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Impact of the Farm to Fork targets on the Cereals and Oilseeds markets

COCERAL-UNISTOCK's main findings

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1. Scope of the study

With the new direction towards a more sustainable EU food system through the EU Green Deal, the EU Commission launched its Farm2Fork and Biodiversity strategies defining the climate ambition of the EU. Several targets are outlined in these strategies:

- On the EU overall land area:
 - o At least 10% of land dedicated to so-called ‘high diversity landscape’, which includes fallow land, hedges, buffer strips, ponds, and so on, defined below as “set-aside”.
 - o 25% of agricultural area under organic farming by 2030.
- On the input side:
 - o A reduction of the overall use and risk of chemical pesticides by 50% and the use of high-risk pesticides by 50% by 2030.
 - o A reduction of fertiliser use by at least 20% by 2030, which will result in the reduction of nutrient losses by at least 50%

The scope of this study is to quantify the impact of these four targets on the EU arable crop sector by 2030. There will be no projections for individual Member States.

The detailed study will not be published nor sent out directly. This below report will serve as a tool for COCERAL-UNISTOCK Secretariat and members to better understand the impact of the Farm2Fork and Biodiversity Strategies and be used as a basis for discussions with EU institutions, national and local authorities.

2. Methodology

The COCERAL-UNISTOCK Secretariat launched a call for candidatures for a working group to work on the impact assessment. Participants in the Farm2Fork Impact Assessment are market specialists from national associations and companies.

The baseline scenario used for comparison is the Commission medium-term outlook on the prospects for agricultural markets and income 2020-2030¹. In this projection, the Commission does not consider legislative proposals that are not finalised and implemented. For instance, the CAP measures considered in the forecast are the CAP regulations implemented in 2013.

As the baseline and data available cover a limited number of crops, the focus crops of the impact assessment are wheat, corn, barley, other grains and oilseeds (rapeseed, soy and sunflower seed).

Three levels of impact were decided depending on the area of arable crops impacted compared to the total agriculture area: a low impact, a medium impact and a high impact. For example, under the medium impact scenario, 37.5% of the set aside requirement is met on arable land and 62.5% on other agricultural land. A fourth scenario (extreme impact) was also added that considers the F2F targets to be only implemented in the arable crops sector, especially the set-aside and organic targets.

¹ https://ec.europa.eu/info/food-farming-fisheries/farming/facts-and-figures/markets/outlook/medium-term_en

Table 1: Overview of the different foreseen scenarios

		Low impact	Medium impact	High impact	Extreme impact
Area	Set aside	25%	37.50%	50%	100%
	Organic	20%	32.50%	45%	100%
	Pesticides	Lower impact by 50% versus medium scenario		Increase impact by 50% versus medium scenario	Increase impact by 50% versus medium scenario
	Fertilizers	Lower impact by 50% versus medium scenario		Increase impact by 50% versus medium scenario	Increase impact by 50% versus medium scenario
Yield	Set aside				
	Organic	Adjusting the assumption according to area scenarios			
	Pesticides	Lower impact by 75% versus medium scenario		Increase impact by 75% versus medium scenario	Increase impact by 75% versus medium scenario
	Fertilizers	Lower impact by 75% versus medium scenario		Increase impact by 75% versus medium scenario	Increase impact by 75% versus medium scenario

As a first step, the members of the working group were requested to review literature, talk to farmers, seed breeders, consultants etc. Based on these discussions and their own expertise, qualitative and quantitative statements were drafted and shared with the COCERAL-UNISTOCK Secretariat. The information collected helped identify how each of the four targets would impact yield and area for each selected crop at farm level.

As a following step, the information was translated into percentages impact on EU crop yield and area. These percentages were built on EU numbers and not on Member States aggregates. These assumptions were then used to calculate the 2030 EU production according to the three foreseen scenarios. The results of this work can be found under point 4 (Results of the internal study).

In order to build an analysis of the study's results under point 5 'Analysis of the study results', a balance sheet for each product was established. These balance sheets were conceived on the basis that the consumption remains unchanged per the Commission medium-term outlook baseline scenario. The imports and exports were forecasted using the minimum stock-to-use ratio of the last ten years.

3. Uncertainties

COCERAL-UNISTOCK decided to work with a simplified methodology in the interest of time and are aware that as a result some uncertainties remain.

