

CEMA



European Agricultural Machinery Industry

CEMA Priorities and key figures

Advancing agricultural machinery
and solutions for sustainable farming



2019

About CEMA

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 (EU28 - 2016) 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.

Full members:



AGORIA



METALTECHNOLOGY AUSTRIA



Associate member:

A.ZeT

This publication has been made with the kind collaboration of AXEMA. Most figures are based on the AXEMA Economic Report 2018 with Eurostat data as of 15 March 2019.

CEMA aisbl European Agricultural Machinery Industry Association

Bluepoint - Boulevard A. Reyers, 80B - 1030 Brussels
Tel: +32 (0)2 706 81 73
E-mail: secretariat@cema-agri.org

Website: www.cema-agri.org

EU transparency register: 489575310490-58

CEMA



Dear CEMA friends,

The European Agricultural Machinery Industry drives innovation and encourages technology uptake in one of the most ancient, diverse and core businesses of Europe: **Farming.**

Having a plate of food is an obvious “gift” for all of us, but very often we tend to forget what lies behind it. European farmers from farms of all sizes make great efforts to produce high-quality products, in a sustainable manner at affordable prices. However, challenges in agriculture are immense: climate constrains, prices volatility or aging of rural areas range among them.

The European Agricultural Machinery Association (CEMA) is committed to providing the best adapted technology solutions that respond to farmers' needs and help them in tackling those challenges. CEMA represents an industry with 7,000 companies spread all over Europe, from numerous SMEs to multinationals, and 150,000 direct employees. We produce a variety of 450 types of machines that cover any field activity from seeding to harvesting and livestock equipment, helping customers in getting the most out of their land, protecting the environment while bringing economic benefits.

This report will help you better understand the size and diversity of advanced agricultural machinery and solutions in Europe.

However, for this industry to keep its level of innovation and competitive leadership in global markets, a balanced regulatory framework is crucial. The size of the sector compared to other “vehicles” productions in Europe and the great number of specialized machines produced in small volumes require tailor-made legislation to support competitiveness in the years to come. Our updated **AgriTech 2030** plan for Europe's Agricultural Machinery Industry, outlined in the next two pages, maps out what is needed for the next decade.

Looking back, 2018 business had its ups and downs but kept relatively positive throughout the year. Marked by the entry into force of the “Mother” Regulation, CEMA manufacturers worked hard to get ready to comply with new safety and functional rules.

Turning now to 2019 and the years ahead, we have many challenges for the industry. Engine exhaust emission rules (Stage V) are to be implemented. With this step, EU environmental requirements for agricultural machines become the strictest in the world and make new European equipment the cleanest available on the global market. Yet, it is too soon to assess the uptake by our customers in the European Union, as farmers around the globe do not face the same constraints.

Within the EU arena, 2019 also leads to very exciting times. The uncertainty to reach a Brexit deal has already marked the first half of the year. Members of the outgoing European Parliament managed to go as far as possible on the new Common Agricultural Policy and the Horizon Europe research and innovation programme, but final negotiations remain to be concluded. A vast majority of Member States agreed on a landmark Joint Declaration on a smart and sustainable digital future for European agriculture and rural areas, but good resolutions must now translate into concrete actions.

Following the 2019 European Elections, we must rapidly have renewed European Institutions that continue to address the many challenges the European Union faces with as little disruption as possible. A reinforced CEMA secretariat stands ready to raise constructive but necessary asks to the European Institutions. We call on EU policy-makers to deliver a balanced regulatory framework supported by appropriate uptake incentives, enabling the best adapted technology solutions to respond to farmers' needs all over Europe. With new opportunities arising such as agricultural data-sharing or artificial intelligence, the Agricultural Machinery Industry's knowledge and expertise must help shape sustainable farming for the benefit of our citizens and society.

Yours faithfully,



Anthony van der Ley
CEMA President



Jerome Bandry
CEMA Secretary General

AgriTech 2030

CEMA's Plan for Europe's Agricultural Machinery Industry



AgriTech 2030 maps out the future of Europe's industry for advanced agricultural machinery and solutions towards 2030. It is consistent with CEMA's mission to bring shared expertise and shape EU legislation for the benefit of sustainable farming and the agricultural machinery and solutions sector.

AgriTech 2030 recognizes that:

- Advanced technology solutions are critical for the future success, sustainability and competitiveness of EU farmers and the optimization of farm management.
- Europe has the industrial leadership in this sector, being the world's largest producer of farm equipment and the acknowledged global leader in innovation.

