



European Agricultural Machinery Industry

Key Figures

2022



Bluepoint
Bd. Auguste Reyers, 80
1030 Brussels

Telephone: +32 (0)2 706.81.73
Email: secretariat@cema-agri.org

Website: www.cema-agri.org

EU transparency register:
489575310490-58

CEMA aisbl

European Agricultural Machinery Industry
Association

CEMA aisbl is the association representing the European agricultural machinery industry. With 11 national member associations, the CEMA network represents both large multinational companies and numerous European SMEs active in this sector.

The industry comprises about 7,000 manufacturers, producing more than 450 different types of machines with an annual turnover of about €40 billion and 150,000 direct employees. CEMA companies produce a large range of machines that cover any activity in the field from seeding to harvesting, as well as equipment for livestock management.

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This publication was produced with the kind collaboration of AXEMA. Most figures are based on the AXEMA Economic Report 2022 with Eurostat data.

Dear reader,

We are glad to present to you the latest edition of the European Agricultural Machinery Industry Report providing a comprehensive overview of the industry represented by CEMA. Our industry is an integral part of the European farming system at large, which ensures that 447 million Europeans have safe and nutritious food on their table.

The last version of this report was issued in 2019, based on 2018 Eurostat data, and many things have changed since our last publication. All through the Covid-19 crisis, our industry demonstrated its resilience as manufacturers were able to ensure the manufacturing, delivery, parts support and servicing of agricultural machinery to farmers, so that the necessary seasonal agricultural activities could be completed at the right point in time. Nature, as we all know, waits for no-one.

The aftermath of the Covid crisis presented a new set of challenges, from supply chain impediments to the overhaul of the geopolitical situation with the war in Ukraine. This led to instability, inflation, and skyrocketing energy costs, adding to a general volatile business environment. Despite these and other difficulties, the agricultural machinery industry has remained strong, solid, and dynamic.

The industry's continuous investments in research and development led to remarkable advancements in the range of equipment, services and technologies offered to farmers. Agriculture 4.0 and the digitalization of agricultural systems allow farming operations to be more efficient, safe, profitable, and environmentally friendly. Today, advanced agricultural machinery and solutions allow our farmers to better produce with less. The green transition cannot happen without modern machinery and technology.

The recent food security crisis also highlighted the urgency to implement policies at both the European Union and global level to ensure the resilience of agrifood systems. To facilitate this transition, we firmly believe that technological innovation is instrumental, provided the right incentives are made available in Europe to further enable the uptake by farmers, cooperatives, and contractors. Sustainable farming is our shared future, for the common benefit of our citizens, our farming communities, and our industries.

Together, we are committed to making this a reality.

Yours truly,

Thierry Krier
CEMA President

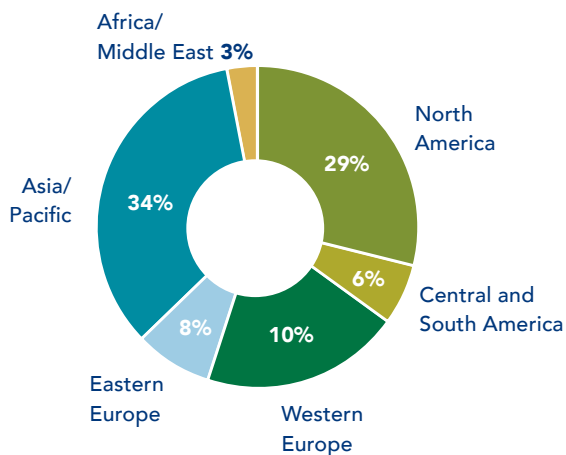
Jelte Wiersma
CEMA Secretary General



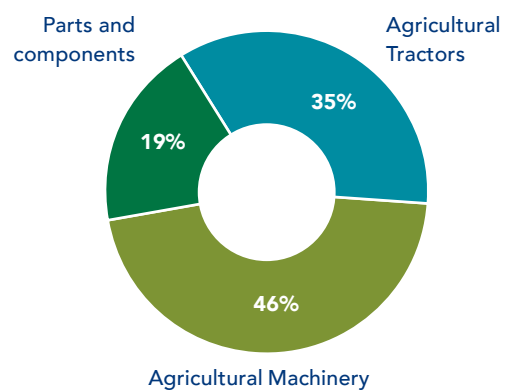
Agricultural machinery: a global industry

With a global market size estimated around EUR 145 Billion, the Agricultural Equipment industry is characterized by a high-level of internationalization and a strong position for European production (€ 40,7 bn in 2021).

Global market of agricultural machinery by geographical area



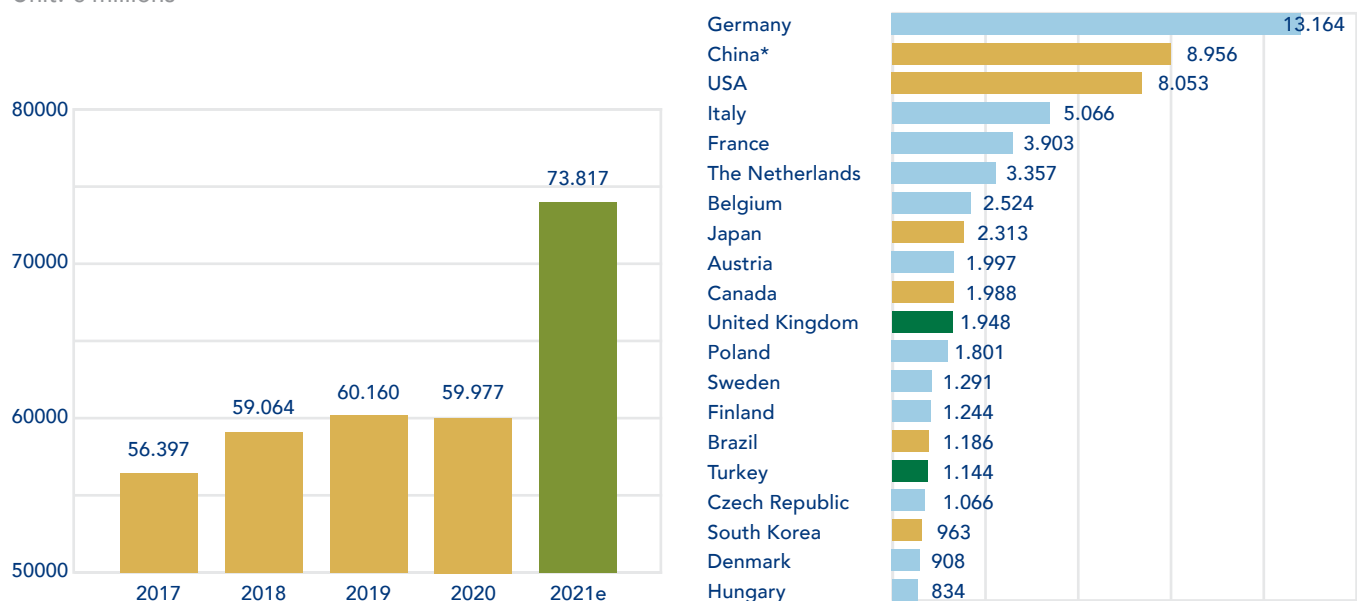
Global market of agricultural machinery by type