First of all, the targets of the F2F are intended to be implemented via the national CAP strategic plans. However, the CAP is still under discussion between the three institutions as of May 2021. The Commission foresees the publication of the basic acts before Summer 2021 if the dialogues are finalised by then. Until the final regulation and associated implementing and delegated acts

are published, the full impact of the CAP on the arable crops sector is uncertain, especially as the Members States will only be able to finalise their CAP strategic plans in 2022 after approval of the Commission.

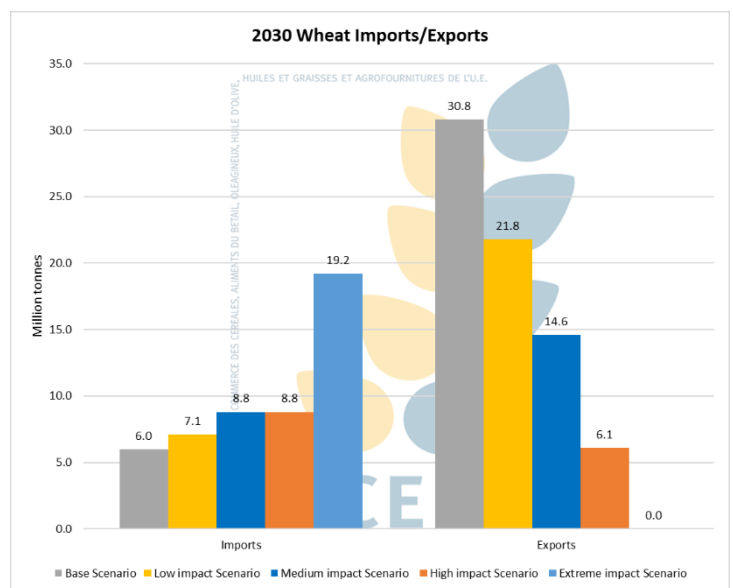
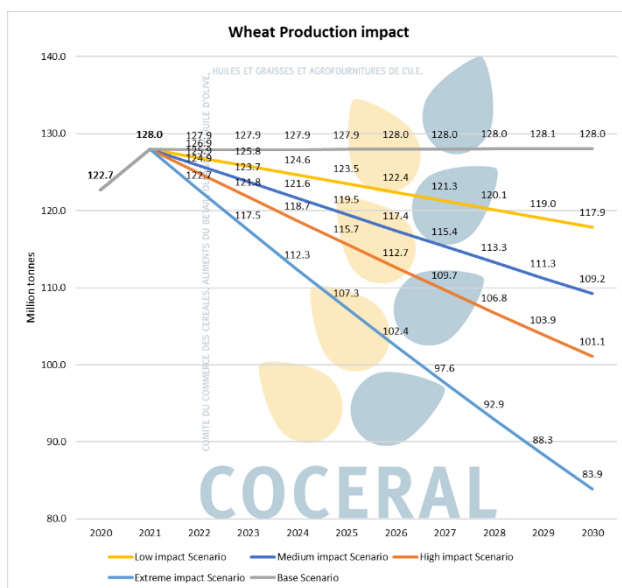
Secondly, it is unclear how much the arable crops sector would be impacted by these strategies as the level of implementation of the targets would be up to the Member States' decision. For instance, it is unclear if the aim of increasing organic production would be more directed towards pastures or other types of crops. Moreover, Member States will need to further decide on how to implement the targets on a national, regional or local level. Some Member States have already achieved these targets on their total agriculture area.

Other uncertainties refer to the potential implementation of new mitigation measures as regards to integrated pest management, new plant breeding techniques, or other types of measures focused on the consumer.

