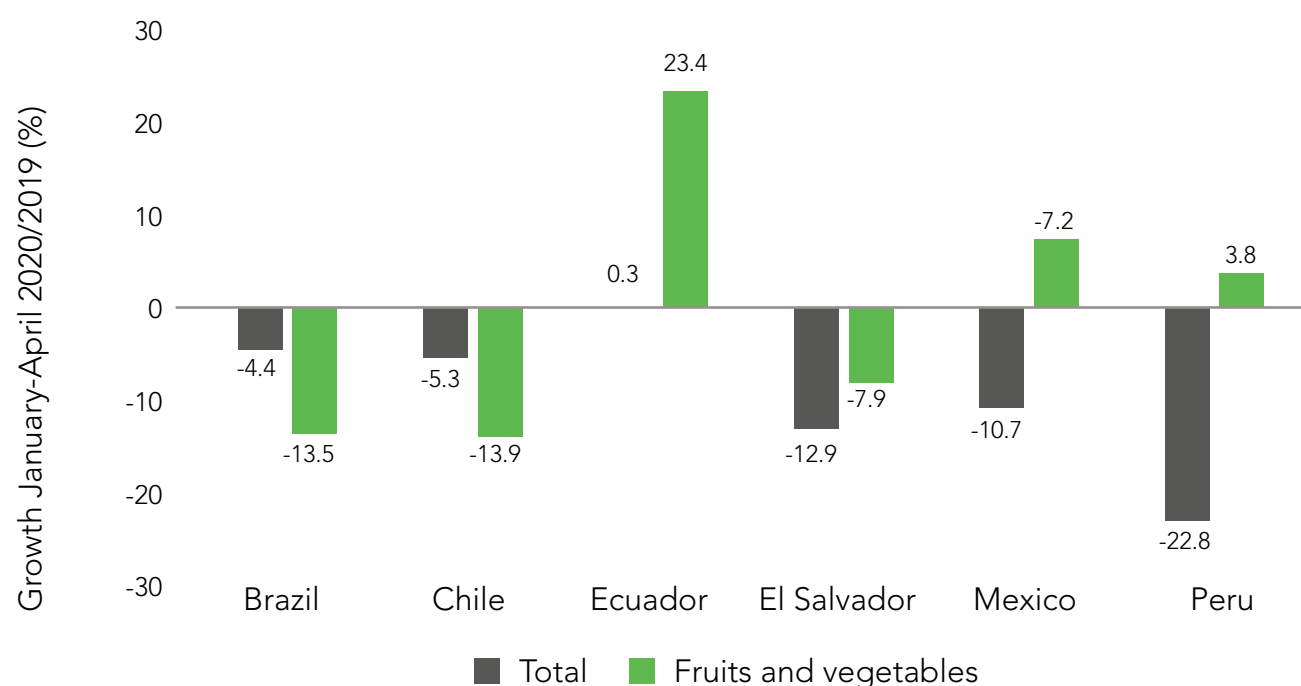


Fruits and vegetables: represent about 26 percent of the region's total food exports. They account for half of Central America's food exports, 41.7 percent of the Caribbean's and less than 20 percent of South America's. Unlike other sub-sectors, the fruit and vegetable sub-sector has direct links to small and medium-sized farmers in many Latin American and Caribbean countries (FAO, 2020).

In the case of fruit and vegetables, the income of small producers was impacted by restrictions on fairs and other sales outlets. Limiting the number of permits to go out for shopping favours the purchase of non-perishable products, to the detriment of fresh ones (FAO and ECLAC, 2020). This trend is compounded by a change in habits associated with the decline in household purchasing power, which is damaging demand for these fresh products since they are considered more expensive than industrial high-carb foods. In Mexico, berry producers have been victims of this phenomenon: they estimate that their growth will only be half as much as last year at the same time. Besides, prices have fallen by up to 35 percent and, because of the adjustment in supply and demand that occurred in April and May, and many producers had to make discards (Sanchez, 2020b).

The decline in exports also affects the income of medium and large farmers, even though trade performance has been heterogeneous. Fruit and vegetable exports have been less affected in Ecuador, Mexico, Peru and El Salvador, as opposed to Brazil and Chile, where exports have declined because of the crisis (FAO, 2020k).

Figure 3/ Export growth, total vs. fruit and vegetables (%), 2019-2020.



* Data from UN Comtrade, for Brazil, Ecuador and El Salvador; Office of Agrarian Studies and Policies (ODEPA, by its acronym in Spanish) and National Customs Service for Chile; Banco de México, for Mexico; and Peruvian Ministry of Foreign Trade and Tourism, for Peru.

** Period: between January and March (Ecuador), between January and April (Brazil, El Salvador, Mexico and Peru), between January and March (Chile).