Global Agricultural Equipment Exports increased from 60 to almost 74 billion euros between 2020 and 2021, a rise of 23%. Germany remains the global leader, with agricultural machinery exports slightly higher than €13 billion. China got closer (€9 billion), moving in front of the United States (€8.1 billion), while Italy and France completing the top 5. When aggregated, the European Union leads global Agricultural Equipment Exports by far.

Trends in international agricultural machinery exports

Unit: € millions

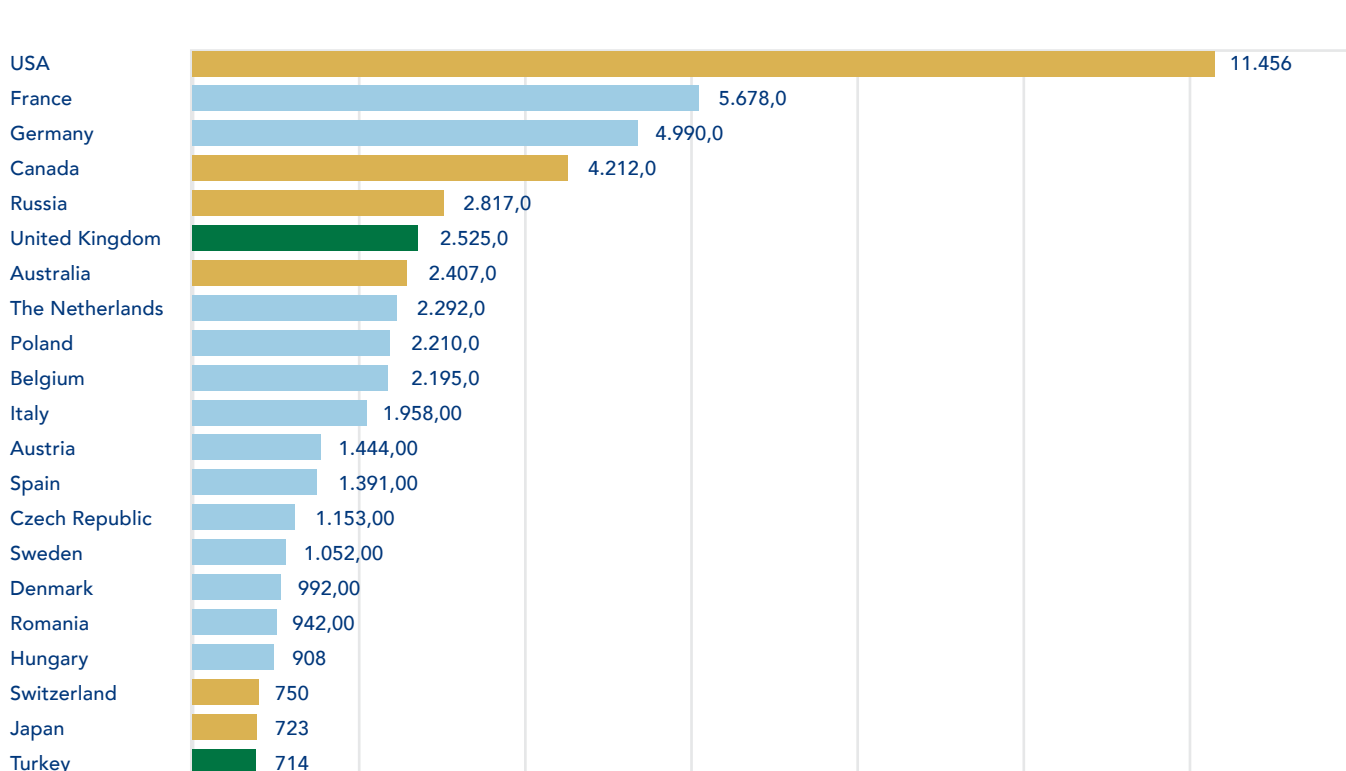
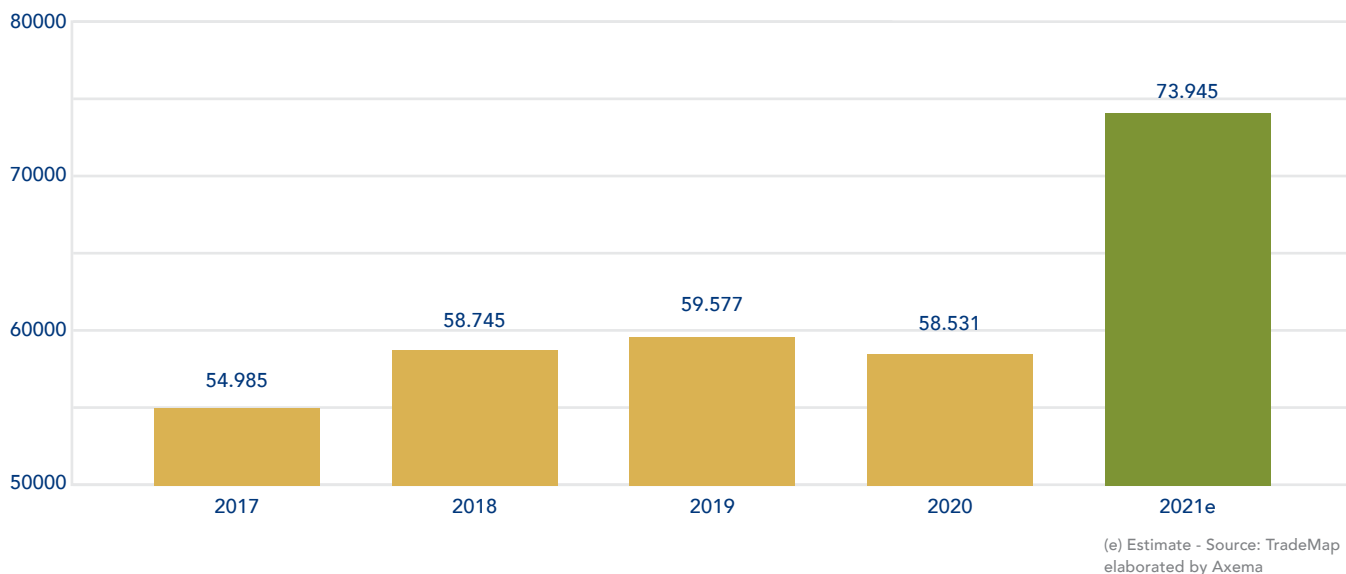


