



Study on organic field crops in the EU and in the main non-member countries



Synthesis  
October 2021



# 1. Objectives, definition and scope of the study

## 1.1.Objectives

This summary reports on the cross-sectional results of a study carried out on behalf of the Agence BIO, Interécéales and Terres Univia to characterize the organic field crop sector (cereals, oilseeds and protein crops – COP) in several European Union (EU) countries and in the main non-member countries. The following objectives were:

1. To record the volumes produced during the last 5 years and to make a forecast for the next 5 years.
2. To record prices over the last 5 years in the countries studied.
3. To assess the trade of field crop products within the European Union and with non-member countries.
4. To outline the policy support and regulatory environment for the organic sector in the countries studied.
5. To establish an contact list of key experts in the organic field crop sector for the countries studied (excluding France).

## 1.2. Reminder of the definitions

- **Production areas and volumes:** the production areas and volumes correspond to the total certified organic areas and volumes produced (excluding productions in their second year of conversion to organic) by country in hectares and tons (except for France for which the volumes produced correspond to the volumes collected).
- **Uses:** the uses correspond to the volumes of certified organic COPs used by primary processing operators for human food (milling, malting, semolina milling, oil milling/ crushing, soyfood, etc.) and/or for animal feed (animal feed manufacturers). Productions in their second year of conversion to organic volumes have been included in the grain tonnages used by feed manufacturers.
- **Trade:** this refers to intra-EU and extra-EU trade flows. While extra-EU flows are quantified via DG AGRI's TRACES platform (years 2018, 2019 and 2020), knowledge of intra-EU trade is based on statistics that may be implemented within Member States.

## 1.3.Scope

The scope of the study includes 18 countries:

- 12 EU Member States: Austria, Denmark, France, Germany, Italy, Lithuania, the Netherlands, Poland, Romania, Spain, Sweden and the UK (until 2019).
- 6 non-member countries: China, India, Russia, Togo, Ukraine and the United States.

The study focuses mainly on the volumes of organic grain produced within each country and used by primary processors in animal feed (AF) and human food (HF).



The data sought concerns certified organic cereals, oilseeds and protein crops used by primary processors in HF and AF. Cereals in their second year of conversion to organic were excluded from the production data but were included in the animal feed use data.

The scope defined in the specifications is different for each of the 18 countries studied, depending on the species selected among the 15 targeted and the level and/or nature of the commodity value chain (production or uses, HF/AF).

The full report from which the synthesis is derived presents the detailed results of the study by country.

## 2. Methods

The method employed is based on an iterative approach. The collection of information was adapted according to the research scope defined for each country and the information available. For each country, the following steps were followed:

- Mapping and collection of official data and statistics, sector studies and industry news.
- Identification of missing information and establishment of expert lists including the following organisations:
  - o National and/or regional authorities
  - o Professional organisations (sectorial or dedicated to the organic sector)
  - o R&D and development organisations, consultancies and NGOs
  - o Economic operators, i.e., companies involved in the collection/processing/marketing of organic COPs.

This stage led to the interviews of nearly one hundred people (99 interviews conducted).

- Estimates made by AND-I/Ecozept when the information sought could not be collected and when the partial data available allowed it. The estimates and orders of magnitude made by AND-I/Ecozept were verified with experts interviewed in each country.
- Projection to 2025. Two methods were used to forecast the volumes expected by 2025:
  - o Trend projection: this is based on the additional areas committed to AB observed over the period 2016 to 2019 (or 2020 if applicable). This method makes it possible to establish the low range of projections.
  - o Projection based on development targets set by the authorities: growth is calculated on the basis of the projected organic surfaces target for 2025. This method is used to establish the upper range of projections generally.

A colour code is used to indicate the origin of the data collected:



A: official data (national authorities, administration in charge of statistics, certification body, etc.)

B: estimated data (provided by one or more experts)

C: calculated data (estimated by AND-I/Ecozept)



### 3. Results

The results of the study are presented at 4 levels:

- Production volumes and uses within the targeted EU Member States in 2019 (including the UK until 2019)
- Production volumes and uses within targeted non-member countries in 2019
- Focus on the major species (common wheat, barley, maize) at the level of the EU Member States for which the defined perimeter allowed a consolidated analysis of the evolution of the volumes produced, used and to be used by 2025.
- Focus on organic COP imports from outside Europe.

#### 3.1. Production volumes and uses of organic COP in the Member States

In 2019, total organic grain production in the 12 Member States surveyed (United Kingdom included) was 4.72 million tons. The main producing countries were:

- Common wheat: Germany, Italy, France, Romania, Sweden and Austria
- Durum wheat: Italy
- Maize: Romania, Austria and Italy
- Barley: Italy, Germany and Spain
- Oats: Germany, Sweden and Spain
- Large spelt: Germany
- Triticale: Austria
- Rape seed: Sweden, Romania and Germany
- Sunflower: Italy and France
- Soya: Austria, Italy and France



Table 1: Organic COP production in 2019 in the Member States in 2019 (including the UK)

Production (tons)	Italy	Germany	France	Austria	Romania	Sweden	Spain	Lituania	United Kingdom	Polska	Denmark	Total
Common wheat	219 750	324 000	240 200	159 661	164 547	164 900	50 504	113 623	33 770	23 935	62 400	1 557 300
Durum wheat	420 564	/	7 500	/	/	/	12 931	/	/	/	/	441 000
Maize	122 800	86 000	116 200	134 763	116 971	/	7 953	/	1 000	17 031	/	602 700
Barley	133 900	160 000	78 200	62 659	/	72 500	122 878	/	38 513	/	/	668 700
Oats	59 400	125 000	32 100	21 565	/	96 800	80 850	59 310	50 619	62 652	/	588 300
Large spelt	3 000	108 000	14 000	21 262	/	ND	/	/	/	/	/	146 300
Triticale	13 000	/	53 400	68 634	/	/	9 709	/	/	/	/	144 700
Rape seed	5 000	8 000	4 500	/	8 975	12 800	/	515	/	/	/	39 800
Sunflower	33 600	6 000	35 600	/	61 082	/	4 248	/	/	/	/	140 500
Soy	42 500	ND	50 100	65 150	30 954	/	0	/	/	/	/	188 700
Peas	14 000	15 000	18 800	3 714	/	/	31 237	37 181	/	1 478	/	121 400
Faba beans	14 000	34 000	28 100	4 994	/	/	/	/	/	420	/	81 500
<b>Total</b>	<b>1 081 500</b>	<b>866 000</b>	<b>678 700</b>	<b>542 400</b>	<b>382 500</b>	<b>347 000</b>	<b>320 300</b>	<b>210 600</b>	<b>123 900</b>	<b>105 500</b>	<b>62 400</b>	<b>4 720 800</b>

NB: « / »: Data outside the scope of the study « ND »: Data not determined although researched

Source: AND-I/Ecozept from various sources and experts



Total organic COP uses in the 12 Member States for 2019 amounts to 4.35 million tons. The main user countries among those surveyed are Germany with 1.17 million tons processed, Italy with almost 1.04 million tons used (despite the absence of data on oilseeds), and finally France with 820 thousand tons. The data collected did not allow us to distinguish the volumes of oilseeds from oilcake used in Germany and Sweden for soybeans.

Table 1: Uses of organic COPs in 2019 in the Member States included in the scope of the study

Uses (tons)	Italy	Germany	France	Austria	Spain	Sweden	Netherlands*	United-Kingdom*	Denmark*	Total
Common wheat	229 800	514 000	264 288	135 712	35 000	97 500	93 000	92 000	63 800	1 525 100
Durum wheat	445 100	/	8 996	/	25 000	0	/	/	/	479 100
Maize	118 400	111 000	128360	53 905	36 000	0	95 000	53 300	34 700 / 51 600	639 115 (+/-16 900)
Barley	133 900	164 000	52 164	54 919	60 400	21 000	/	/	/	486 400
Oats	47 700	169 000	22 267	21 565	38 000	26 000	/	30 000	/	354 500
Large spelt	ND	incl. In common wheat	5 700	ND	/	0	/	/	/	5 700
Triticale	11 000	/	79 076	68 634	10 000	0	/	/	/	168 700
Rape seed	ND	27 000	12 040	/	/	7 500	/	/	/	46 500
Rapeseed meal	ND		2 154	/	/	4 200	/	/	/	6 400
Sunflower	ND	67 000	40 446	/	4 000	/	/	/	/	111 400
Sunflower meal	ND		29 056	/	3 000	/	/	/	/	32 100
Soybean	ND	84 000	54 325	9 773	3 000	50 000	/	/	/	201 100
Soybean meal	26 000		91 719	55 377	30 000		/	/	/	203 100
Peas	12 300	32 000	12 347	ND	ND	/	/	/	/	56 600
Faba bean	19 700	/	17 236	ND	ND	/	/	/	/	36 900
<b>Total</b>	<b>1 043 900</b>	<b>1 168 000</b>	<b>820 200</b>	<b>399 900</b>	<b>244 400</b>	<b>206 200</b>	<b>188 000</b>	<b>175 300</b>	<b>98500</b> <b>115 400</b>	<b>4 352 809</b> <b>(+/- 8450)</b>

NB: "/": Data outside the scope of the study, "ND": data not determined although sought, \* for these countries, only the volumes used in Animal Feed (AF) are included in the defined scope.

Source: AND-I/Ecozept from various sources and expert



## 3.2. Production volumes and uses of organic COP in non-member countries

### 3.2.1. Cereal production and uses

For cereals, only the production volumes of Ukraine and Russia were included in the scope of the study. As there are no official data for these two countries and no expert has provided quantitative estimates of production volumes, we have made estimates based on global certified areas and average yields. For Russia, the low range is considered by the experts interviewed to be the closest to reality. No source identified organic sunflower or maize production in Russia, although FiBL has certified area data for these crops.

The estimated production of common wheat in the three countries studied is between 500 000 and 770 000 tons depending on the year. The USA accounts for two thirds of the volumes, followed by Ukraine.

Table 2: Common wheat production in third countries from 2016 to 2019

Common wheat production (tons)	2016	2017	2018	2019	2020
United States of America*	430 573	423 504	456 638	516 941	ND
Russia	13 000/73 000	7 000/41 000	11 000/67 000	34 000 /217 000	ND
Ukraine	94 100 / 270 000	68 200 / 208 100	105 900 / 208 100	75 700	ND
Total	537 700 / 773 600	498 700/ 672 600	573 500/ 731 700	626 600/ 733 900	ND

NB: \*campaign year

Source: AND-I/Ecozept from various sources and experts

For maize, the estimated production of the three countries is between 1.1 million and 1.44 million tons depending on the year. The USA accounts for the vast majority of these volumes.