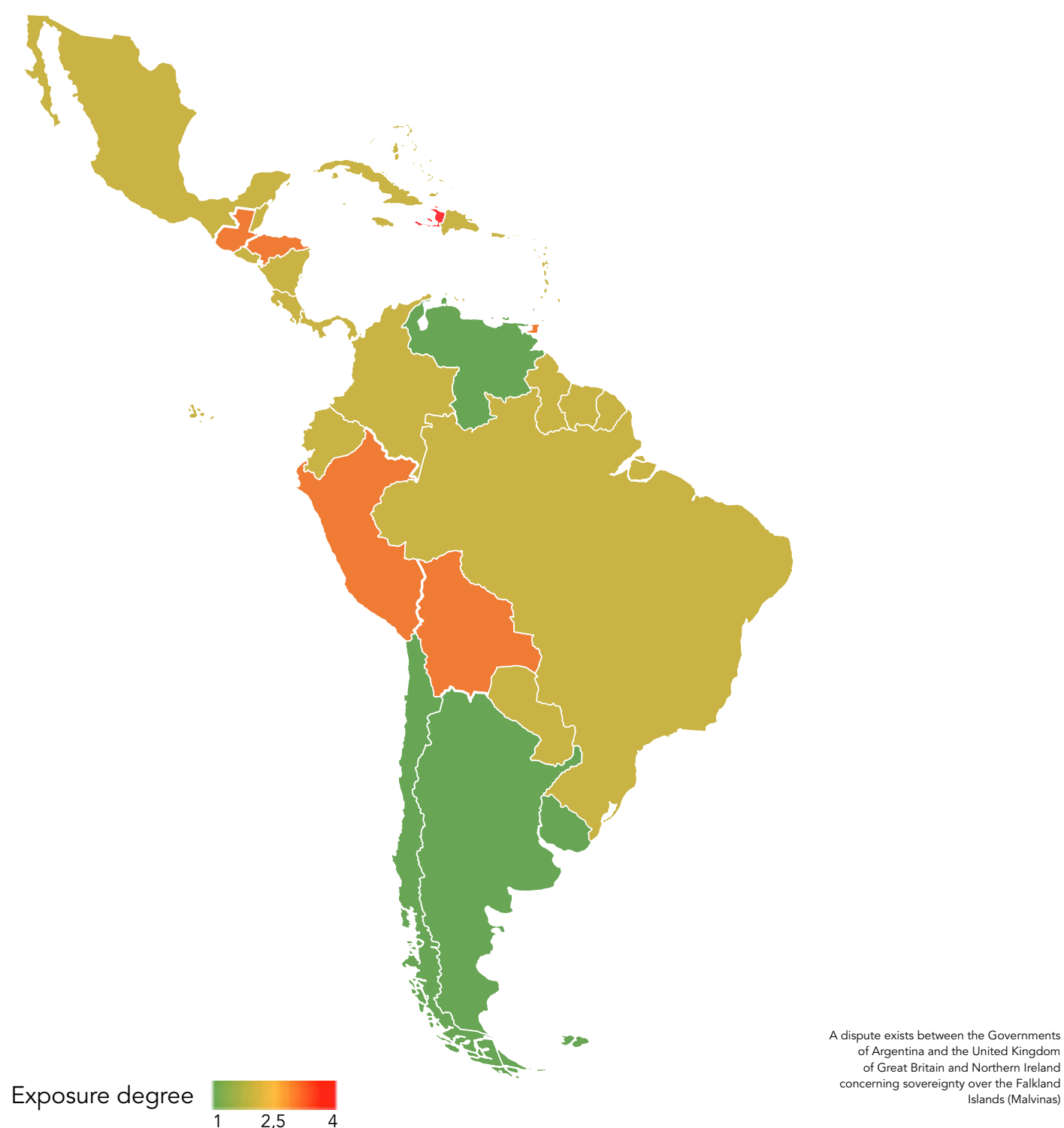
Source: FAO (2020b), modified by the authors

4.2. Disruptions in the availability of labour

The most labour-intensive productive subsectors are naturally the most vulnerable to disruptions in the availability of this input; unlike, for example, the capital-intensive subsectors, which make use of machinery rather than labour. In South America, the predominant production is based on large productive units and is export-oriented, with a high demand for labour. In contrast, in Central America and the Caribbean, based on smaller productive units, the cost of labour is less important, probably because of the undervaluation of labour, since self-employment is not considered in the cost evaluation (see Figure 2).

Countries with lower labour intensity would be less exposed to the COVID-19 shocks, while countries with higher labour intensity would be more exposed (see Figure 4). This can also be related to the use of machinery. The countries with higher machinery use would be less dependent on labour, and therefore, workers would be less exposed to the disease. In other words, countries with higher gross production per worker (fewer workers and more technology) would have a lower risk for workers in the agrifood sector to get infected with COVID-19.