*Countries for which an extrapolation had to be carried out because of the absence of data for December - (e) Estimate - Source: TradeMap elaborated by Axema

Global Agricultural Equipment Imports trends are quite similar. The structure was unchanged with regards to the classification of importing countries: France remained the second largest importer of agricultural machinery, behind the United States and ahead of Germany. One notable fact: Russia entered the top 5, replacing the United Kingdom. When aggregated, the European Union leads global Agricultural Equipment Imports.

Trends in international agricultural machinery imports

Unit: € millions



Europe remains a significant net exporter when it comes to the Agricultural Equipment industry.



Russia/Ukraine conflict

- agricultural machinery flows

Russia imports about 2.8 billion euro yearly of agricultural machinery sourced globally (year 2021). A very significant portion of these imports are exports from European countries, with Germany being the most exposed (€583 M) and the Netherlands, Italy, France, Finland, Poland also being significantly suppliers. Belarus (€441 M) and China (€399 M) are the other two major exporters of agricultural machinery to Russia.

Ukraine imports about 1.3 billion euro yearly of agricultural machinery sourced globally (year 2021). Here too, Germany is the largest exporter with 29% of the yearly flow in value. The United States and China complete the top 3 suppliers. Italy, Poland, France and the UK are also significant suppliers. In contrast, the flow of Russian and Ukrainian exports of agricultural machinery to the EU is minimal.

The war between Russia and Ukraine is impacting agricultural machinery trade flows, for equipment, parts and components, despite these goods being essential to ensure global food security. With an additional large number of indirect effects, such as the increased cost or shortage of energy, raw materials and agricultural goods, the conflict will most certainly have major repercussions on the agricultural machinery sector in the short, medium and long term.

Source: TradeMap

Exported from	Russian imports of agroequipments 2020 in € thousands	Russian imports of agroequipments 2021 in € thousands
Global	2052795	2825552
Germany	429531	583335
Belarus	367043	441571
China	286925	398586
USA	123898	220603
Netherlands	181149	123359
Italy	101479	121509
Finland	42282	119241
France	58197	90611
Brazil	24380	76672
Poland	51678	73758
Sweden	35957	66862
Canada	43753	62525
Czech Republic	42012	57169
Hungary	25910	42402
Turkey	28235	42200
Belgium	22077	38407
Autriche	21559	31092
Slovakia	11336	29463
UK	17207	27944
Spain	25458	24382

Exported from	Ukrainian imports of agroequipments 2020 in € thousands	Ukrainian imports of agroequipments 2021 in € thousands
Global	735592	1313560
Germany	207283	376421
USA	106344	217240
China	89900	151313
Belarus	40309	99746
France	31172	65980
Poland	40475	59342
Italy	42801	58002
UK	16550	44150
Sweden	20107	35452
Belgium	31045	35260
Czech Republic	15666	22916
Turkey	15126	22555
Austria	11831	21413
Hungary	11104	15876
Netherlands	12300	9812
Spain	6162	7967
Russia	3344	6615
Denmark	4778	6421
Brazil	2259	5837
Canada	4292	5664



Agricultural Robots

Statement Dr. Christopher Müller, Director of IFR Statistical Department (IFR is the International Federation of Robotics):

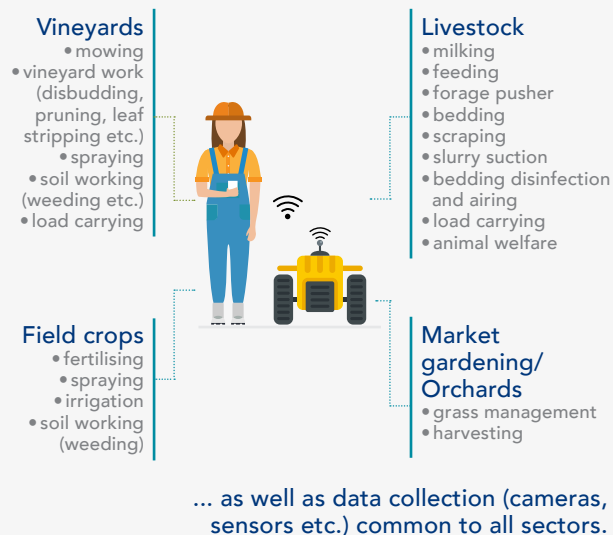
“The International Federation of Robotics’ Statistical Department (IFR SD) runs an annual survey enriched by comprehensive research to measure the uptake of both industrial and service robots. The service robot industry is more diverse and less tangible than the industrial robot industry. Over a thousand companies worldwide are service robot suppliers, with many products still in the development stage.