4. Results of the internal study

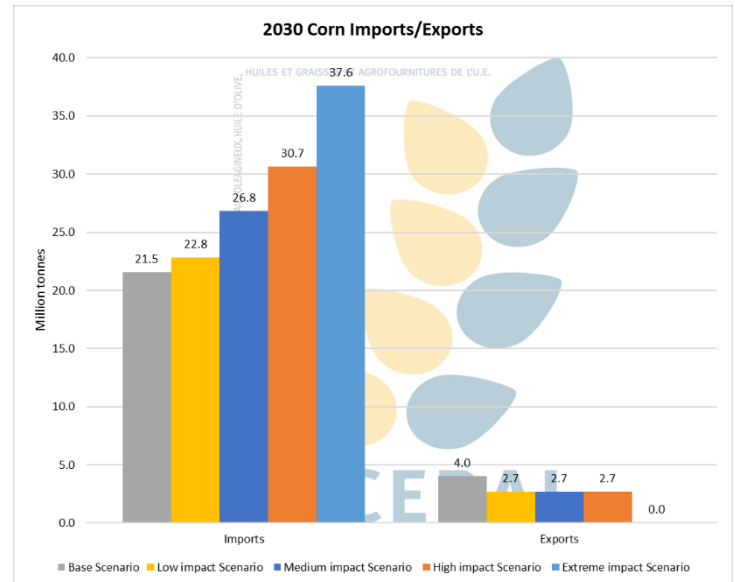
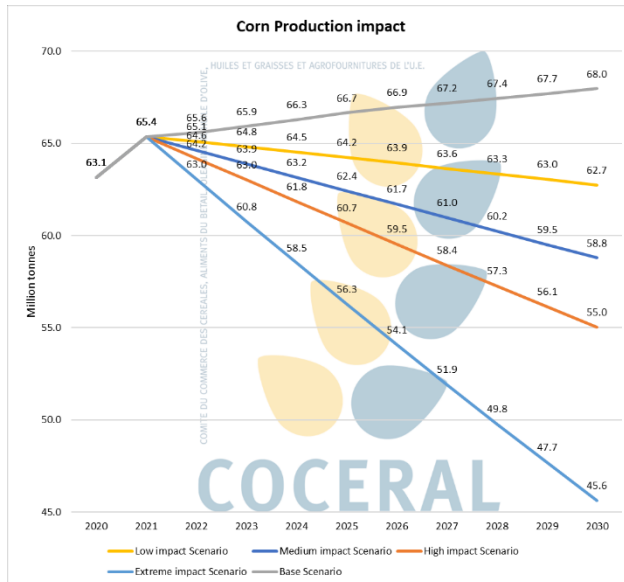
Wheat

Compared to the 2030 EU outlook baseline, COCERAL-UNISTOCK foresees that wheat production will decrease by -8%, -15%, -21% and -35%, respectively according to the low, medium, high and extreme impact scenarios.



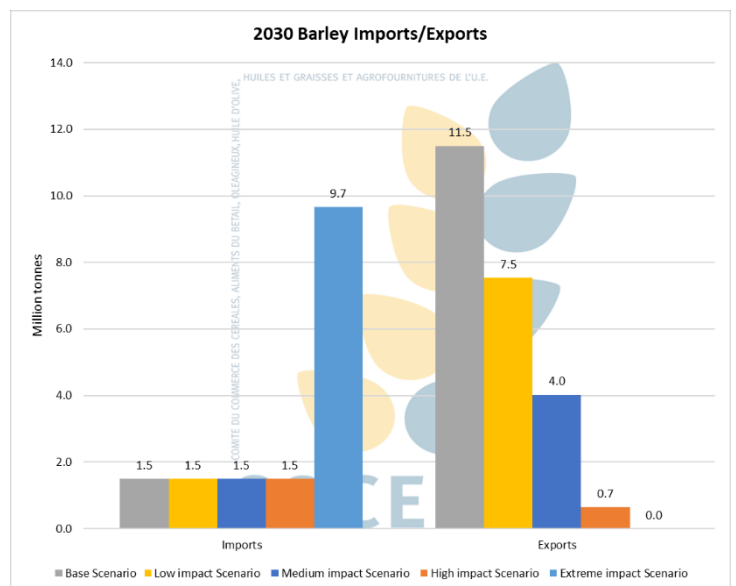
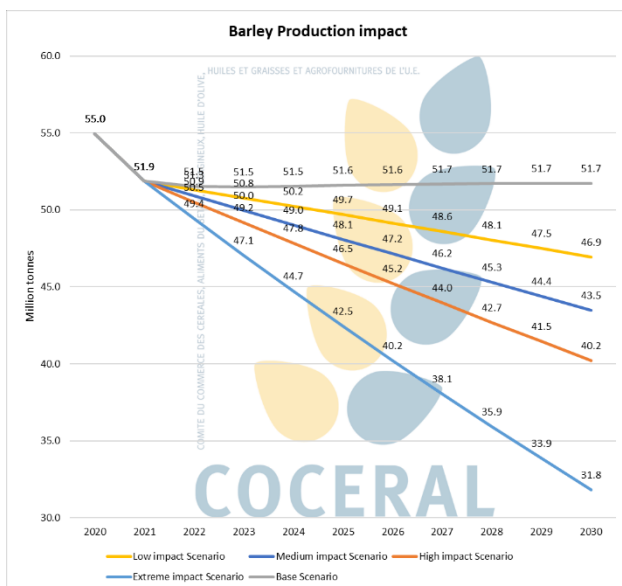
Corn