Table 3: Maize production in third countries from 2016 to 2019

Maze production (tons)	2016	2017	2018	2019	2020
United States of America*	1 006 477	1 040 622	1 045 099	1 043 777	ND
Russia	0/78 000	0/40 000	0/65 000	0 /128 000	ND
Ukraine	87 100 / 360 000	118 000 / 277 400	176 500 / 277 400	100 900	ND
Total	1 093 600/ 1 444 500	1 158 600/ 1 358 000	1 221 600/ 1 387 500	1 144 700/ 1 272 700	ND

NB: \*campaign year

Source: AND-I/Ecozept from various sources and experts

Non-member country uses were only studied in the USA for organic maize and common wheat. The volumes are around 1.5 million tons of maize used and 550 000 tons of common wheat.

### 3.2.2. Oilseed production and use

Sunflower production was estimated for Russia and Ukraine between 34 000 and 70 000 tons.

Table 4: Sunflower in third countries from 2016 to 2019

Sunflower, seeds production (tons)	2016	2017	2018	2019	2020
Russia	0/37 000	0/13 000	0/13 000	0 /32 000	ND
Ukraine	33 900 / 73 400	33 900 / 62 100	50 700 / 58 500	39 400	ND
Total	33 900/ 107 400	33 900/ 75 100	50 700/ 71 500	71 400	ND

Source: AND-I/Ecozept from various sources and experts

Soybean production for the USA, China, India and Togo has been estimated between 1.13 and 1.52 million tons for the years 2018 and 2019 (full scope). China and India account for almost four-fifths of the volumes produced. The data collected for oilcake does not allow its consolidation.



Table 5: Soybean and soycake production in USA, China, India and Togo

Soybean production, seeds (tons)	2016	2017	2018	2019	2020
United States of America*	193 679	193 083	211 746	204 424	ND
China	386 700 / 536 800	432 200 / 599 900	488 400 / 677 900	506 500 / 703 100	ND
India	ND	ND	386 000/ 454 000	474 400 / 558 100	532 749 / 626 800
Togo	33 000	37 000	43 000	54 000	59 000
Total	613 400/ 763 500	662 300/ 830 000	1 129 100/ 1 386 600	1 239 300/ 1 519 600	613 400/ 763 500

NB: \*campaign year

Source: AND-I/Ecozept from various sources and experts

Soycake production (tons)	2016	2017	2018	2019	2020
China	ND	ND	ND	ND	ND
India	ND	ND	196 200 / 230 800	207 500 / 361 800	320 400 / 377 000
Togo	0	0	61	100	ND
Total	ND	ND	ND	ND	ND

Source: AND-I/Ecozept from various sources and experts

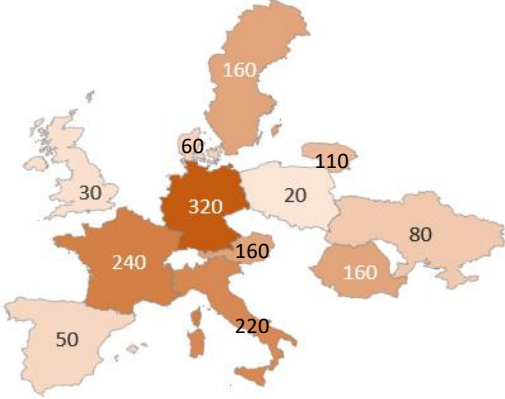
### 3.3. Focus on common wheat 2016-2019

#### 3.3.1. Production

Common wheat production in the 11 countries surveyed for this species increased by 65% between 2016 and 2019, from 0.94 million to 1.56 million tons produced. Germany, France and

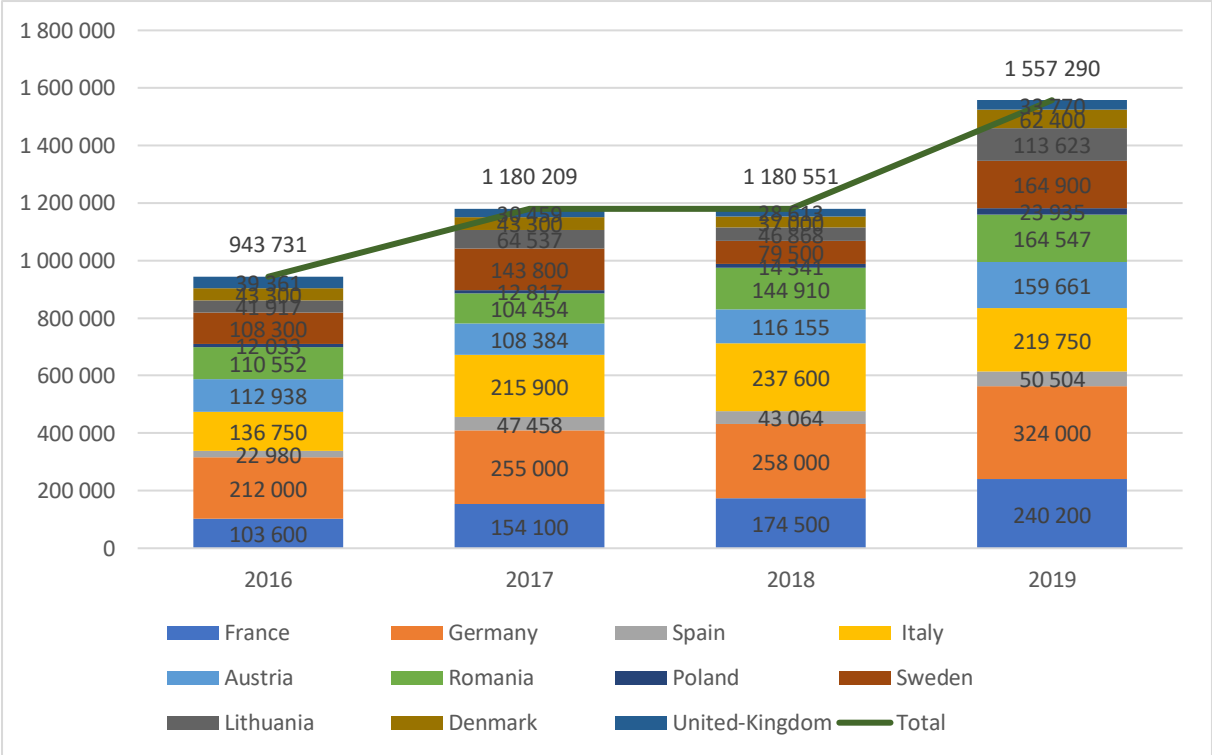
Italy account for 21%, 15% and 14% respectively of the common wheat production of these 11 countries, followed by Romania, Sweden (11% each) and Austria (10%). France, Germany, Italy and Lithuania accounted for almost two-thirds of the increase in production between 2016 and 2019. The year 2019 stands out for very high yields in the northern European countries (Germany and Lithuania).

Figure 1: Organic common wheat production (thousand tons) - 2019 all countries



Source: AND-I/Ecozept from various sources and experts

Figure 2: Organic common wheat production in the Member States included in the scope of the study from 2016 to 2019 in tons



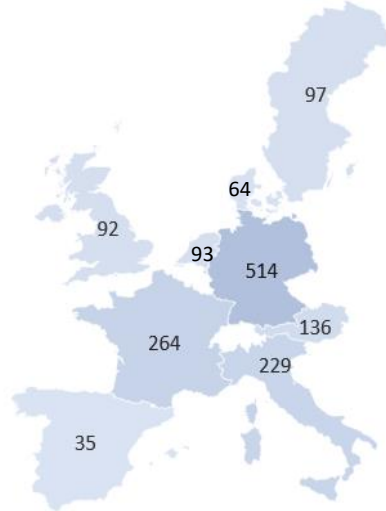
Source: AND-I/Ecozept from various sources and experts



### 3.3.2. Uses

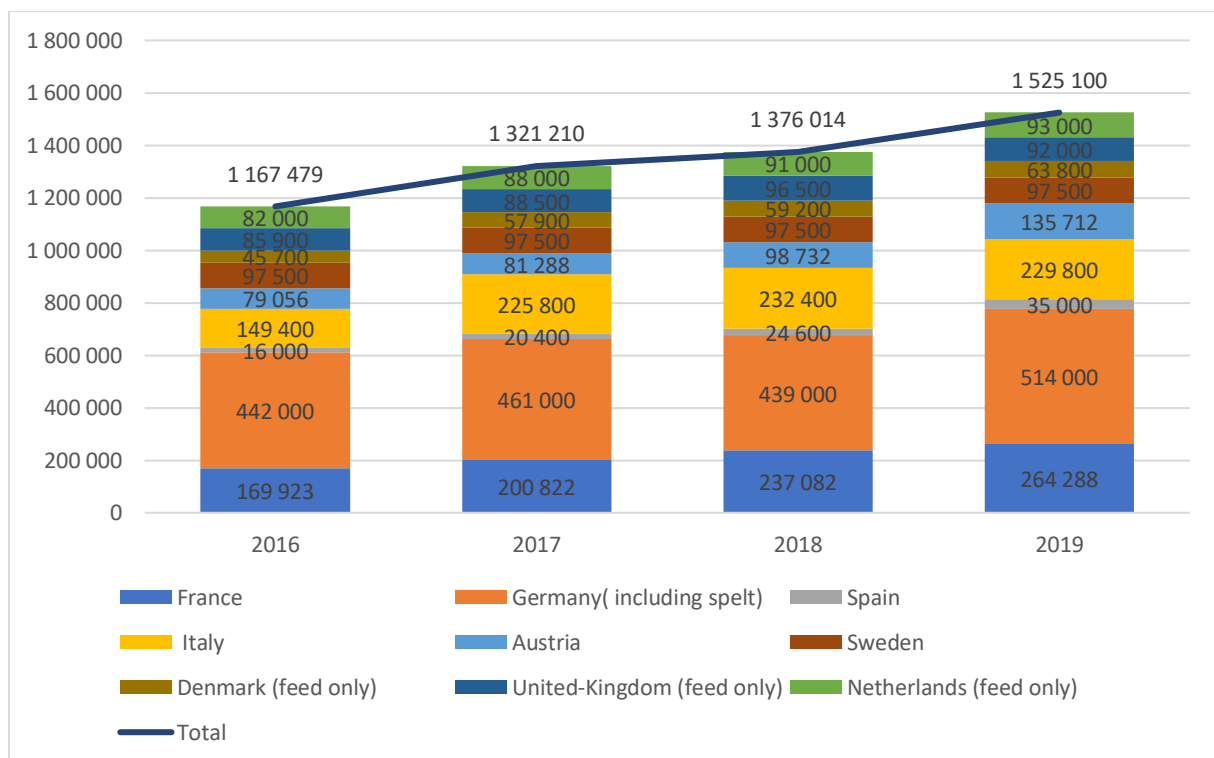
Common wheat uses in the 9 countries studied for this species increased by 31% between 2016 and 2019, from 1.17 million to 1.52 million tons used. The main user countries are Germany (34% of use in these 9 countries but volumes include spelt), France (17%) and Italy (15%). The most dynamic countries that have contributed most to this increase in use are France (26% of additional common wheat volumes), Italy (22%) and Germany (20%).