IFR classifies service robots for professional use in 9 major families: Agriculture, Professional cleaning, Inspection and maintenance, Construction and demolition, Transportation and logistics, Medical robots, Search and rescue / security, Hospitality, and other.

Robotics is an important part of digitalization in agriculture. Robots are mainly established in cow milking, followed by other robots for livestock farming, such as mobile barn cleaners or robotic fencers for automated grazing control. There is a lot of research and development to use robots for the cultivation of plants and crops, which encompasses a variety of tasks. But due to the technological complexity, the practical use and economic benefit of these robots is often still limited. The growing portfolio of market-ready robots for various cultivation tasks will create additional impetus in the long run.”

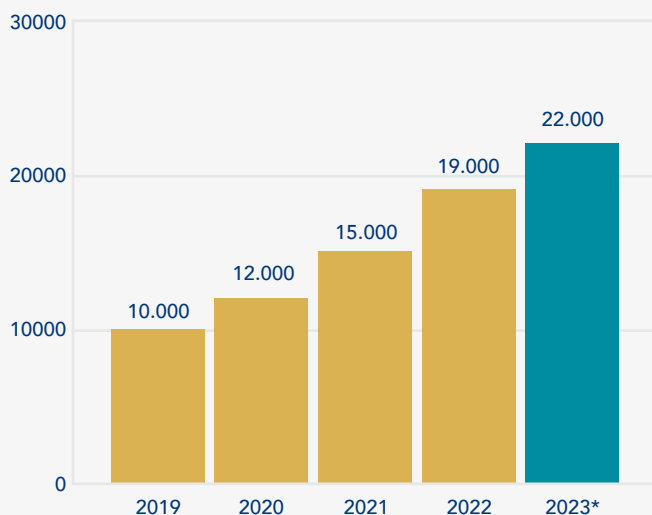
Agricultural robots, serving what purpose?

Main uses by sector



Annual sales of agricultural robots worldwide

Unit: number of units sold



*Source: AXEMA, internal survey of sector stakeholders and IFR (International Federation of Robotics) - Sept. 2020

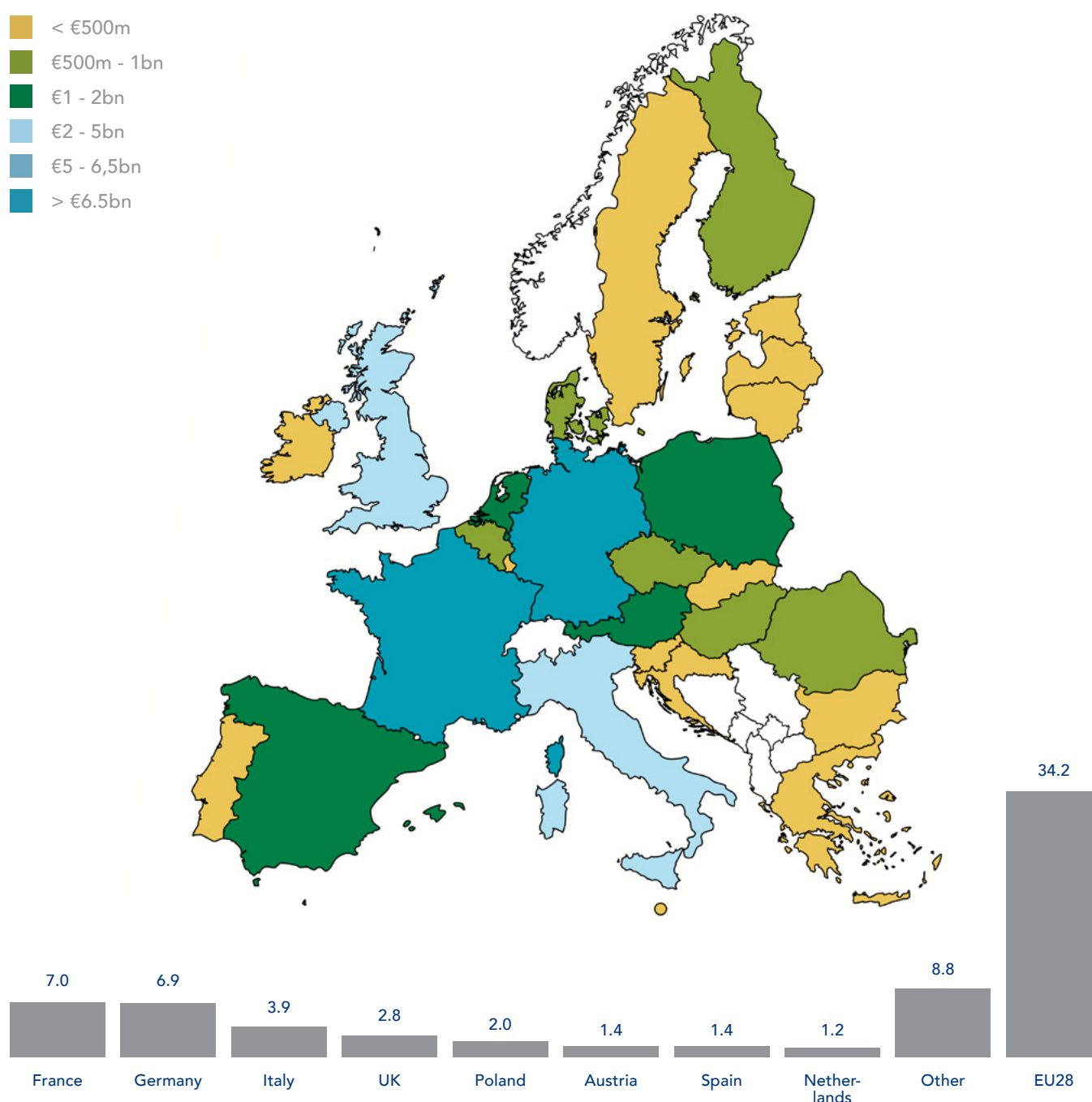
2021 Agricultural equipment market

According to CEMA estimates, the European agricultural machinery market (European Union + United Kingdom) was worth €34.2 billion for manufacturers in 2021, up 20% compared to 2020. France was the largest European market, at €7 billion. It was followed by Germany, Italy, the United Kingdom and Poland. In 2021, this top 5 accounted for 66% of the total.