Compared to the 2030 EU outlook baseline, COCERAL-UNISTOCK foresees that corn production will decrease by -8%, -13%, -19% and -33%, respectively according to the low, medium, high and extreme impact scenarios.



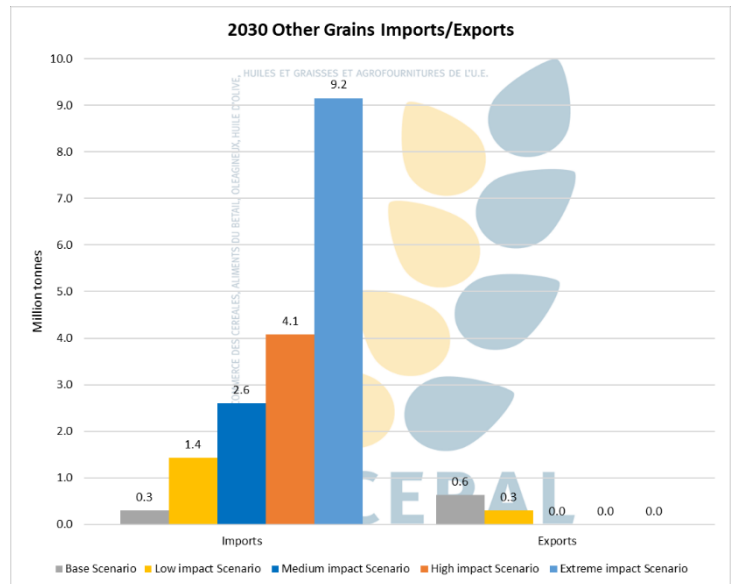
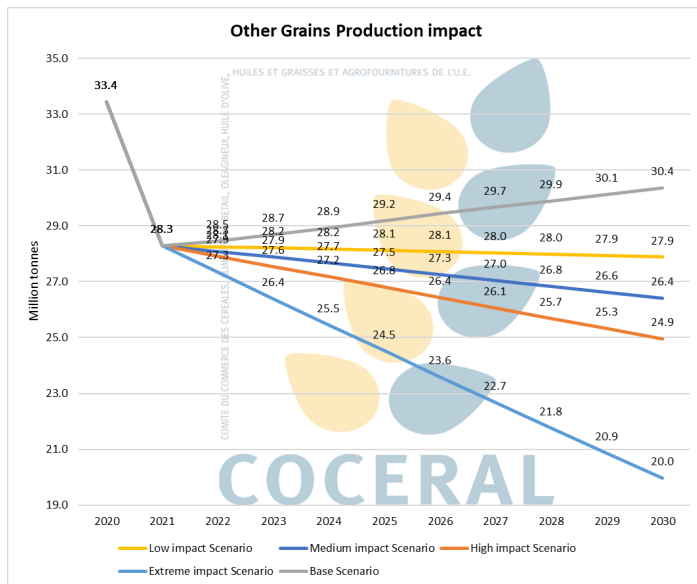
Barley

Compared to the 2030 EU outlook baseline, COCERAL-UNISTOCK foresees that barley production will decrease by -9%, -16%, -22% and -38%, respectively according to the low, medium, high and extreme impact scenarios.