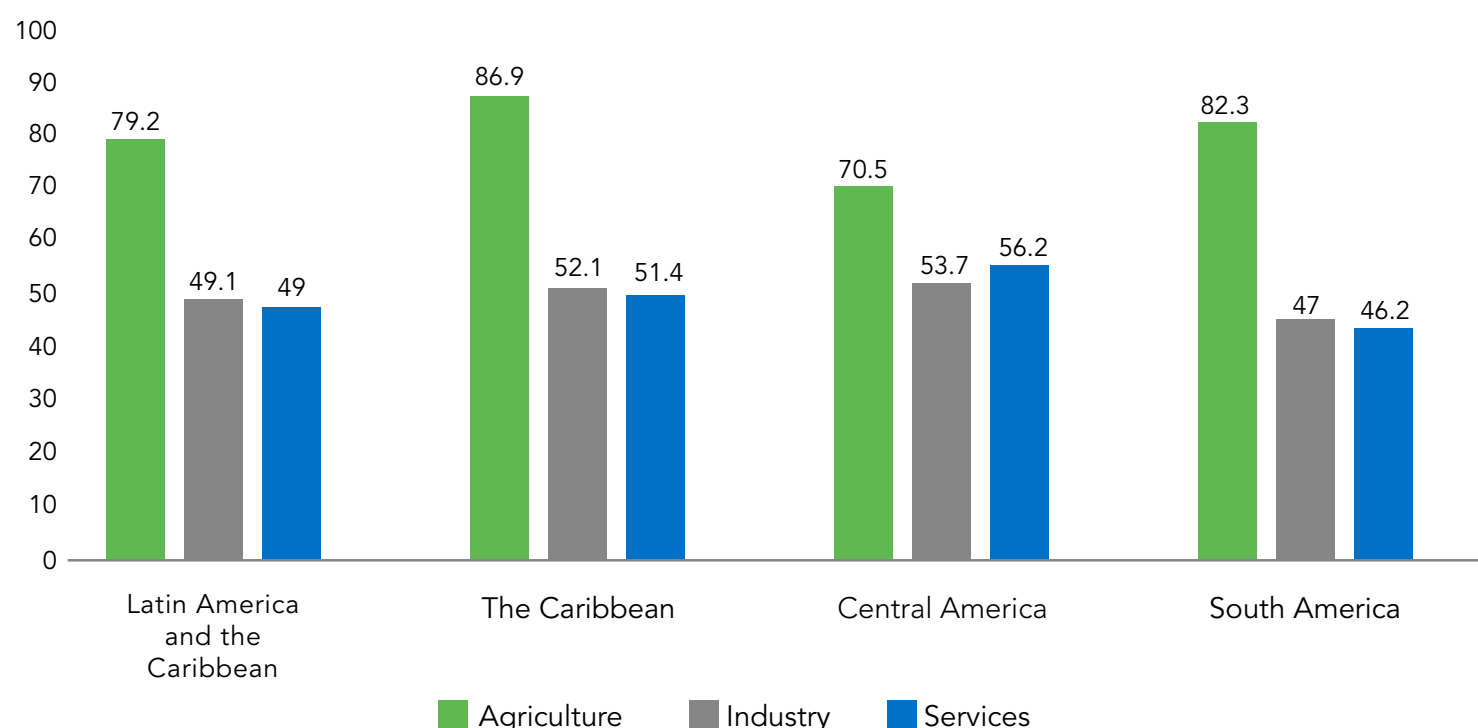
Figure 4/ Degree of exposure to COVID-19, according to gross production per agricultural worker, 2020.



Source: FAO, based on Schmidhuber, Pound and Qiao (2020)..

Another factor that seriously affects the availability of labour in the agrifood sector is the high rate of informal employment, which exceeds 84 percent (ECLAC and FAO, 2020). It is easier for an employer to dispense with workers who are not registered, protected or regulated by national regulations (ILO, 2020). In times of pandemic, in addition to suffering greater job insecurity, informal workers are at greater risk of infection: they are not given the same preventive measures (personal protective equipment, for example) as formal workers (FAO and ECLAC, 2020). This situation is particularly severe in the agricultural sector, which has the highest rate of informality of all productive sectors in Latin America and the Caribbean (79.2 percent) (see Figure 5).

Figure 5/ Informal employment rate (%) by economic sector, 2018.



Source: FAO, based on ILO (2018).

At a sectoral level, the following aspects can be observed:



Fisheries and aquaculture: sanitary restriction measures have impacted aquaculture and fisheries. Labour shortages have specifically affected crews of migrant workers. Crew members have been restricted in their movement to their workplace and are more exposed to infection on fishing boats. Crews of large industrial ships with shifts of several weeks at sea are unable to return home because of restrictions and quarantines (FAO, 2020e).



Livestock: even though livestock production demands little labour, mostly in extensive type productions, the situation changes as we move forward in the value chain. In the slaughtering process, work is done in closed, humid and cold places, with a high density of people. This increases the exposure of workers to the coronavirus, as in the case of two meat producers in Brazil, where 1 075 workers were infected with COVID-19 in their workplace (El Cronista, 2020).

Movement restrictions could also affect small producers who move their livestock from one grazing area to another in search of better pastures. This can be seen in Peru, Argentina (cattle, goats), Chile (sheep in Patagonia), the Plurinational State of Bolivia (llamas) and the Brazilian marshland.



Industrial crops (cereals, soybeans): the production of industrial crops, such as cereals or soybeans is highly mechanized; it is a capital-intensive production rather than labour-intensive. Consequently, disruptions in the labour force do not pose a particularly serious threat. However, FAO warns that labour shortages for harvesting and planting activities should be kept under review to avoid food losses or delays in cultivation.