Turkey, which is also in the CEMA membership, represents a market of €2.8 billion*.

The European agricultural machinery market in 2021

Unit: € billion



The European agricultural machinery related market in the European Union + United Kingdom and Turkey in 2021

Unit: € billion

Country	Related market (=1+2-3)	2021e Production (1)	Imports (2)	Exports (3)
France	7.03	5.50	5.67	4.14
Germany*	6.97	10.51	4.55	8.09
Italy	3.87	6.98	1.96	5.07
Turkey**	2.79	3.22	0.71	1.14
UK	2.77	2.19	2.53	1.95
Poland	1.97	1.56	2.21	1.80
Austria	1.40	1.96	1.44	2.00
Spain	1.39	0.80	1.39	0.80
Netherlands	1.24	2.30	2.29	3.36
Finland	0.91	1.66	0.49	1.24
Romania	0.82	0.08	0.94	0.21
Czech Republic	0.74	0.65	1.16	1.07
Belgium	0.71	1.04	2.20	2.52
Denmark	0.62	0.54	0.99	0.91
Hungary	0.52	0.44	0.91	0.83
Sweden	0.51	0.75	1.05	1.29
Ireland	0.42	0.18	0.51	0.27
Portugal	0.42	0.10	0.38	0.06
Lithuania	0.34	0.00	0.60	0.27
Greece	0.26	0.02	0.30	0.06
Croatia	0.24	0.09	0.22	0.07
Bulgaria	0.23	0.04	0.53	0.33
Estonia	0.21	0.06	0.26	0.11
Latvia	0.20	0.00	0.27	0.07
Slovakia	0.17	0.19	0.37	0.39
Slovenia	0.14	0.10	0.29	0.24
Luxembourg	0.08	0.00	0.13	0.05
Malta	0.04	0.00	0.04	0.00
EU 27	31.45	35.55	31.15	35.25
EU 27 + UK + Turkey	37.01	40.96	34.39	38.34

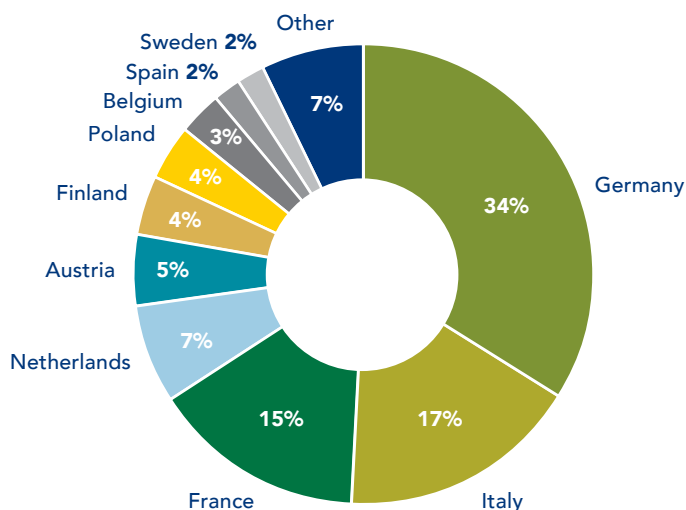
(e) production estimates: AXEMA – Primary sources: Eurostat, customs data via TradeMap. Except (*) source VDMA and (**) source Tarmakbir.

2020 EU Agricultural equipment production

Germany remained in 2020 the world's top producing country of Agricultural machinery, with production in terms of value exceeding €11 billion. Together with Italy (€5.7 bn) and France (€4,8 bn), these three countries concentrate two thirds of production in terms of value in the European Union of 27.

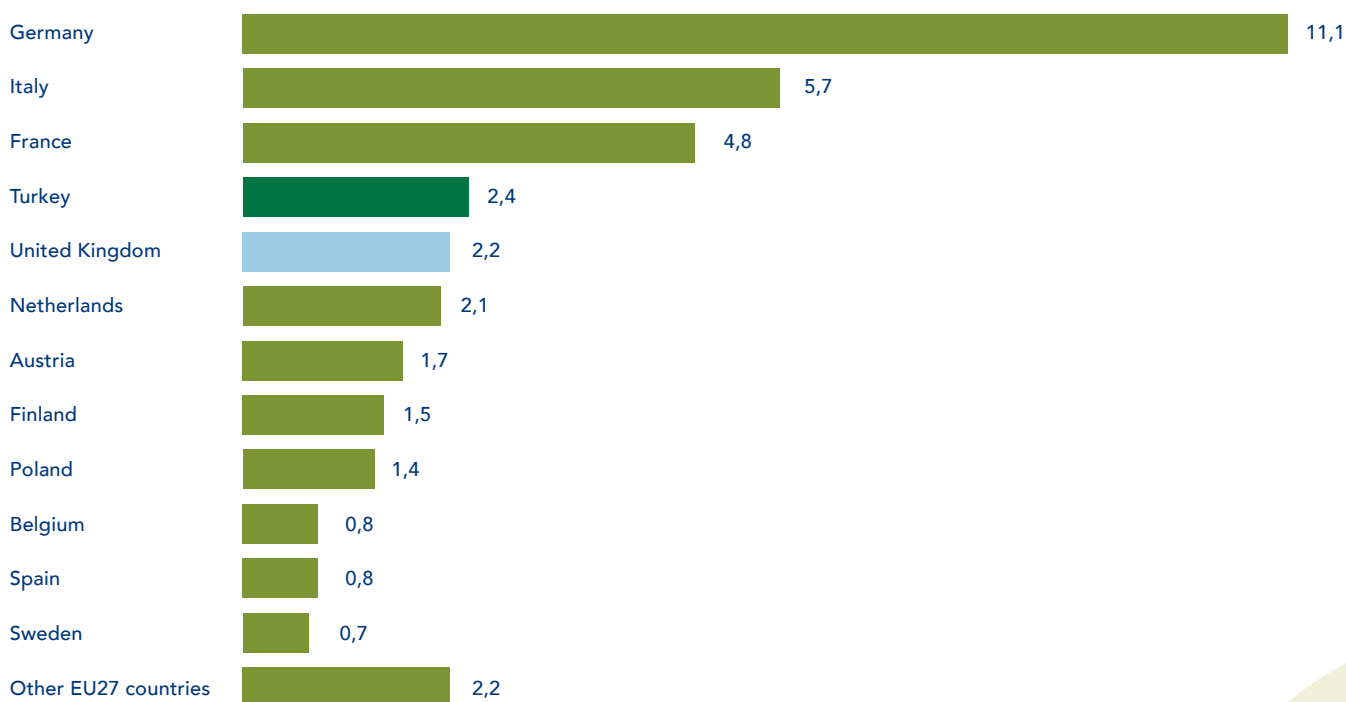
Breakdown of European agricultural machinery production by country