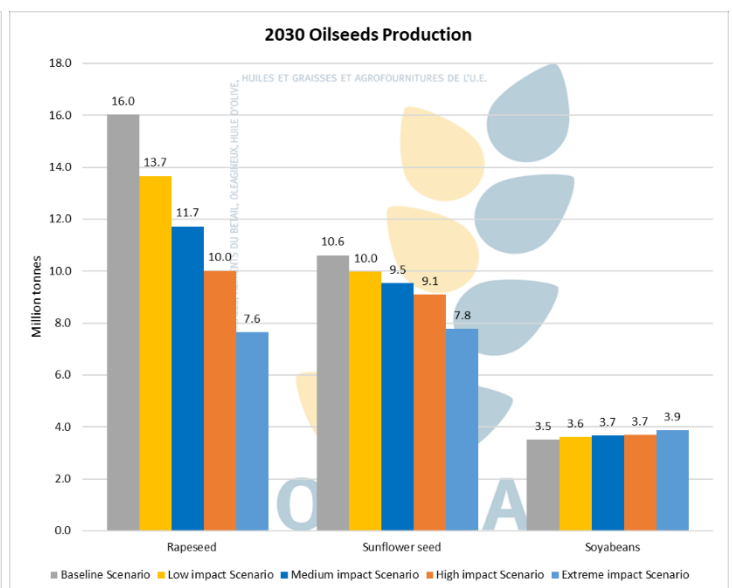
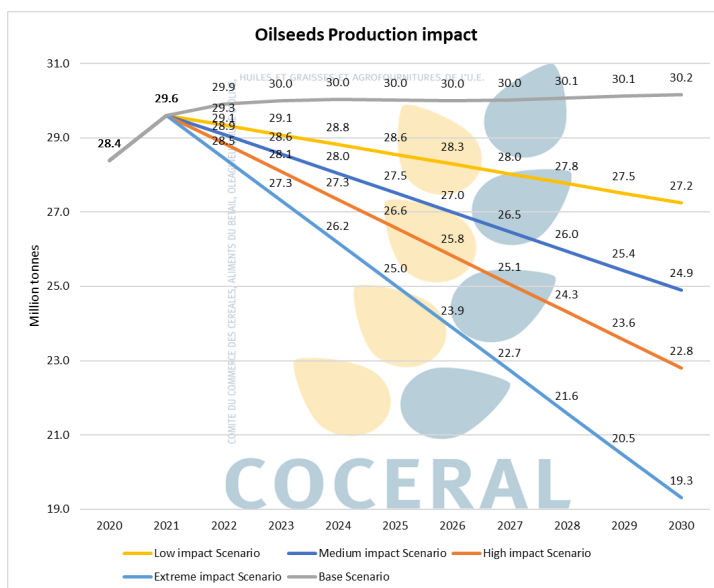
Other grains

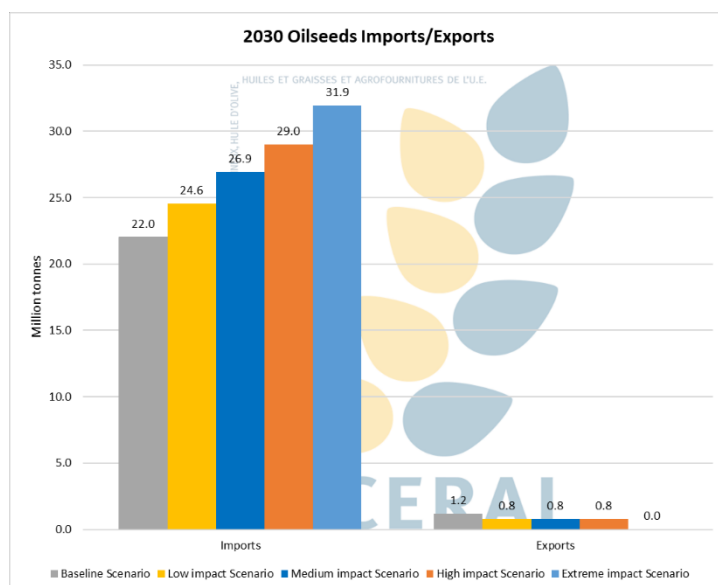
Compared to the 2030 EU outlook baseline, COCERAL-UNISTOCK foresees that the production will decrease by -8%, -13%, -18% and -34%, respectively according to the low, medium, high and extreme impact scenarios.



Oilseeds

Compared to the 2030 EU outlook baseline, COCERAL-UNISTOCK foresees that the production will decrease by -10%, -17%, -24% and -36%, respectively according to the low, medium, high and extreme impact scenarios. However, the production decrease is only observed for rapeseed and sunflower seeds. Soybean production is expected to grow compared to the baseline.