Figure 3: Organic common wheat use (thousand tons) - 2019 - all countries



Source: AND-I/Ecozept from various sources and experts

Figure 4: Organic common wheat uses in the Member States included in the scope of the study from 2016 to 2019 in tons



Source: AND-I/Ecozept from various sources and experts

The share of human food in total use could only be assessed in a handful of countries: France, Spain, Italy and Sweden. Sweden is the only country for which the use of common wheat in animal feed is greater than that in human food.

Table 6: Organic common wheat food uses in human food (HF) 2016 to 2019

HF Uses (tons)	2016	2017	2018	2019	2020	%HF in 2020
France	122 255	144 764	166 955	193 995	200 000	77%*
Spain	12 000	15 400	18 600	20 000	ND	57%
Italy	148 100	224 400	231 000	228 600	240 000	100%
Sweden	18 300	18 300	18 300	18 300	18 300	19%

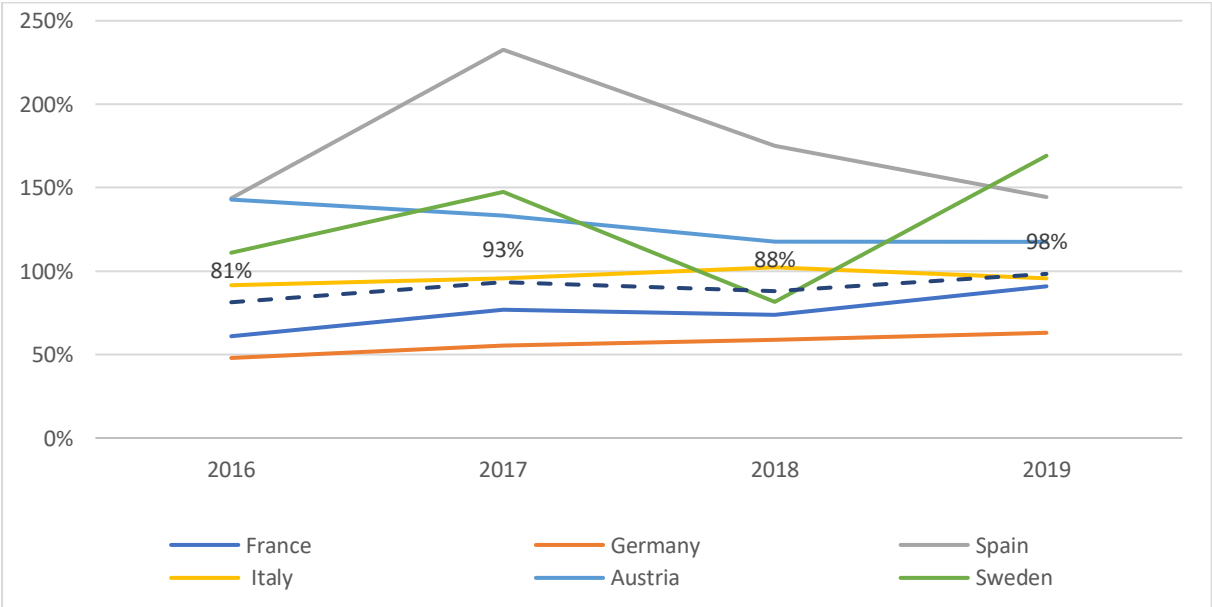
Source: AND-I/Ecozept from various sources and experts

\*NB: the ratio is calculated as Organic HF uses on the total wheat used for human food (mills) and for feed (including organic second year of conversion)

### 3.3.3. Production/uses ratio

The common wheat production/use ratio was calculated for the 6 main common wheat producing and using countries. This ratio makes it possible to visualize the level of self-sufficiency of organic common wheat production from 2016 to 2019. The average of the 6 countries shows an increase in the coverage of uses by national production, with the ratio rising from 81% to 98% in 2019. Among the 6 countries studied, Spain, Austria and Sweden have had a regular production surplus compared to their domestic uses over the last 4 years. Italian production covers almost all identified needs. France and Germany have a chronic deficit of organic common wheat over the period, but their self-sufficiency has improved by 30 points for France and 15 points for Germany.

Figure 5: Evolution of the production/uses ratio of organic common wheat in 6 Member States from 2016 to 2019



Source: AND-I/Ecozept from various sources

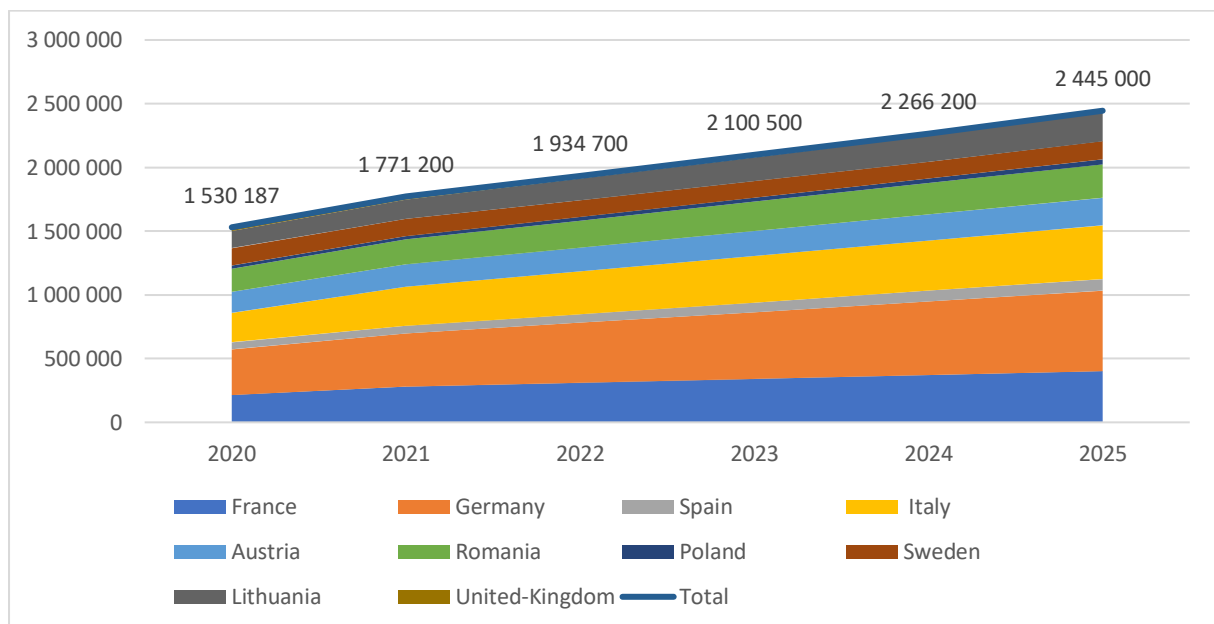


### 3.3.4. Projection of common wheat production to 2025

Projections for 2025 for 10 countries (9 Member States and United Kingdom; Denmark excluded from the scope) show an increase in common wheat production of between + 44% (low hypothesis) and + 60% (high hypothesis). According to the projections, common wheat production expected at this time should reach 2.2 million and 2.45 million tons.

Germany, Italy and France should contribute more than 60% of the additional volumes of organic common wheat expected in 2025, in the two hypotheses studied. Note also the significant growth estimated for Romania and Lithuania, while on the contrary common wheat production is expected to grow moderately in Spain and Poland and to stagnate in the United Kingdom and Sweden (low hypothesis).

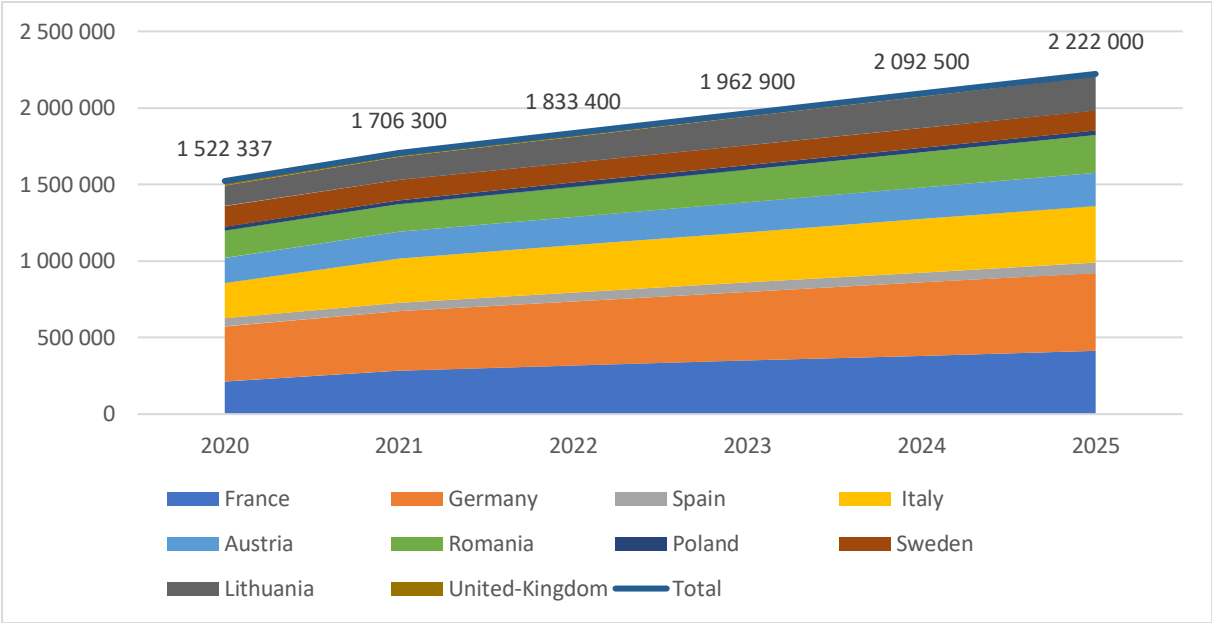
Figure 6: High projection of common wheat production by 2025 in 9 Member State and in the UK s in tons