Fruits and vegetables: fruit production is very labour-intensive, especially during harvest. The increased demand for labour makes it more vulnerable to the travel restrictions now in place in most parts of the world. Moreover, demand could be affected in this sector by recent, perhaps transitory, changes in consumption habits that favour non-perishable foods over fresh ones.

In addition, as mentioned above, the availability of liquidity for producers to hire extra labour could be reduced (IADB, 2020). Vegetables have followed a similar pattern to fruits, illustrated by the labour shortages in some fields in Argentina (Gimberg, 2020).

Vegetable production is labour-intensive and not very mechanised, highly dependent on the availability of workers in the planting and harvesting seasons. Travel restrictions and quarantines imposed by most countries have made it difficult for workers to show up at their workplaces, particularly seasonal workers and migrant workers. We can see, for instance, Central American workers moving to the United States of America, Nicaraguans seeking work in Costa Rica and Panama, Panamanians doing so in Costa Rica, and Haitians migrating to the Dominican Republic (ILO, 2016). In this sub-sector, agribusiness workers are at higher risk of infection, since large crowds of people are generated to move around and work on the farm.

4.3. Disruption of access to agricultural inputs

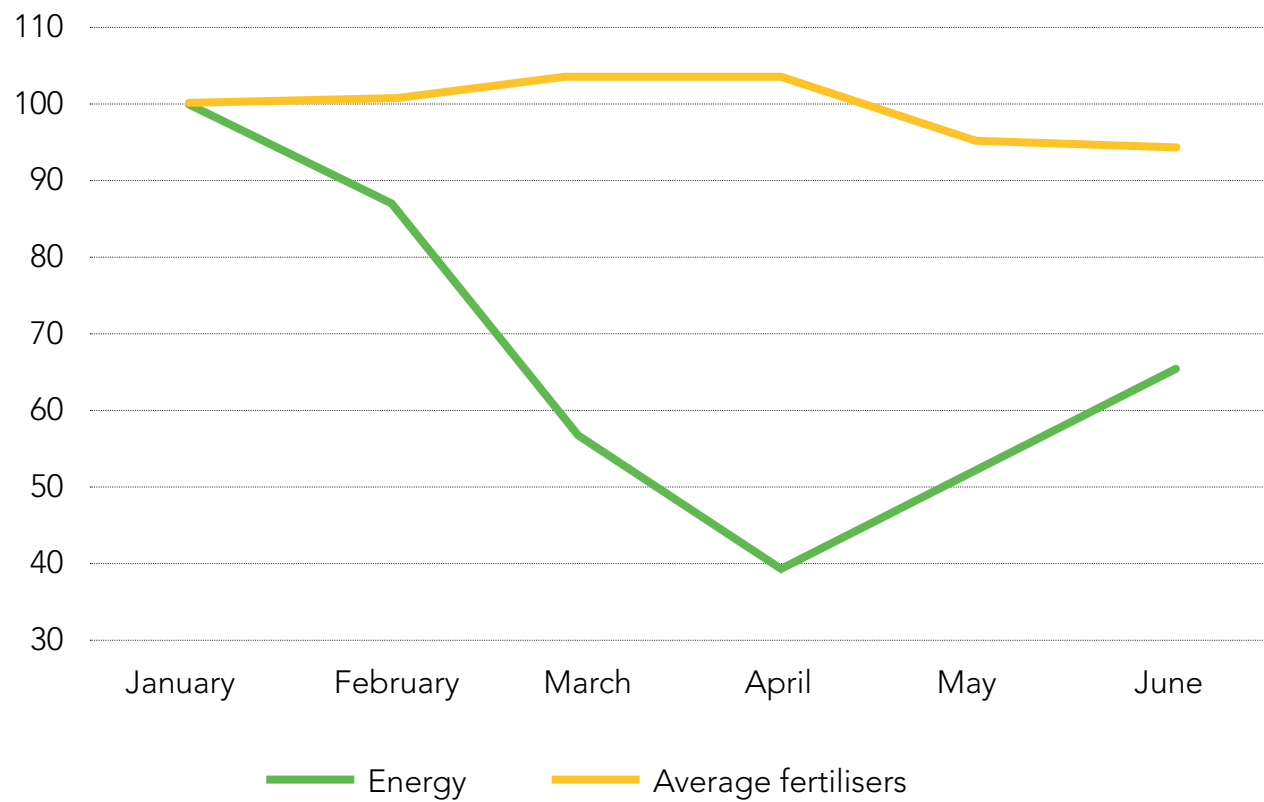
Initial disruptions in the logistics chain, due to the effects of the pandemic, affected the availability of several agricultural inputs unevenly.

In livestock production, for example, the stocks of animal feed and medicines diminished, as happened in Argentina, where restrictions have disrupted shipments of veterinary inputs such as vaccines and medicines, resulting in increased disease occurrence and consequent loss of animals (FAO, 2020n).

Although logistical disruptions have affected access to other agricultural inputs, this has not been reflected in international prices. In the case of fertilisers, even though a slight increase was observed during April, compared to previous months, it has been compensated with price drops in May and June (see Figure 6). According to forecasts made by the World Bank (2020), fertiliser prices will fall by 10 percent during 2020.