Unit: %, share of total production in terms of value



Main agricultural machinery producing countries in the EU-27 + United Kingdom and Turkey

Unit: € billion



Source: AXEMA estimates, based on data from Eurostat's PRODCOM branch survey: production corresponds to invoices (domestic market + export) for agricultural machinery and equipment

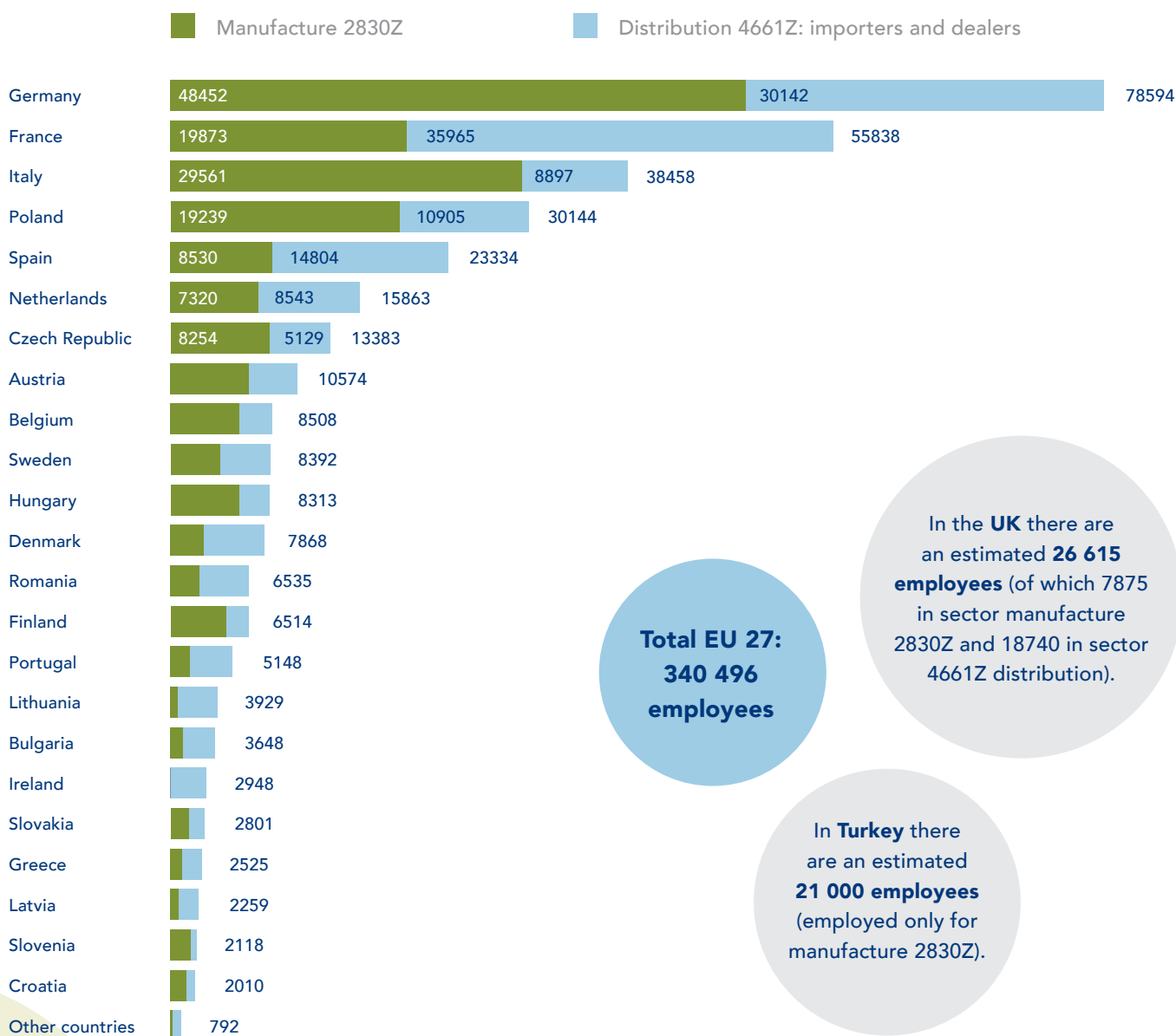
2019 Agricultural equipment employment

The number of employees involved in the manufacturing of agricultural machinery doubles when combined with the employees on the distribution and maintenance side (importers and dealers). Some 340 000 people are therefore directly employed in the European agricultural machinery value chain, to which one should also add employment on the supplier side. In 2019, Germany provides the largest numbers of jobs overall, although France is the largest European employer on the distribution side (importers and dealers). The five leading countries in the EU 27 – Germany, France, Italy, Poland and Spain – concentrated 66% of the total workforce in 2019.