NB: For Austria, Lithuania, Poland and the United Kingdom, only one projection has been made

Source: AND-I/Ecozept

Figure 7: Low production projection of common wheat by 2025 in 9 Member States and the UK in tons



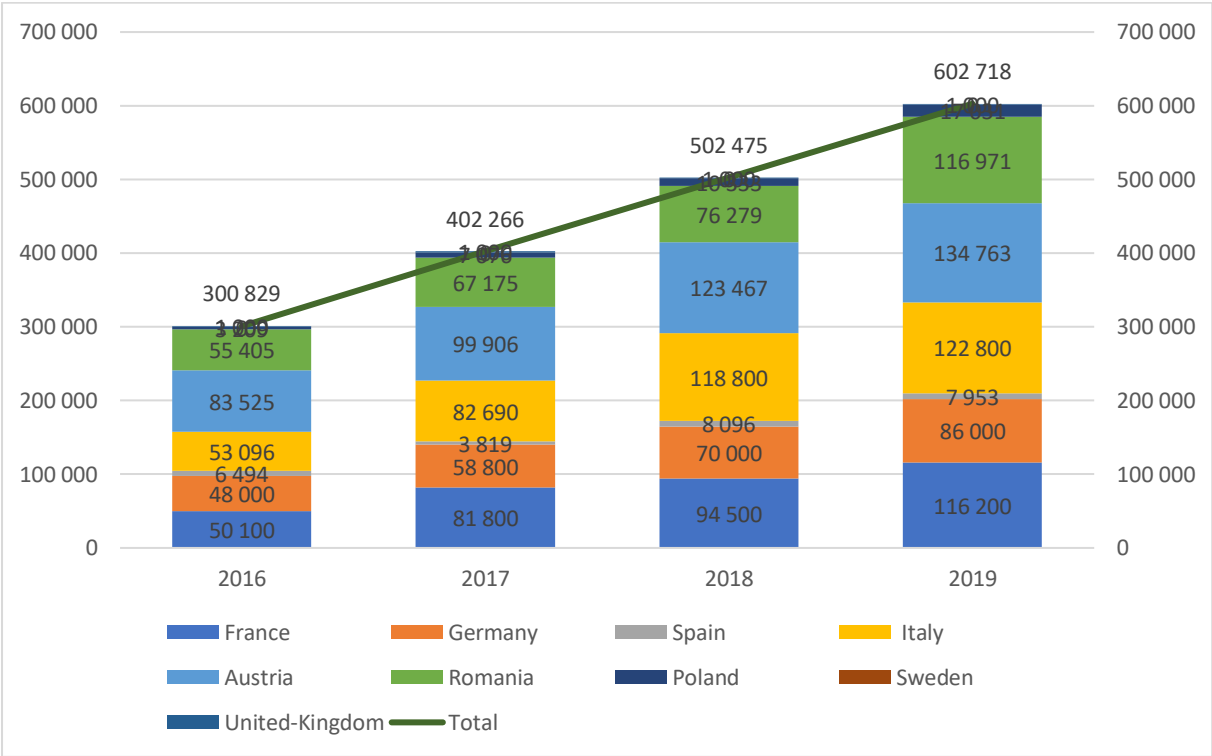
NB: \*For Austria, Lithuania, Poland and the UK, only one projection has been made  
 Source: AND-I/Ecozept

### 3.4. Focus on maize 2016-2019

#### 3.4.1. Production

Maize production within the 9 countries surveyed for this species doubled (+100%) between 2016 and 2019, from 300 100 tons to 602 000 tons. Austria (22% of the production of the 6 countries surveyed), Italy (20%), Romania (19%) and France (19%) account for more than four-fifths of the total EU organic maize production of the countries surveyed. These same four countries have contributed to the majority of the growth observed.

Figure 8: Organic maize production in the Member States included in the scope of the study from 2016 to 2019 in tons



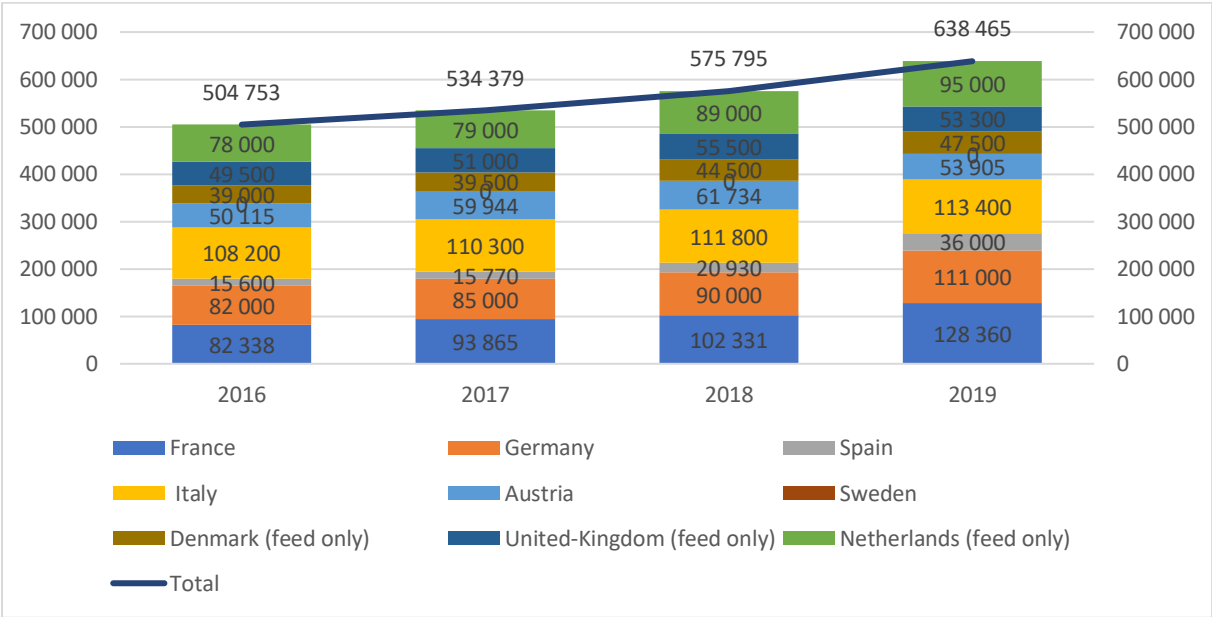
Source: AND-I/Ecozept from various sources

### 3.4.2. Uses

Organic maize uses in the 9 countries surveyed for this species increased by 26% between 2016 and 2019, from 505,000 tons to 634,000 tons. The main user countries in 2019 are France (20% of uses in the 9 countries surveyed), Italy (18%) and Germany (17%).

The countries that contributed most to the growth in use were France (34% of additional maize volumes), Germany (22%) and Spain and Denmark (15% each).

Figure 9: Organic common wheat uses in the Member States included in the scope of the study from 2016 to 2019 in tons



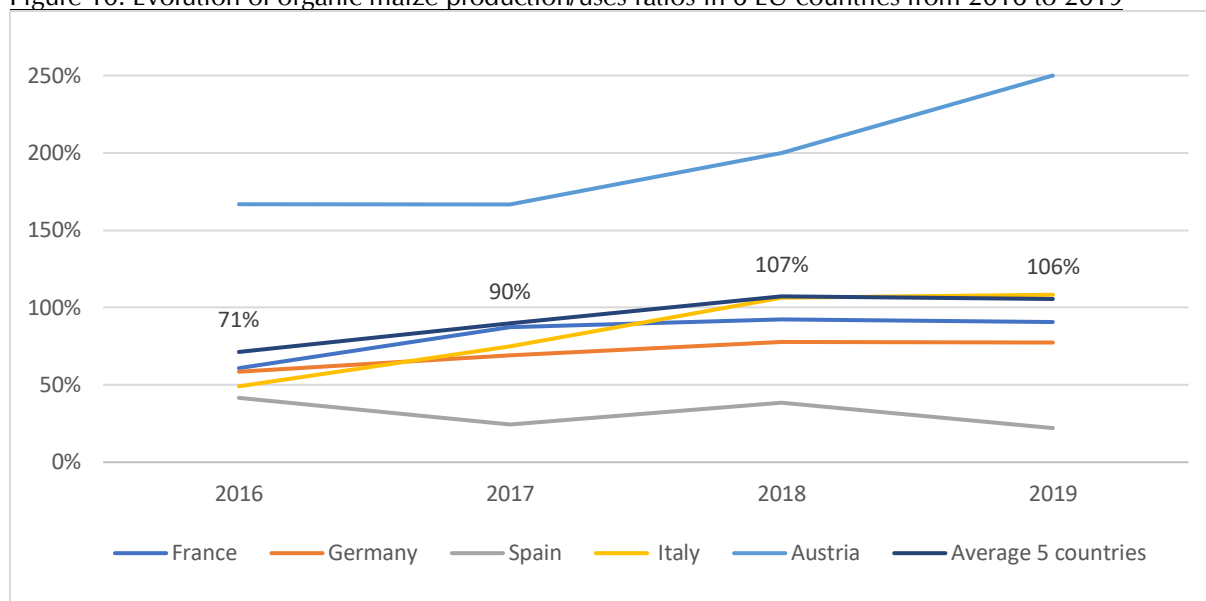
Source: AND-I/Ecozept from various sources

### 3.4.3. Production/uses ratio

The production/uses ratio of organic maize was calculated for the 5 major countries. The average of the 5 countries shows an increase in their level of self-sufficiency, with the average ratio rising from 71% in 2016 to 106% in 2020. Austria is the only country whose production chronically and significantly exceeds its domestic uses (x 2.5 in 2019). France and Germany remain slightly in deficit despite the increase in their respective production in 2019. Italy has become self-sufficient in organic maize since 2018. Spain is largely dependent on external supplies to meet its needs and this ratio has even deteriorated between 2016 and 2019.