- The economic footprint of the industry is highly significant, being the largest agricultural input industry and representing more than 300,000 jobs (including distribution and maintenance) most of which in scarcely populated rural areas.

AgriTech 2030 articulates a forward-looking EU policy agenda to stimulate innovation, jobs, safety standards and growth in farming and in the agricultural machinery industry and help to adapt to challenges such as structural change in agriculture, digitization and globalization.

To implement AgriTech 2030, CEMA works closely with the European Institutions, farmers, agricultural contractors and other partner organisations.

AgriTech 2030 focuses on three key areas of work:

1. Maximizing the Industry's Contribution to Highly Productive, Competitive, Sustainable Farming Methods with High Safety Standards

In the run-up to 2030, agriculture faces a formidable challenge: to produce more food, feed, fibre and alternative advanced fuels for a growing world-population from fewer resources in a sustainable manner at affordable prices. Advanced agricultural machinery and solutions play a central role in meeting this challenge. In light of this:

- The EU must recognize the intrinsic link between the farm machinery industry and agriculture in all relevant strategies, policies and product legislation.
- An ambitious, coherent, forward-looking EU regulatory agenda for the farm machinery industry is critical. EU industrial, digital, environmental and agricultural policies must be aligned to provide a supportive framework.
- EU legislation must be appropriate and proportionate to the machinery usage and operation, with impact assessments. A "copy-paste" from the automobile sector adds significant costs for little or no added value. The diversity of crops and practices requires a diversity of specialty equipment produced in small numbers.

- The EU should put a greater focus on self-regulatory mechanisms, including testing and leaner certification systems, to avoid burdensome authorisation procedures that are too complex and too costly for small product series and for the many SMEs active in the industry.

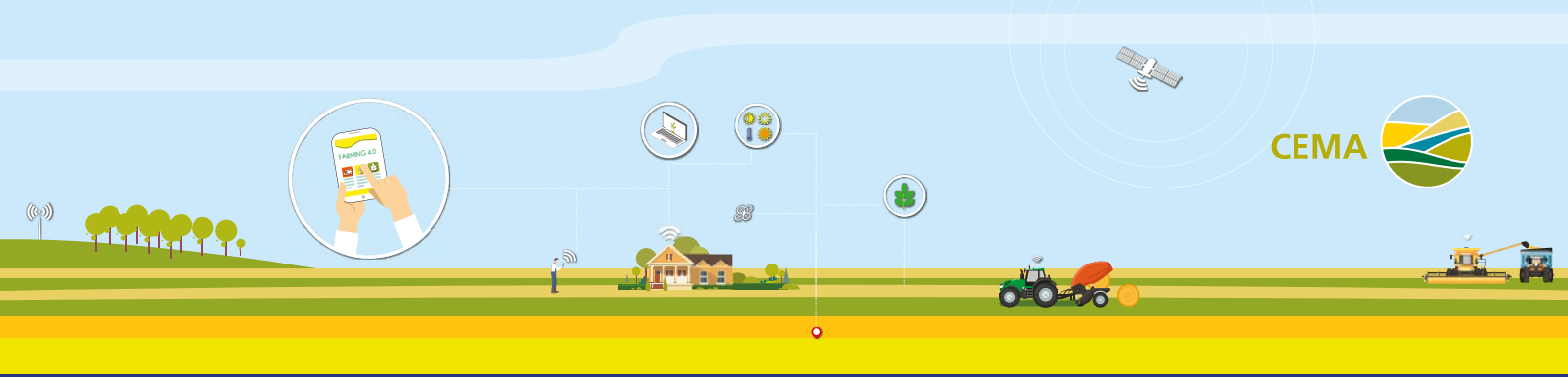


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"Data-sharing and data flows will mark the EU industrial agenda 2019 – 2024 and beyond. Manufacturing processes, jobs and services are evolving as well as our customers' demands.

To provide the best products and solutions, keep innovation levels and global leadership, we call on the EU to put industry at the core of its strategic vision and support the Industry4Europe initiative."

Markus Baldinger
CEMA Technical Board Chair



2. Bringing European Farming to the Forefront of Digital and Precision Agriculture

Precision Farming and Digital Agriculture are revolutions in the making and drive productivity, waste reduction and pro-active environmental protection. Their impact on the ground can be substantial, through savings on inputs such as water, fertilizers and pesticides, reducing farm-related CO₂ emissions and soil compaction, and optimising yields and quality in agricultural production. Benefits are definable from all types of farm, from large to small. They significantly contribute to the attractiveness of the sector for younger generations of farmers.