Salaried employment in the EU 27 agricultural machinery industry in 2019

(sectors 2830Z and 4661Z: manufacture, import and distribution of agricultural machinery)

Unit: number of employees



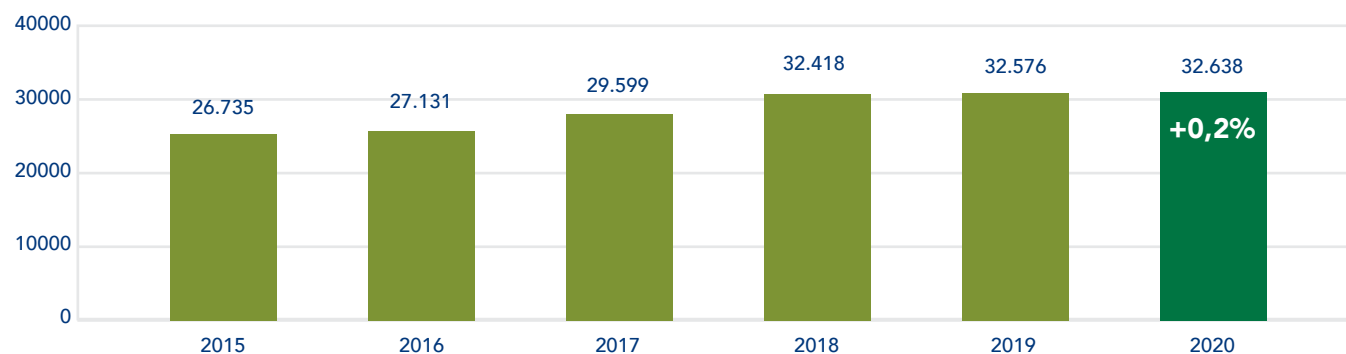
Source: Eurostat, structural business statistics (SBS), 2019 data

Agricultural equipment production per product family

The structure of European agricultural machinery production continued to be lead by tractor production (22% of total production, i.e. €7.3 billion in 2020). This was followed by the production of machine parts and spare parts (18%), the manufacture of soil working/sowing/fertilising equipment (12%), the manufacture of harvesting equipment (11%), and then, roughly equal, the production of garden machinery and livestock equipment (9% each).

The European (EU27) agricultural machinery production was worth a total of €32.639 billion in 2020, stable compared to 2019. The health crisis therefore had no significant impact on European agricultural machinery production in terms of value, the resumption of production in spring compensating for the drop at the start of the year.

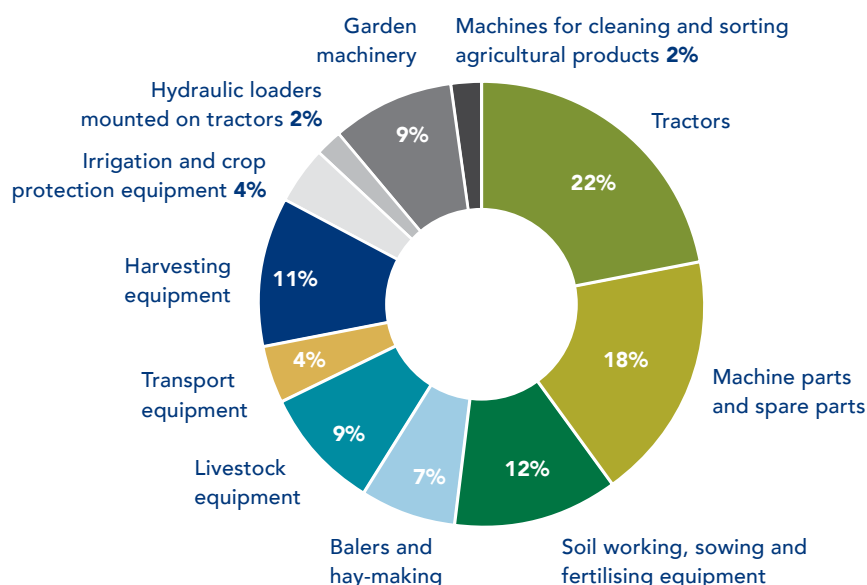
European (EU 27) agricultural machinery production Units: € million



Source: Eurostat

Breakdown of European agricultural machinery production by product family in 2020 (EU27 + UK)

Unit: %, share of total production in terms of value



Source: AXEMA. Note: The data comes from the PRODCOM branch survey: production corresponds to invoices (domestic market + export) for agricultural machinery and equipment. Like the French survey, some agricultural machinery is not, or only partially, taken into account in the value of European production (€32,639 m) above. This is the case, for example, for vinification vats, milk tanks and telescopic loaders.

This general picture needs to be viewed at the product family level: tractor production fell for the second year in a row (down 4% in 2020 at €7.28 billion). On the other hand, production increased for several product categories, including soil working, sowing and fertilising equipment (up 3% at €3.89 billion).

European (EU 27) agricultural machinery production by product family (2015-2020)

Unit: € million

Machinery type	2015	2016	2017	2018	2019	2020
 Tractors	6,281	6,980	6,602	8,465	7,581	7,275
 Machine parts	4,256	4,265	4,856	5,145	5,072	5,997
 Soil working, sowing and fertilising equipment	3,059	3,063	3,537	3,580	3,767	3,893
Soil working equipment (ploughs, harrows, cultivators, etc.)	1,023	1,053	1,240	1,241	1,234	1,253
Sowing equipment	670	675	753	747	791	885
Mineral or chemical fertiliser spreaders	224	184	183	220	250	272
Manure spreaders	118	108	119	124	118	142
Other soil working or cultivation machines, equipment, machinery	1,024	1,043	1,242	1,248	1,373	1,342
 Harvesting equipment	3,102	3,009	3,386	3,646	3,381	3,479
Combine harvesters	1,732	1,583	1,715	1,940	1,636	1,592
Self-propelled forage harvesters	411	433	455	479	471	600
Other harvesting equipment	959	993	1,216	1,226	1,273	1,286
 Garden* and forestry machinery	2,487	2,667	2,872	2,999	3,010	2,851
Lawn mowers	917	1,054	1,127	1,293	1,150	1,139
Forestry equipment	766	849	933	1,015	1,227	980
Chainsaws	641	606	642	542	471	550
Hedge trimmers, lawn shears, electric lawn edging shears	163	158	169	149	162	182