5. Analysis of the study results

Based on the results of the different scenarios, COCERAL-UNISTOCK have come to the following conclusions.

Production

As expressed in the above section, the production for all crops considered except for soyabean is foreseen to decrease under all scenarios. The most impacted crop is rapeseed with a decrease to 10 million tonnes (-27%) compared to the baseline in the medium impact scenario.

Consumption

In each scenario, grain production is reduced. To offset the loss of production and to stabilise the grains balance sheet, the EU would either need to import more grains or reduce its consumption. A reduction of consumption would have an impact on other sectors, such as livestock, oils, starch or biofuels. For instance, COCERAL-UNISTOCK projects that, under the 'medium scenario', feed demand would need to decrease by 13% even considering a declining livestock production in order not to make the EU a net grain importer. In addition, the impact would also hinder some further various downstream production chains such as activities from meat production, milling industry and starch processing or other packaging activities (e.g. bottling for vegetable oils).

Prices

The global market would rely on fewer grain exporting countries, making it subject to more volatile and potentially higher prices worldwide. For instance, the tight April 2021 market situation shows how fragile price evolution can be, with historically low stock-to-use ratios. Furthermore, there will be a higher impact on price development in land-locked countries.

If the current trend regarding demand for organic products continues, it can be expected that there will not be enough demand to respond to the 25% target for organic production. As such, prices for organic products would drop and it would become extremely unattractive for farmers to grow organic products. The F2F organic target would be creating a segment only for the EU market and it is not forecasted that this production would be exported to third countries. In essence, 25% of EU production would be isolated from the world market mechanism.

Trade/international markets

To equilibrate the balance sheet with a lower production level, the EU could become a net importer of grains, leading to a much higher price level on the domestic market and worldwide. This would in turn lead to higher costs for consumers and for operators down the chain, such as the livestock producers.

From a global perspective, the number of suppliers would be reduced as the EU will not be able to supply the world's most needy regions with staple food, such as wheat. Instead, other regions will need to take additional land into production, for example Kazakhstan. However, in Kazakhstan, wheat yields are only 20% of the EU level. This would mean that either five times more land must be used to produce the same amount of wheat in the EU or substantial intensification of wheat production must happen in third countries such as Kazakhstan. If so, this would lead to an increase of transport costs if production were eventually located in third countries. This is not sustainable from a global perspective and sustainability is a global issue, especially when it is expected that global agriculture would need to produce almost 50% more food, feed and biofuel to meet the demand in 2050.

As the EU becomes an increasing importer under all the scenarios, the Import Tariff-Rate Quotas regulation would need to be reviewed. With more crops imported out-of-quota, the downstream supply chain would face higher costs.

As wheat production is projected to be reduced according to the three scenarios, a significant drop of the export surplus can be expected, especially during a difficult year (due to climate change). The EU could then become a net importer of feed wheat, leading to higher prices due to import tariffs as import quotas are not sufficient to meet demand in the EU. On the global market, this would lead to spikes in wheat prices and more countries potentially implementing export policies such as tariffs and/or bans.

Regarding corn, as the EU is currently a net importer, it can be expected that imports will be increased to balance the EU supply and demand for animal feed. At the same time, China imports are expected to remain high. The question to be seen is if other exporter countries, like the US will be able to supplement the global demand.

Rapeseed imports would need to rise significantly in order to meet the EU demand. This would be very difficult to achieve, especially if Canada resumes its exports to China.

Furthermore, as the EU envisions to reduce its import dependence of proteins crops as expressed in the F2F strategy, the further reduction of rapeseed meal production would only make the EU more dependent on imports of protein feedstocks. The demand is not expected to be fulfilled by alternative supplies such as protein from algae in the medium term, nor by EU's soy production, given its production volumes and different quality parameters.

Finally, outside the EU, many farmers have now access to seeds and crops that are currently considered under EU legislation as GMOs. More than a matter of choice, this is somehow a default option at the agricultural systems level. As mentioned above, under the different scenarios and in order to have a stable balance sheet, more crops and proteins regarded as GM would be imported. Independently from the results of the Commission's study on New Genomic Techniques, if the EU decides to limit the imports of GM products, the issue of EU food security would become crucial.