Figure 10: Evolution of organic maize production/uses ratios in 6 EU countries from 2016 to 2019

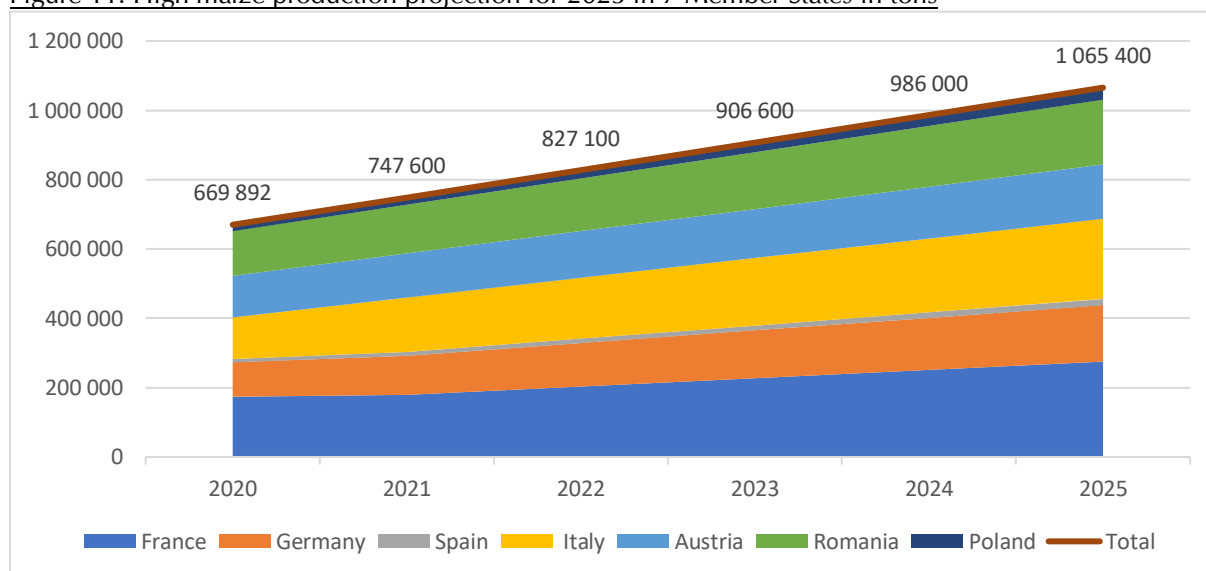


Source: AND-I/Ecozept from various sources

### 3.4.4. Projection of maize production to 2025

Projections for 2025 in seven EU Member States show an increase in organic maize production of +34% in the low case and +43% in the high case. The expected maize production at that time could be between 941 500 tons and 1.06 million tons for the countries studied. In the high hypothesis, France, Italy and Germany should contribute more than 70% of the additional volumes, while in the low hypothesis, France, Romania and Italy should contribute more than two thirds of the growth.

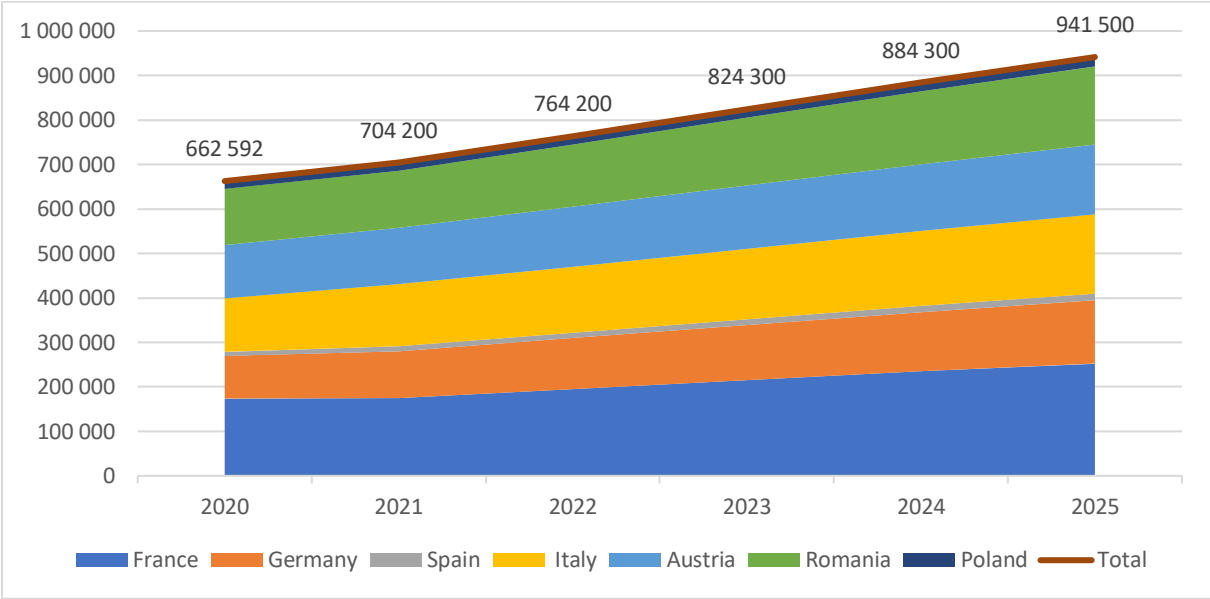
Figure 11: High maize production projection for 2025 in 7 Member States in tons



\*For Austria and Poland only one projection was made.

Source: AND-I/Ecozept

Figure 12: Low maize production projection for 2025 in 7 Member States in tons



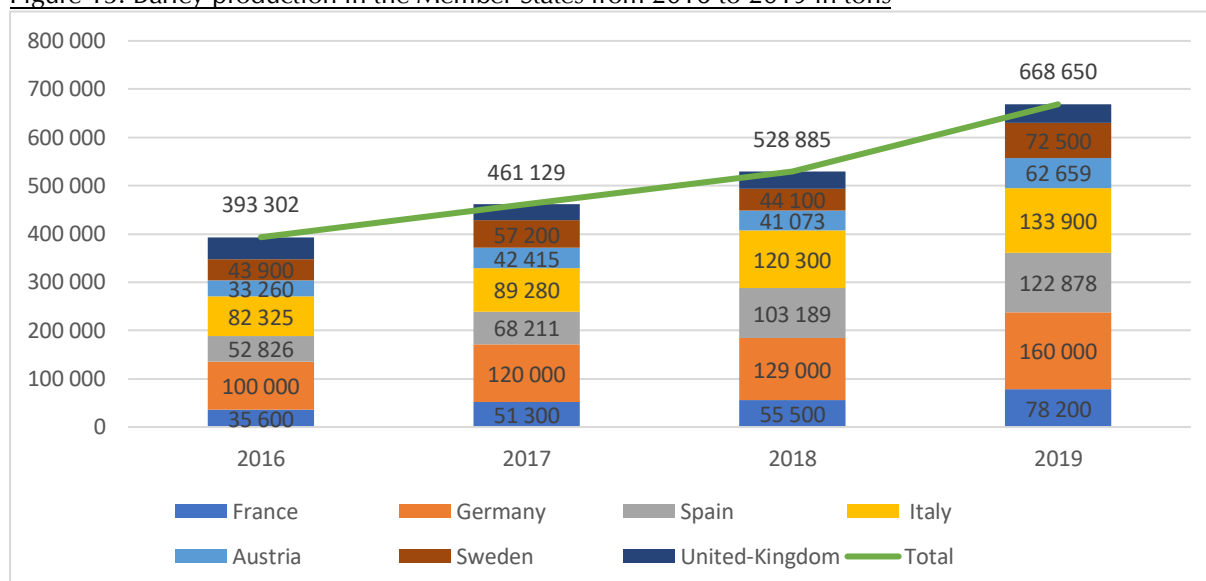
\* For Austria and Poland only one projection was made.  
 Source: AND-I/Ecozept

### 3.5. Focus on barley 2016-2019

#### 3.5.1. Production

Organic barley production (within the 7 countries surveyed for this species) had increased by 70% between 2016 and 2019, from 393,000 tons to 830,000 tons. Italy (36% of the production of the 7 countries surveyed), Germany (19%) and Spain (15%) are the main organic barley producing countries. Production increased particularly in these three countries, which accounted for 82% of the observed growth.

Figure 13: Barley production in the Member States from 2016 to 2019 in tons



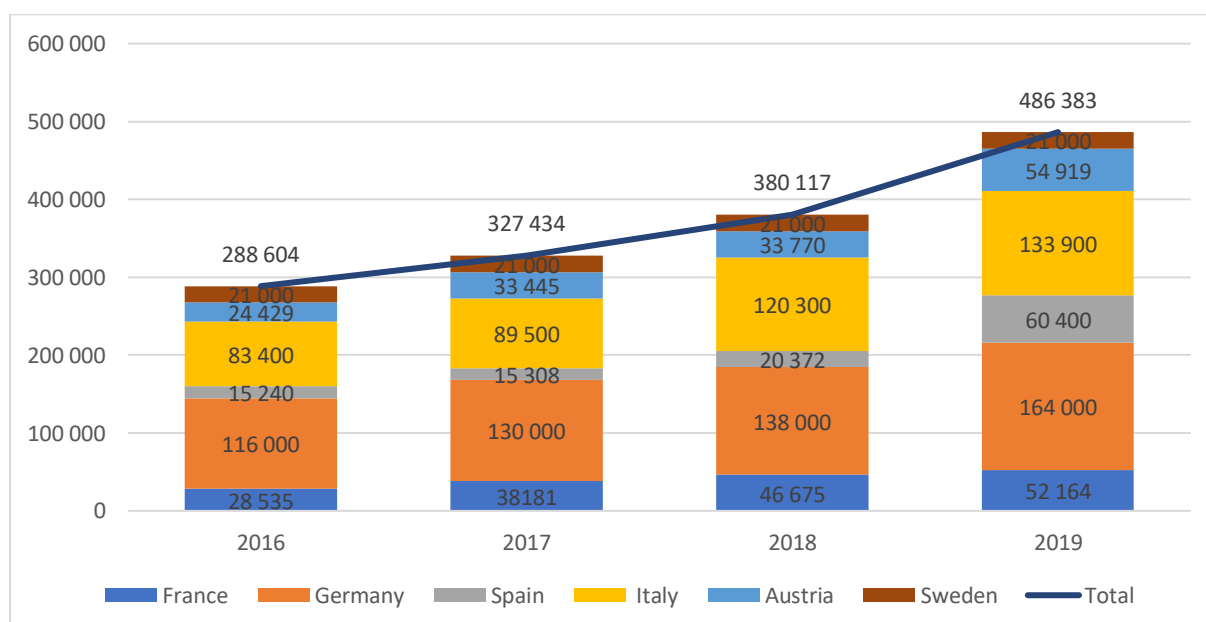
Source: AND-I/Ecozept from various sources

### 3.5.2. Uses

Organic barley uses within the 6 countries surveyed for this species increased by 124% between 2016 and 2019, from 288 000 tons to 650 000 tons. The main user countries in 2019 are Italy (46% of use within the countries surveyed) and Germany (25%).