The availability and price of energy is a relevant factor for highly mechanized crops such as grains and oilseeds. However, international energy prices are at historically low levels, reaching its lowest level in April. Currently, energy prices (especially oil) have decreased by 35 percent so far in 2020. A sustained decline in energy and fertiliser prices could force down the prices of some foods, especially grains and oilseeds (World Bank, 2020).

Figure 6/ International energy and fertiliser prices (%), 2020.



Source: FAO, based on World Bank (2020).

Although the price of some agricultural inputs is lower today, a negative local effect is caused by the widespread devaluation of Latin American currencies against the dollar, which has made access to imported inputs more expensive. Between January and April 2020, there were significant falls in the Mexican peso (-22.7 percent), the Colombian peso (-16.4 percent), the Uruguayan peso (-14.2 percent), the Chilean peso (-9.4 percent), and the Argentine peso (-8.5 percent). There was little change in Caribbean currencies, which generally follow the US dollar closely (FAO and ECLAC, 2020).



5. Guidelines for short-term and long-term recovery



5.1. Immediate crisis response

These guidelines are measures that make it possible to mitigate the direct and immediate impacts of the crisis. Decision-makers can consider these recommendations in governments, agro-enterprises, and agricultural and fishery cooperatives.

5.1.1. Liquidity and access to funding

- Implement social protection measures for the unemployed, especially for the informal sector (women, youth, children, migrants and indigenous people).
- Focus direct assistance on small businesses with rapid access to information (Craven *et al.*, 2020).
- Encourage local demand for agricultural products. Shorten marketing chains through e-commerce or new fairs.
- Promote public purchases of fresh and highly perishable products from local producers for social feeding programs, such as school feeding programs, support for vulnerable, sick people in quarantine, prisons, hospitals or retirement centres as a form of food assistance. Seek connections with community services in the area, such as community kitchens, where it can be sold for a fixed price (FAO, 2020o).
- Monitor inflation and establish, where possible, a minimum price for the products in the basic food basket (fruits, vegetables, fish, aquaculture products, milk and meat).
- Ensure that large food companies accelerate payments to small businesses. Large companies can work together to preserve liquidity along the food chains (Unilever, 2020).
- Deliver liquidity through vouchers or direct transfers to producers who need it.
- Adapt financial incentive packages to the needs of agricultural enterprises (FAO, 2020d). Facilitate access to micro-finance schemes for small producers.
- Promote credit moratoria and debt repayment (Sandbu and Sandbu, Financial Times, 2020).
- Reduce costs through the derogation, deferment or rescheduling of patents, permits or public taxes.



Fisheries and aquaculture

- Support the processes of international trade for products. Facilitate the customs process, access to ports, international transport and bureaucratic restrictions by digitalising them.
- Keep the cold chain and food safety intact to ensure sales and avoid product returns.
- Postpone payments for fishing rights or fees, or reduce tax payments.
- Offer a monetary subsidy for lost or unfulfilled fishing days.
- Extend, as far as possible, the fishing season to compensate for economic losses.
- Support producers to strengthen capacities and add value to low-cost products with high nutritional value (FAO, 2020j).



Fruits and vegetables

- Promote public purchases of fresh and highly perishable products from local producers for social food programs.
- Temporarily relax the regulation on travel hours for truck operators to ensure rapid transport without waste of perishable products; also, facilitate international trade and associated procedures (OECD, 2020).
- Encourage the introduction of technologies to improve marketing, and increase the shelf life of fresh products, such as minimally-processed foods (washed, cut and packaged products).



Livestock

- Keep markets, fairs and points of sale open for livestock products, always keeping in mind hygiene protocols and physical distancing. This applies to informal points of sale as well.
- Encourage small and medium enterprises to produce safe products with a longer shelf life (for example, frozen meat, or UHT or powdered milk) (FAO, 2020g).



5.1.2. Labour

- Protect workers from contagion on the premises.
- Encourage transport to the premises with health considerations.
- Train workers to avoid the risk of contagion outside the premises.
- Ensure that formal and informal workers have appropriate insurance (public or private) in case they get infected with COVID-19.
- Classify agricultural workers as essential service providers, exempting them from travel restrictions.
- Facilitate the cross-border movement of migrant workers.
- Develop a contingency plan in case of labour shortages. This could include training the local unemployed population to support agricultural activities such as harvesting and storage in case of labour shortages on farms and to replace sick workers.



Fisheries and aquaculture

- Issue visas for foreign crew to facilitate movement from home to ship (FAO, 2020o).
- Train artisan fishermen to avoid contagion on board and land.



Fruits and vegetables

- Ensure cross-border movement for seasonal workers and migrants under strict medical supervision. Facilitate digitalization of procedures to avoid crowding in lines at borders. The number of temporary workers on the premises must not exceed the available work and accommodation health standards.
- Provide personal protective equipment to transporters, field and packaging workers, and cold chain workers, because of the frequent contact maintained in perishable product supply chains.
- Prepare a register of foreign workers and coordinate with contracting companies and countries of origin contingency plans in the event of border closures or worker contagion (OECD, 2020).