Machinery type	2015	2016	2017	2018	2019	2020
 Livestock equipment	2,294	2,151	2,726	2,431	3,386	2,792
Livestock watering, feeding and rearing equipment	960	955	1,445	1,142	1,866	1,302
Feed preparation machines and equipment	556	530	522	594	642	668
Milking machines	386	328	376	414	587	548
Other livestock equipment	391	337	383	281	291	274
 Hay-making equipment	1,214	1,105	1,240	1,336	1,462	1,365
 Balers and pick-up balers	702	688	776	820	819	882
 Irrigation and crop protection	1,177	1,190	1,304	1,356	1,426	1,448
 Agricultural trailers and semi-trailers	1,124	969	1,094	1,254	1,343	1,245
 Machines for cleaning and sorting agricultural products	544	576	666	827	715	800
Total EU 27 production	26,736	27,131	29,600	32,419	32,577	32,639

Source: The data comes from the Eurostat's PRODCOM branch survey: production corresponds to invoices (domestic market + export) for agricultural machinery and equipment. Like the French survey, some agricultural machinery is not, or only partially, taken into account in the value of European production (€32,639 m) above. This is the case, for example, for vinification vats, milk tanks and telescopic loaders.

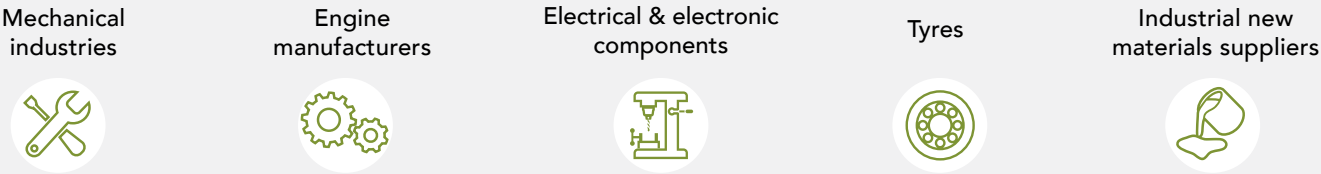
* For garden machinery refer to EGMF, the European Garden Machinery Federation.



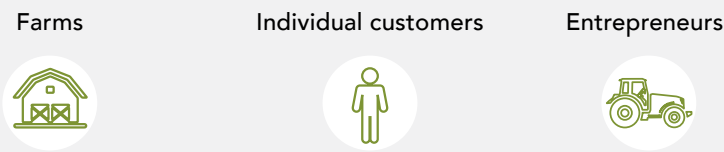
The European agricultural machinery industry



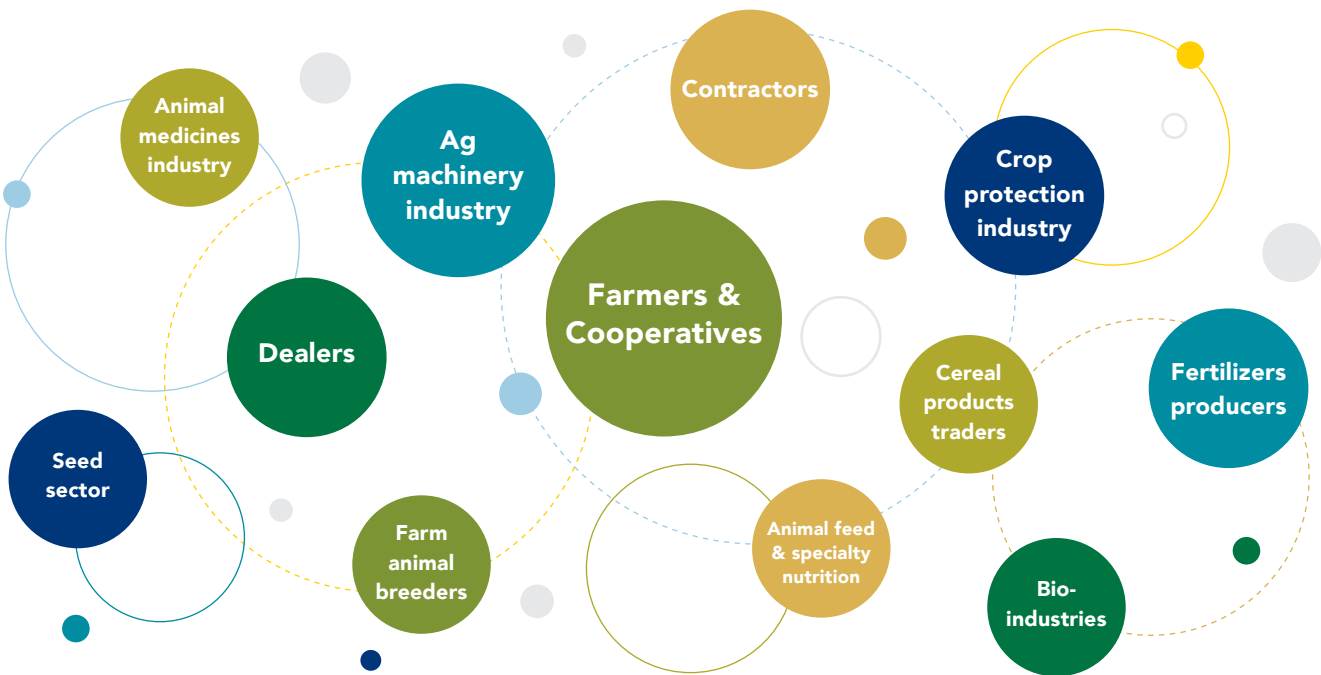
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