The countries that have contributed most to the growth of these uses are Italy, Germany and Spain.

Figure 14: Organic barley uses in the EU Member States included in the scope of the study from 2016 to 2019

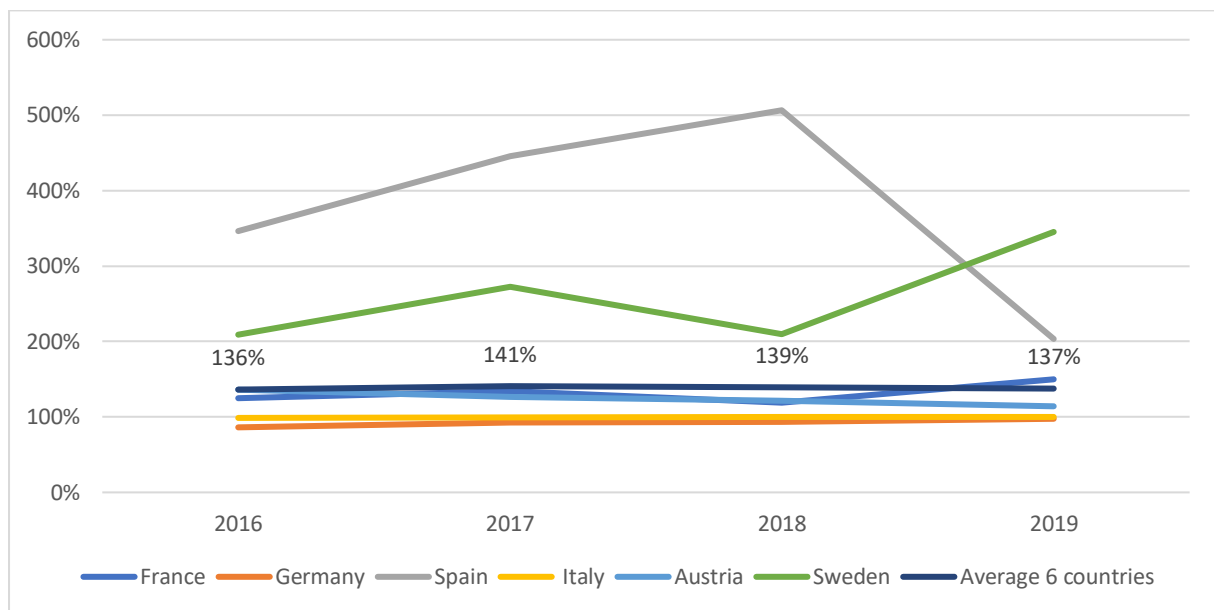


Source: AND-I/Ecozept from various sources

### 3.5.3. Production/uses ratio

The production/use ratio of organic barley was calculated for the 6 major countries. The average of the 6 countries shows organic barley production is significantly higher than use between 2016 and 2019, ranging from 136% to 128%. While self-sufficiency levels have remained relatively stable for Germany, Austria and Italy, they are very much in surplus in Spain (production 3 to 5 times higher than national uses between 2016 and 2018) and Sweden (especially in 2019) and to a lesser extent in France. These data should be taken with caution, however, as barley has been subject to significant downgrading from organic to conventional in Spain and Italy, which may undermine the observed ratios.

Figure 15: Evolution of organic barley production/use ratios in 6 EU countries from 2016 to 2019

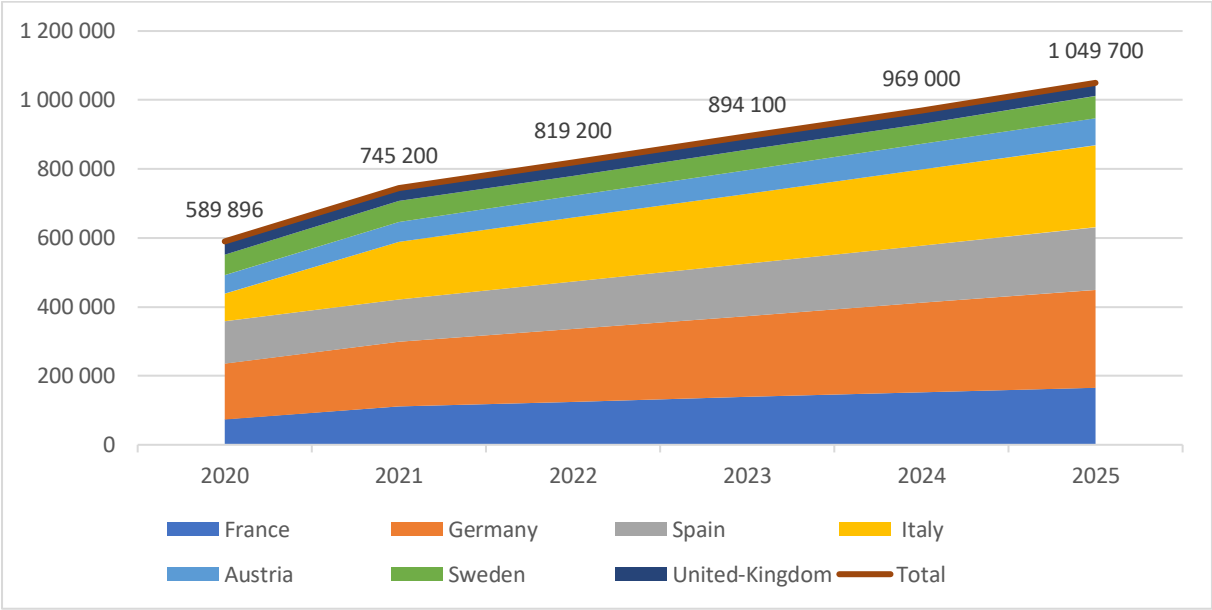


Source: AND-I/Ecozept

### 3.5.4. Barley production projection to 2025

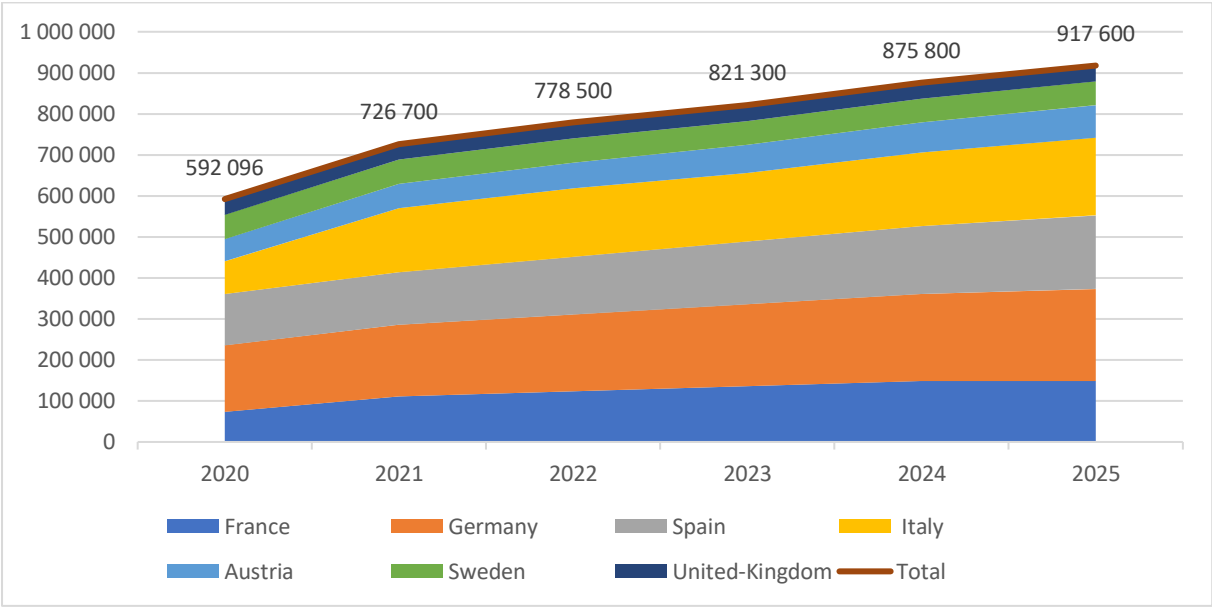
Projections for 2025 in the 7 Member States show an increase in organic barley production of between +28% (low hypothesis) and +41% (high hypothesis). The expected barley production at that time could be between 1.05 and 1.21 million tons for the countries studied. In the high and low hypothesis, Germany, Italy and Spain should contribute to more than three quarters of the expected growth in organic barley production.

Figure 16: High production projection of organic barley by 2025 in 6 Member States and in the UK in tons



NB: for Austria and the UK only one projection was made  
 Source: AND-I/Ecozept

Figure 17: Low production projection of organic barley by 2025 in 6 Member States and in the UK in tons



NB: for Austria and the UK only one projection was made  
 Source: AND-I/Ecozept

### 3.3 .EU imports of organic cereals and oilseeds from third countries between 2018 and 2020

Using the TRACES tool, it is possible to assess imports of organic COP from third countries into the EU (UK data has been excluded from the analysis) between 2018 and 2020. However, this analysis does not take into account intra-EU trade...

#### 3.1.1. Cereal imports

European imports of the main organic cereals studied (durum and common wheat, barley, oats and maize) fell sharply from over 387 000 tons to 177 000 tons. This was mainly due to a drop in imports of common wheat and maize. Dutch imports from non-member countries fell from 112 369 tons in 2018 to 33 470 tons in 2020 for common wheat and from 142 758 tons to 53 356 tons for maize.

Conversely, imports of durum wheat have more than doubled over this period. It is almost exclusively Belgium and Italy that import durum wheat from non-member countries (22 492 tons for Belgium in 2020 and 17 600 tons for Italy).