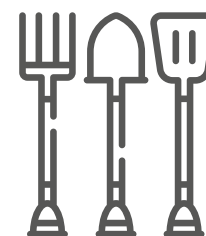
Livestock

- Encourage respect for infection prevention measures on livestock farms dedicated to dairy farming, intensive meat feeding and slaughterhouses.
- Focus the work on critical points that may affect animal and/or human health with the advice of veterinarians and specialists (FAO, 2020n).
- Articulate cooperatives and associations to provide inputs for livestock production (FAO, 2020l).



5.1.3. Agricultural inputs

- Adopt health and legal measures so as not to disrupt the production and transport of agricultural inputs, declaring agricultural inputs as essential goods and adjusting trade policy to improve the functioning of market flows (FAO, 2020f).
- Apply temporary subsidies to agricultural inputs in the regions and value chains most affected by the restrictive measures.
- Promote technological platforms that allow the definition of specific demand from producers and enable them to contact several suppliers (Doherty and Botwright, 2020).
- Support the implementation of technologies that allow for the optimization of the use of agricultural inputs such as precision fertigation.
- Support the digitalization of commercial transactions and shorten marketing chains between suppliers and producers (SAMPi, 2017).
- Promote and adopt machine-sharing applications, which can facilitate continuous access to machinery (Splitter, 2019).



Fisheries and aquaculture

- Support fish farmers with food supply through subsidies or soft credits.
- Ensure the supply of ice and isothermal boxes to preserve unsold products, especially among artisanal fishermen (FAO, 2020i).
- Maintain a constant flow of communication and coordination with artisanal fisheries organizations and observatories to share information on disruptions and innovations during the COVID-19 pandemic period (FAO, 2020i).



Fruits and vegetables

- Monitor access to seeds and fertilisers to detect possible shortages.
- Ensure the provision of seeds and fertilisers, especially in remote rural territories.



Livestock

- Establish online coordination and cooperation mechanisms, with real-time information, with cooperatives or livestock farmers associations, to anticipate disruptions and needs.
- Maintain an up-to-date register with relevant information for international and national veterinary authorities.
- Develop contingency plans for family farmers in remote areas to access veterinary services in case of emergency (FAO, 2020j).



5.2. Sectoral recovery: the transformation of food systems

Many of the disruptions to the food system caused by COVID-19 and extreme weather events – increasingly frequent as a result of climate change – point to underlying problems associated with food systems that need to be reviewed to generate more resilient and sustainable systems.

The COVID-19 crisis is an opportunity to drive the transformation of food systems. The pandemic has demonstrated the flexibility and willingness of public and private sector actors and their capacity for innovation and adaptation.

In order to promote a transformation of food systems in the medium and long term, FAO recommends (FAO, 2020m):



Innovations that increase efficiency, inclusiveness and resilience

- Use real-time information and technological advances to avoid disruptions in the supply of inputs.
- Establish innovative practices that integrate small producers into the input market.
- Incorporate reliable, traceable and certifiable digital solutions (e-commerce, blockchain) to connect consumers with producers.
- Improve the preservation of perishable products and reduce food loss through new technologies and innovative solutions.
- Encourage digital registration of producers and their workers.
- Strengthen private sector partnerships to promote cooperation and resource management for technology design and investment in pre-competitive spaces.



Incorporating nature-based solutions to increase resilience and sustainability

- Establish and manage protected areas and green corridors.
- Restore degraded lands with mixed production systems (ecological restoration of wetlands and riparian areas).
- Promote sustainable and resilient production activities (such as sustainable forest management and resilient small-scale agriculture with diversified products in agroecological systems).

- Improve water, soil and nutrient management (efficient irrigation, including solar pumps; organic inputs production, such as worm compost, pesticides and natural herbicides).
- Promote sustainable and mixed production grazing practices, such as agroforestry systems.



Improving the institutional and policy environment

- Promote the interaction of science, experience and policy to take advantage of new opportunities for transformation, with multi-sectoral and multi-level participation.
- Design collective solutions for the transformation of food systems to achieve social objectives.
- Build public and private investment flows aimed at building more sustainable and resilient food systems.



6. Interview



Carlos María Uriarte
Uruguayan Minister of Livestock,
Agriculture and Fisheries



Uruguay is a country with a net food export profile, and 80 percent of its exports are of agro-industrial origin. From a strictly sanitary point of view, Uruguay is one of the few countries in the world that has successfully confronted the pandemic, keeping the number of infected people under control.

However, the good results achieved in the fight against COVID-19 have had a cost for the economy and society. The Minister of Livestock, Agriculture and Fisheries, Carlos María Uriarte, is satisfied with the results achieved so far, and in particular with the fact that there have been no cases of coronavirus in the agrifood chain. Nevertheless, he is also aware of the challenges lying ahead.

What conclusions can be drawn today regarding the impact of the COVID-19 pandemic on Uruguay's food systems? How did the country react?

The first and most important conclusion is that thanks to the behaviour and responsibility of Uruguayans, the country has not had a single case of COVID-19 in its agrifood chains to date.