Storage/Logistics

The organic production goal of 25% would need new developments in storage/logistics. Besides a large increase in numbers, the storage units must be adapted to smaller quantities. The originators will need to segregate organic and conventional production.

In each scenario, the EU becomes a net importer of grains. As such, changes would also need to be done to the infrastructure and operations to take on this additional volume of imports.

Impact on other sectors

Meat and dairy sectors

With a tighter balance sheet, meat and dairy production would be expected to decline to balance the grain supply and demand, if there is a limited amount of grain imports. Although this reduction of EU meat production is already foreseen by the Commission, *“accompanied by changing consumer preferences, with consumption of beef continuing to decrease and poultry replacing pig meat”*, the Farm to Fork target will lead to a further drop. As such, meat and dairy exports will then be reduced. The EU would thus lose its competitive advantage in exporting high-quality agri-food products.

Biofuels

In order to deliver on the broader EU climate and energy ambition, further decarbonisation of the EU transport sector is needed. With the recently published EU Strategy for Sustainable and Smart Mobility and the Commission proposal for a revision of the Renewable Energy Directive expected in July 2021, biofuels are expected to continue to play a role at a time when more advanced biofuels from waste and residues are deployed. In the short and medium term, an increased demand for agricultural raw materials to produce biodiesel and bioethanol is envisaged in order to deliver on the need to decarbonise the EU transport sector.

With the reduction of oilseeds production in the EU, the demand for feedstock for biofuel use will not be fulfilled. Furthermore, at the international level, demand for renewable energy in North and South America is continuing to increase. This will lead to a strong global demand on vegetable oils.

Conclusion

In all scenarios, the EU is set to become a structural net importer of agricultural commodities, with especially significant effects on corn and oilseeds/oilseed meal supplies. Years with low yields could lead to supply shortages. This will also impact the level of prices in the food and feed value chain. With lower local production and a shift towards imports from far away origins, lower prices will be impossible to achieve.

6. Our position

One of the key components of the EU agri-food industry's success, is a fully integrated supply chain supported by an open trade policy. Thanks to the EU's climate and quality of arable land the EU can produce almost all kinds of crops. Thanks to technical knowledge that has developed over the last 60 years, these crops are now processed and/or used to feed animals or humans directly. This fully integrated supply chain provides both availability and affordability for the downstream EU food and non-food processors.

However, we have seen that, in the last 20 years, while the EU production has gone up, its global market share has decreased. This makes our raw materials more susceptible to weather, political or price risks. As the EU wants to promote free and fair trade while implementing the F2F strategy, we could see that there will be more competition between the domestic consumption and EU exports to third countries.

We cannot assume that the rest of the world will be able to produce the basic agri-raw materials that the EU will not grow in sufficient quantities and qualities anymore. This would make our supply chain very vulnerable as we would be in competition for a limited amount of production with other countries like China or even Russia (prone to export bans or taxes when it suits them).

Unlike crude oil or the metal industry, the agriculture production is finite for one year. One does need to wait till the following crop to replenish silos. This means that all our food industries become at risk.

To avoid this uncertain future, we have some propositions.

Generally, structurally importing areas should benefit from accompanying measures such as free trade agreements or increased free trade quota systems on a global basis or with certain neighbouring states. Regulations will have to be made easy to implement and be flexible enough to avoid technical hurdles that increase possible shortages in supply.

On the target of at least 10% of land dedicated to so-called 'high diversity landscape', there should either be a limit on the compulsory percentage of set-aside applied on every farm or the possibility to cancel this obligation. The fulfilment of the balance should be possible in areas with lower yields. Production of oilseeds could be also accountable for set aside requirements due to their nitrogen fixing properties.

In any respect, we believe that coherence between the different policies under the EU Green Deal but also under the CAP would be beneficial for all actors of the supply chain. The EU should promote measures focusing on innovation, technology and education, which will be critical in helping the EU agricultural sector to adapt to the changes in climate and in consumer demands, notably as regards to sustainability. Emphasis should be on investment towards research and development of seeds, but also towards innovative technologies and agriculture practices such as precision farming. In particular for seeds, there is potential in supporting seed technologies as an integrated solution to the F2F. This would be a way to counterbalance the grains and oilseeds production's decline through insect-resistant seeds and the reduction of PPPs.