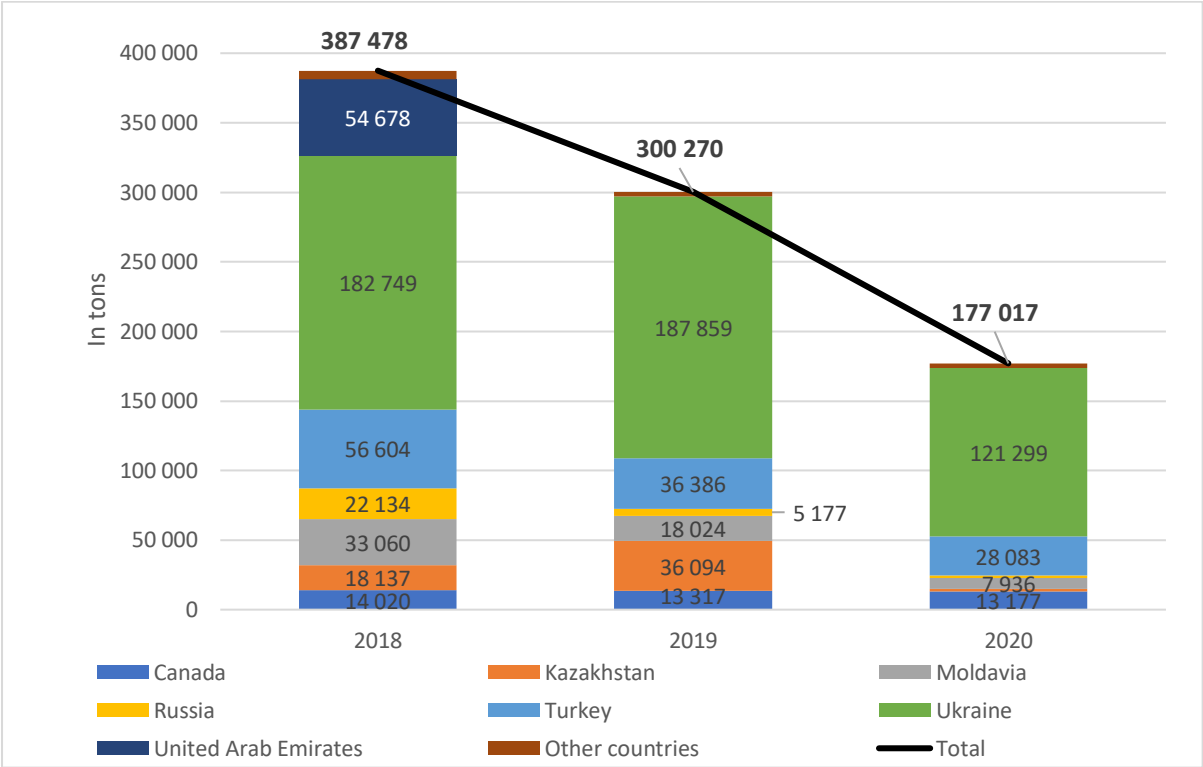
Tableau 7: European imports of the main organic cereals between 2018 and 2020 in tons

Species	2018	2019	2020	Evolution 2020/2018
Common wheat	18 694	35 536	40 194	115%
Common wheat and meslin	164 172	95 104	45 524	-72%
Barley	7 931	3 435	1 307	-84%
Oats	1 192	1 168	1 189	0%
Maize	195 489	165 027	88 803	-55%
<b>Total cereals of the perimeter</b>	<b>387 478</b>	<b>300 270</b>	<b>177 017</b>	<b>-54%</b>
<b>Total imported cereals</b>	<b>413 639</b>	<b>319 216</b>	<b>197 088</b>	<b>-52%</b>

Source: AND-I/Ecozept from DG AGRI TRACES

The main suppliers of organic cereals to the EU are Ukraine (common wheat and maize) and to a lesser extent Turkey (maize and durum wheat), accounting for more than two thirds of cereal volumes imported. It is to note the presence of the United Arab Emirates, which in 2018 was a significant re-export platform for COP whose organic nature was disputed.

Figure 18: European imports of the main organic cereals by exporting country between 2018 and 2020



Source: AND-I/Ecozept from DG AGRI TRACES

### 3.1.2. Oilseed imports

Oilseed imports into the EU27 (excluding the UK) have decreased slightly between 2018 and 2020 for both seeds and oilcake form. The main imported species remains soybeans, which has seen its seeds imports increase from 104 794 tons in 2018 to 137 308 tons in 2020, while oilcake imports have fluctuated between 223 444 tons and 288 484 tons. For seeds, the main EU importer is France, whose extra-EU imports have risen from 27 877 tons to 51 672 tons in 2020. The other main importing countries are Belgium (17 398 tons in 2020), Germany (16 370 tons), Spain (12 396 tons) and the Netherlands (12 400 tons). As regards oilcake of extra-EU origin, the main importing countries are the Netherlands (82 672 tons in 2020), Denmark (38 694 tons in 2020 compared with 66 407 tons in 2018), France (34 657 tons in 2020), Italy (21 278 tons), Spain (17 864 tons), Sweden (12 301 tons) and Germany (10 224 tons).

Extra-EU imports of sunflower seeds have decreased due to reduced trade to the Netherlands from 69 539 tons in 2018 to 4 543 tons in 2020 and to a lesser extent to Italy from 16 179 tons in 2018 to 2 960 tons in 2020.

For rapeseed from non-member countries, which is imported exclusively as seeds, the main importers are France (6 344 tons in 2020), Romania (6 025 tons in 2020), the Netherlands (3 175 tons) and Austria (3 140 tons).

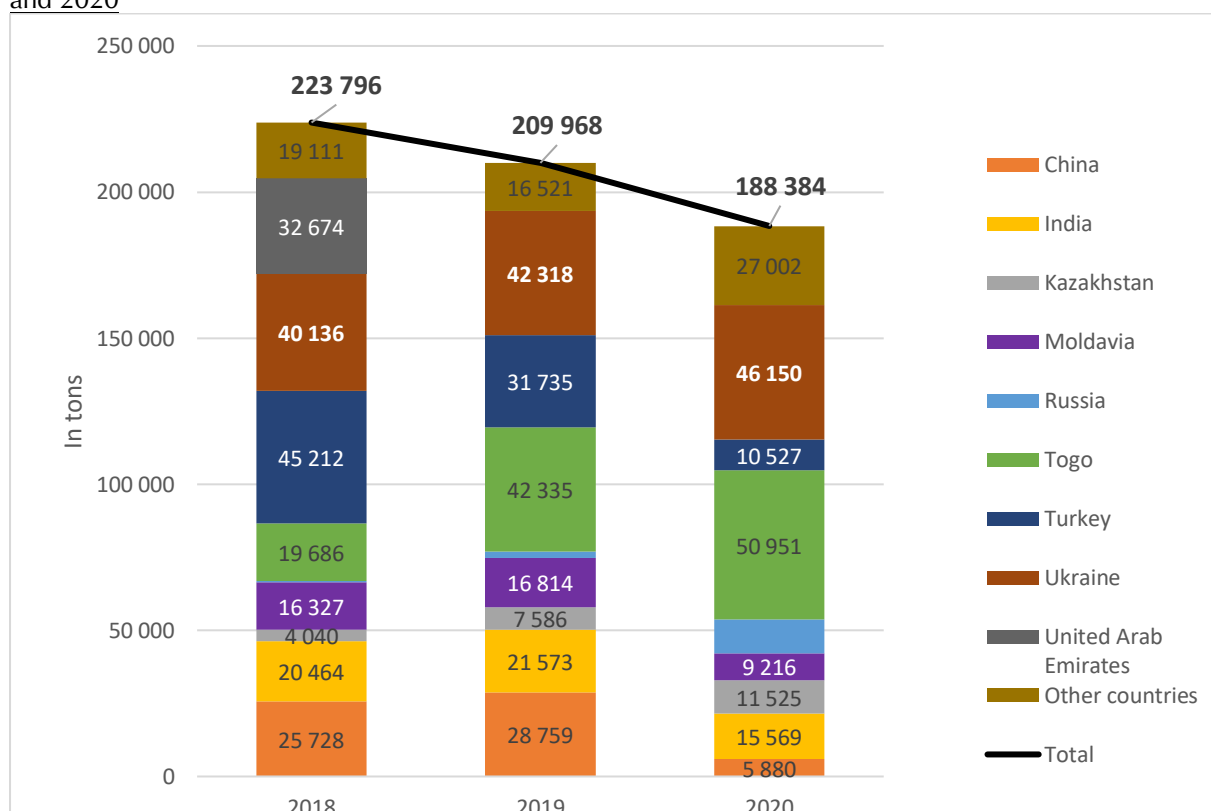
Tableau 8: European imports of organic oilseeds between 2018 and 2020 in tons

Species	2018	2019	2020	Evolution 2020/2018
Rapeseed (seeds)	16 638	21 780	22 132	33%
Rapeseed (meal)	394	0	0	-100%
Sunflower (seeds)	102 364	57 930	28 944	-72%
Sunflower (meal)	12 586	8 976	7 443	-41%
Soybean	104 794	130 259	137 308	31%
Soybean meal	243 114	288 484	223 444	-8%
<b>Total (grains)</b>	<b>223 796</b>	<b>209 968</b>	<b>188 384</b>	<b>-16%</b>
<b>Total (oilcake)</b>	<b>256 093</b>	<b>297 460</b>	<b>230 887</b>	<b>-10%</b>
<b>Total general</b>	<b>479 890</b>	<b>507 428</b>	<b>419 271</b>	<b>-13%</b>

Source: AND-I/Ecozept from DG AGRI TRACES

There are several countries that export oilseed seeds to Europe. Togo and Ukraine are the main exporters to the EU, accounting for more than half of European imports in 2020.