Secondly, it should be noted that the measures were successful, and they were also timely.

Thirdly, we can highlight the fact that economic activity did not stop.

Finally, social responsibility and solidarity were fundamental: the government and the private sector made the most considerable efforts to ensure that all Uruguayans had their basic needs covered.

Our agrifood chains did not experience any problems; the impacts they received came from the effects of the pandemic on international markets, which, for an agro-exporting country like Uruguay, were not minor. In particular, beef exports to various international destinations were suspended and then cancelled, and the destination of the containers had to be managed, as well as the costs incurred. This was very shocking for several agrifood chains (meat and dairy, among others) that had to face the logistic and financial aspects on an ongoing basis.

What other factors influenced food systems during this period?

Even though much emphasis was placed on not stopping economic activity, some sectors, such as tourism, were very affected and their activity has completely stopped.

The quarantine caused many Uruguayans to resort to unemployment insurance and/or to advance their leave of absence. As a result, unemployment increased, and the country had to resort to external financing to support social services.

Public accounts suffered severe consequences, but there was no food shortage for Uruguayans, and the agrifood exports continued despite the difficulties in international markets.

How have chain actors responded in this scenario? What is the current state of the main chains associated with agribusiness, family farming and the cooperative process in Uruguay?

At the national level, this global sanitary emergency highlighted two fundamental aspects of agrifood chains:

1. The solidarity shown by the members of the agrifood chains in Uruguay towards the rest of the population. Donations of food were made from farms, processing industries or producers' cooperatives or institutions, among others, to the population support networks, to ensure the availability of and access to food throughout the country.
2. The capacity of agrifood export chains to manage the international impact on purchasing commitments, with logistical and financial effects.

The response capacity was fantastic in Uruguay, as well as the solidarity that food producers have had with the rest of society. Tons of food were donated to the poorest.

The activity of the chains associated with agribusiness in Uruguay never stopped. In Uruguay, these chains are mainly based on companies and cooperatives. Eighty per cent of cattle slaughtering is in the hands of five multinational companies and 90 percent of milk industrialization belongs to a single cooperative. Therefore, family farming is essential in terms of number of people, but its impact on the chains is limited.

How have markets for agricultural input suppliers reacted to ensure the continuity of Uruguayan agricultural production?

At the beginning, there were problems in accessing goods from abroad. But during all this time, protocols and controls were quickly developed to ensure agricultural inputs were never lacking.

Concerning financing, financial and tax obligations were deferred, and credit was made more accessible. Thus, the productive operation was not affected.

What complexities or disruptions were made clear during the pandemic, and what lessons can be drawn from them to rethink the way food chains were run before the crisis, considering challenges such as economic, social and environmental sustainability?

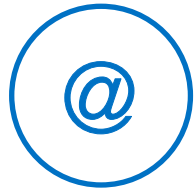
The pandemic taught us that it is critical to distinguish between what is truly important and what is trivial. It has taught us to respect and care for each other; to know that we are all equal in the face of greater evils; to value solidarity; to know that taking care of ourselves comes first. But that it is also essential to maintain economic activity, since **there is no worse death than dying of hunger**. Besides, the different actors in the agrifood export chains learned to improve their logistical planning and to manage financial risks, as well as to strengthen the health and quality guarantees of food products to ensure compliance with the highest requirements. From the Ministry of Livestock, Agriculture and Fisheries, we immediately expedited the budgetary funds available for agricultural emergencies, because, together with the pandemic, we were affected by a very significant drought. We wanted to provide producers, particularly meat and dairy farmers, with financial availability to meet their emerging needs, such as securing forage.

How do you plan the process of sectoral reactivation? What opportunities do you see for Uruguayan agricultural production in this context? What kind of policies should be promoted?

We understand that agricultural production in Uruguay has excellent opportunities for the post-pandemic period. The behaviour we adopted to face the crisis has generated credits to Uruguay as a food-producing country, which we must be able to capitalize.

The main challenge will be to adjust public accounts and regain employment. To do so, it is vital to bet on generating more genuine income for the country. In this sense, it will be necessary to increase exportable balances, improve the competitiveness of our products, improve access to international markets, and revive tourism.

7. Resources



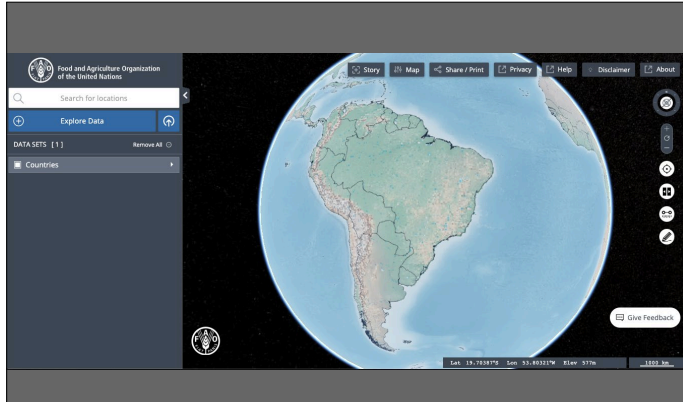
In the section, we provide you with websites that may complement the information contained in this edition of the bulletin.