Figure 19: European imports of the main organic oilseeds seeds form by exporting country between 2018 and 2020

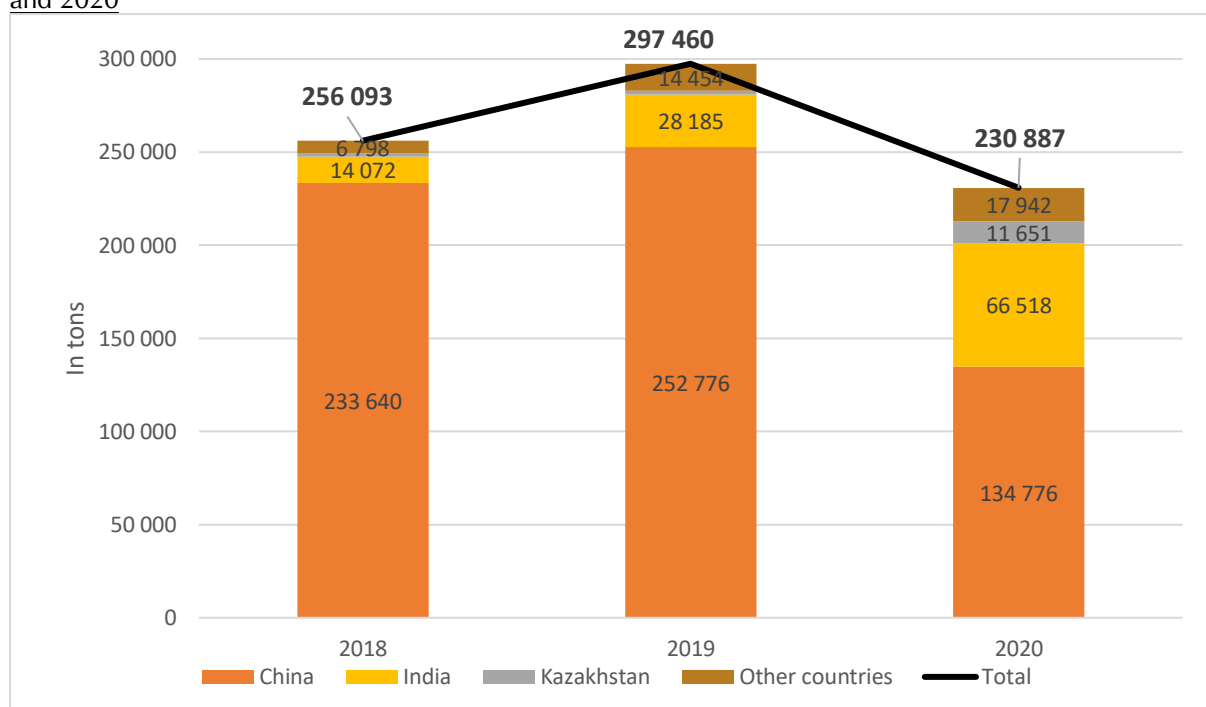


Source: AND-I/Ecozept from DG AGRI TRACES

China accounts for the largest share of imported oilcake volumes. However, the share of imports from this country is tending to decrease in favour of India.



Figure 20: European imports of the main organic oilseeds as oilcake by exporting country between 2018 and 2020



Source: AND-I/Ecozept from DG AGRI Traces

## 4. Conclusions and recommendations

The methodology used allowed us to approximate the volumes of production, uses and trade of the main organic cereal, oilseed and protein crops within the 18 countries studied. Despite the incomplete scope of the research (in terms of countries and crops studied) and the heterogeneity of the data collected, the basis for an analysis of the development of these sectors was established.

In addition to the results obtained, this work has made possible the mapping of existing data sources and the identification of experts in the different countries studied. We can thus classify the countries in 3 categories according to the completeness (surface, production and uses) and reliability of the available or estimated data (regarding the scope considered in the present study):

- Countries whose data and information systems are considered complete, specific and robust: France, Germany, Austria, United States of America;
- Countries whose data and information systems are judged incomplete and specific and of variable robustness: Denmark, Spain, Italy, Lithuania, Poland, Romania, United Kingdom; Sweden, Togo;
- Countries whose data and information systems are considered incomplete and fragile: China, India, Netherlands (AA), Russia, Ukraine.

In order to strengthen the knowledge of the organic field crop sector in the world, we propose three recommendations based on the limitations encountered during this study in order of priority:

- Strengthening the global methodological approach, particularly by studying a perimeter of countries with common crops and data. A relevant country group would be the countries bordering or very close to France with a developed organic sector (Italy, Germany, Spain, Austria or even the United Kingdom, Belgium, Denmark and the Netherlands). This approach would allow us to consolidate the data and then extend the work to other countries.
- Carrying out monitoring on countries where we have little knowledge and whose importance as "consumer" and/or "producer" and/or "buyer/retailer" is significant. Our methodological approach, which has proved its worth during this first work, could be strengthened and adapted, mobilizing in particular more local partners.  
Countries concerned by order of priority (countries already present in the field of the study and other countries): USA, Ukraine, China, India, Canada, Kazakhstan, Russia, Argentina, Brazil and Turkey.
- Consolidating knowledge on information that is considered fragile or even non-existent within the current scope. In particular, the integration of new growing species such as buckwheat, millet, rice or pulses could be considered. It would also be important to develop knowledge by sector by carrying out dedicated studies (flour and oilcake in particular and or/soy for human consumption).

## 5. Annex: detailed production to 2025

Tableau 9: High production projection of organic common wheat by 2025 in 6 Member States and in the UK in tons

High projection 2025 - common wheat	2020	2021	2022	2023	2024	2025
France	213 500	282 300	312 400	342 500	372 600	402 600
Germany	360 000	414 000	468 000	522 000	576 000	630 000
Spain	56 002	61 500	68 800	76 000	83 200	90 500
Italy	230 000	305 100	334 300	363 400	392 500	421 700
Austria	164600	174900	185300	195600	206000	216300
Romania	181000	197500	213900	230400	246800	263300
Poland	25 400	26 900	29 900	32 900	35 800	38 800
Sweden	137 550	133 100	130 600	130 600	130 600	143 500
Lithuania	132 700	150 800	168 900	187 100	205 200	223 400
United Kingdom	29 435	25 100	22 600	20 000	17 500	14 900
<b>Total</b>	<b>1 530 187</b>	<b>1 771 200</b>	<b>1 934 700</b>	<b>2 100 500</b>	<b>2 266 200</b>	<b>2 445 000</b>

Source: AND-I/Ecozept

Tableau 10: Low production projection of organic common wheat by 2025 in 6 Member States and in the UK in tons

Low projection 2025 - common wheat	2020	2021	2022	2023	2024	2025
France	213 500	284 500	316 700	349 000	381 200	413 400
Germany	360 000	389 600	419 200	448 800	478 400	508 000
Spain	52 352	54 200	57 800	61 300	64 900	68 500
Italy	230 000	288 000	308 500	329 100	349 600	370 200
Austria	164 600	174 900	185 300	195 600	206 000	216 300
Romania	177700	181000	197500	213900	230400	246800
Poland	24 500	25 100	26 300	27 500	28 700	29 900
Sweden	137 550	133 100	130 600	130 600	130 600	130 600
Lithuania	132 700	150 800	168 900	187 100	205 200	223 400
United Kingdom	29 435	25 100	22 600	20 000	17 500	14 900
<b>Total</b>	<b>1 522 337</b>	<b>1 706 300</b>	<b>1 833 400</b>	<b>1 962 900</b>	<b>2 092 500</b>	<b>2 222 000</b>

Source: AND-I/Ecozept

Tableau 11: High production projection of organic maize by 2025 in 6 Member States and in the UK in tons

High projection 2025 - maize	2020	2021	2022	2023	2024	2025
France	173 800	179 300	203 200	227 200	251 100	275 000
Germany	98 900	111 800	124 700	137 600	150 500	163 400
Spain	9 727	11 500	12 900	14 200	15 600	16 900
Italy	120 000	156 800	175 700	194 500	213 300	232 200
Austria	120 000	127 300	134 600	141 900	149 100	156 400
Romania	128 700	140 400	152 100	163 800	175 500	187 200
Poland	18 766	20 500	23 900	27 400	30 900	34 300
<b>Total</b>	<b>669 892</b>	<b>747 600</b>	<b>827 100</b>	<b>906 600</b>	<b>986 000</b>	<b>1 065 400</b>

Source: AND-I/Ecozept

Tableau 12: Low production projection of organic maize by 2025 in 6 Member States and in the UK in tons

Low projection 2025 - maize	2020	2021	2022	2023	2024	2025
France	73 300	111 800	125 200	138 700	152 100	165 500
Germany	162 000	186 300	210 600	234 900	259 200	283 500
Spain	123139	123 400	138 000	152 500	167 000	181 500
Italy	80 000	166 800	184 600	202 300	220 000	237 800
Austria	53 700	58 700	63 800	68 800	73 900	78 900
Romania	59 200	59 600	58 500	58 500	58 500	64 300
Poland	38556,5	38 600	38 500	38 400	38 300	38 200
<b>Total</b>	<b>589 896</b>	<b>745 200</b>	<b>819 200</b>	<b>894 100</b>	<b>969 000</b>	<b>1 049 700</b>

Source: AND-I/Ecozept

Tableau 13: Low production projection of organic barley by 2025 in 6 Member States and in the UK in tons

High projection 2025 - barley	2020	2021	2022	2023	2024	2025
France	73 300	111 000	123 500	136 100	148 700	148 700
Germany	162 000	174 400	186 800	199 200	211 600	224 000
Spain	125339	127 800	140 600	153 500	166 400	179 300
Italy	80 000	156 600	166 800	166 800	178 400	190 000
Austria	53 700	58 700	63 800	68 800	73 900	78 900
Sweden	59 200	59 600	58 500	58 500	58 500	58 500
United Kingdom	38 557	38 600	38 500	38 400	38 300	38 200
<b>Total</b>	<b>592 096</b>	<b>726 700</b>	<b>778 500</b>	<b>821 300</b>	<b>875 800</b>	<b>917 600</b>

Source: AND-I/Ecozept

Tableau 14: High production projection of organic barley by 2025 in 6 Member States and in the UK in tons

Low projection 2025 - barley	2020	2021	2022	2023	2024	2025
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France	73 300	111 000	123 500	136 100	148 700	148 700
Germany	162 000	174 400	186 800	199 200	211 600	224 000
Spain	125339	127 800	140 600	153 500	166 400	179 300
Italy	80 000	254 100	272 300	290 400	308 600	326 700
Austria	53 700	58 700	63 800	68 800	73 900	78 900
Sweden	59 200	59 600	58 500	58 500	58 500	58 500
United Kingdom	38556,5	38 600	38 500	38 400	38 300	38 200
<b>Total</b>	592 096	824 200	884 000	944 900	1 006 000	1 054 300

Source: AND-I/Ecozept