FAO HiH

Hand-in-Hand Geospatial Platform

<https://data.apps.fao.org/>

A geospatial platform where you can find information on crop production, climatology, demography, socio-economic and environmental variables, among many other layers of geo-referenced information.



Johns Hopkins University and The Global Alliance for Improved Nutrition

Food Systems Dashboard

<https://foodsystemsdashboard.org>

A platform that combines multiple sources and allows access to and analysis of 170 food indicators worldwide, such as grain production yields and agricultural infrastructure, among others.

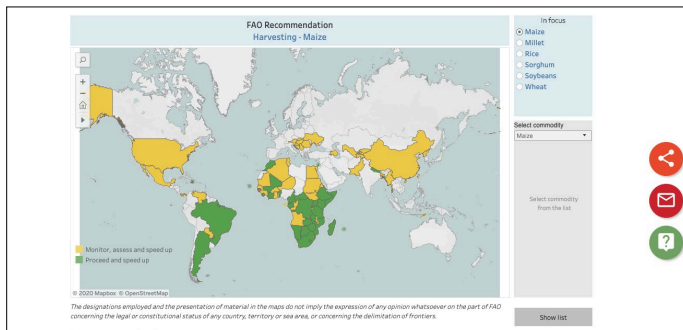


FAO

Crop calendars and COVID-19

<http://www.fao.org/2019-ncov/covid-19-crop-calendars/es/>

FAO platform that provides recommendations on planting and harvesting tasks during the COVID-19 outbreak. To do so, crop calendars are made available, indicating critical periods in which activities should be carried out. The charts are presented by country and by crop type.

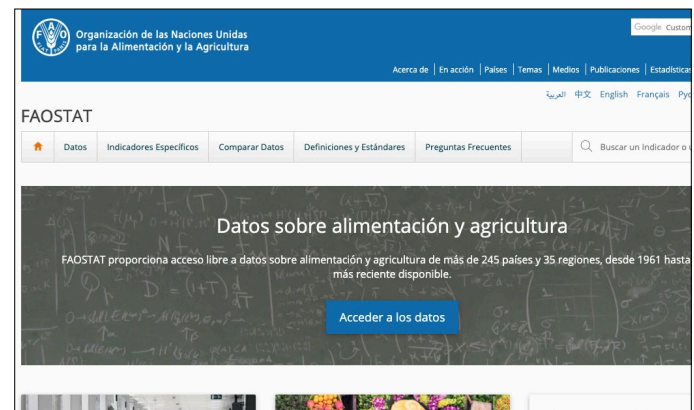


FAOSTAT

Food and Agriculture Data

<http://www.fao.org/faostat/es/#home>

FAO platform with access to data on crop production, livestock, as well as inputs such as fertilisers, labour and machinery.

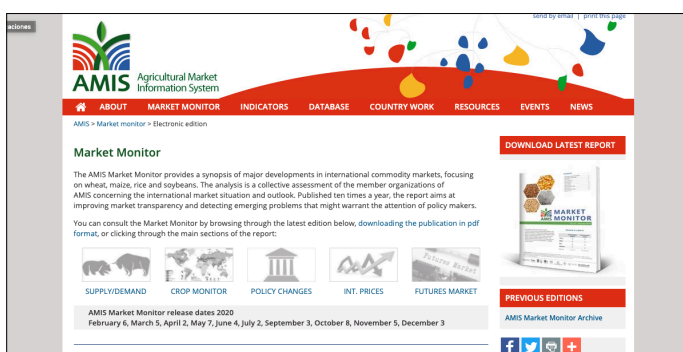


AMIS

Market Monitor

<http://www.amis-outlook.org/amis-monitoring/monthly-report/en/#.XxiXfi3W7Vo>

Market Monitor provides information on the main developments in international markets, production and prices of commodities such as wheat, corn, rice and soybeans.

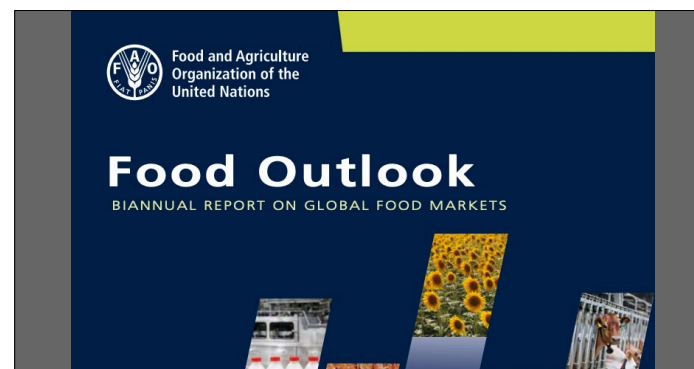


FAO

Food Outlook

<http://www.fao.org/3/ca9509en/ca9509en.pdf>

This report contains the main forecasts on how the world food market will behave in the coming months. This edition addresses the uncertainty triggered by the COVID-19 pandemic.



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