Uptake of these technologies is currently dramatically lagging behind the pace of digital technology uptake in other sectors, due to agricultural product margin constraints and associated investment capability.

CEMA sees a strong role for EU and national policy-making to mainstream Precision Farming and ensure a speedy digital transformation in European agriculture, to enhance the technology leadership of EU farm machinery industry, by:

- Providing via CAP after 2020 direct support measures for the investment in green, digital and precision technology as well as knowledge sharing.

- Increasing use-related EU research funding (through large-scale pilots and digital testbed projects) in order to pave the way for a successful and rapid uptake of digital technology in farming.
- Improving digital skills for current and future farmers and their advisors.
- Strengthening investment in rural broadband across the entire EU to establish a robust digital infrastructure for this farming revolution.

"CEMA members have been at the forefront of the precision & digital farming revolution, with solutions to respond to farmers needs all over Europe. We call on the EU institutions to enable the uptake of advanced technologies, by all farms, in order to widely spread sustainable farming practices; to live up to the commitments set in the 2019 Joint Declaration on a smart digital future for European agriculture and rural areas; and to deliver on the €10 billion for research and innovation projects, to be implemented by the future Horizon Europe programme, for food, agriculture, rural development and the bio-economy."

Gilles Dryancour
CEMA Strategic Committee Chair



3. Strengthening Europe's Industrial and Technological Leadership in Advanced Farm Equipment

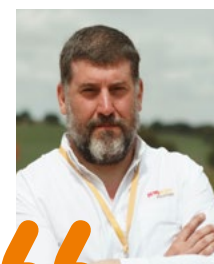
World-class innovation is at the heart of Europe's agricultural machinery industry and the global competitiveness of European agriculture. Future EU policies must encourage this industry's global leadership in production and innovation, rather than obstruct it with inappropriate over-regulation, and acknowledge its major contribution to society, by:

- Providing EU research funding in the most promising technology areas, notably automation, robotization, digital connectivity and artificial intelligence.
- Supporting machine developments which promote process-efficiency and CO₂ reductions in agricultural output.
- Delivering high standards of safety, contributing through innovation and fleet renewal to reach industry's pledge to cut on-road fatalities with farm machines in Europe by 50% by 2035.
- Raising the attractiveness of the agricultural and industrial sectors, including through better EU citizens' awareness.

- Promoting export of high-quality, high-technology, environmentally respectful European farm vehicles to increase share of third markets with high growth potential.
- Accelerating the mechanization of Agriculture across the world through sustainable incentives and capacity building, with a special focus on developing countries.

"Modern agricultural machines are the way to go for a more sustainable, efficient and environment-friendly farming sector in Europe and globally. Moreover, keeping lively rural areas and competitive farming businesses in the EU will be crucial to ensure there is enough food for EU citizens. The EU must support all segments of the agri-food chain – including machinery and solutions – for today's challenges and for the next generations."

Ignacio Ruiz
CEMA Economic Experts Group Chair



AGRICULTURAL MACHINERY

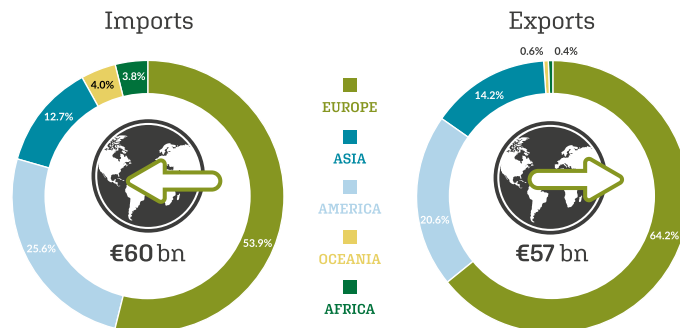
A Global Industry

Agricultural machinery is a highly integrated global industry, leveraging a complex supply chain to support sustainable farming across the globe.

Europe accounts for 54% of the world's imports and 64% of the world's exports of agricultural machinery, with a net balance of over €4 bn in 2018. Many farmers in the world rely on agricultural machinery produced in Europe, with tractors, green space equipment, harvesting equipment and soil working equipment topping the bloc's exports.

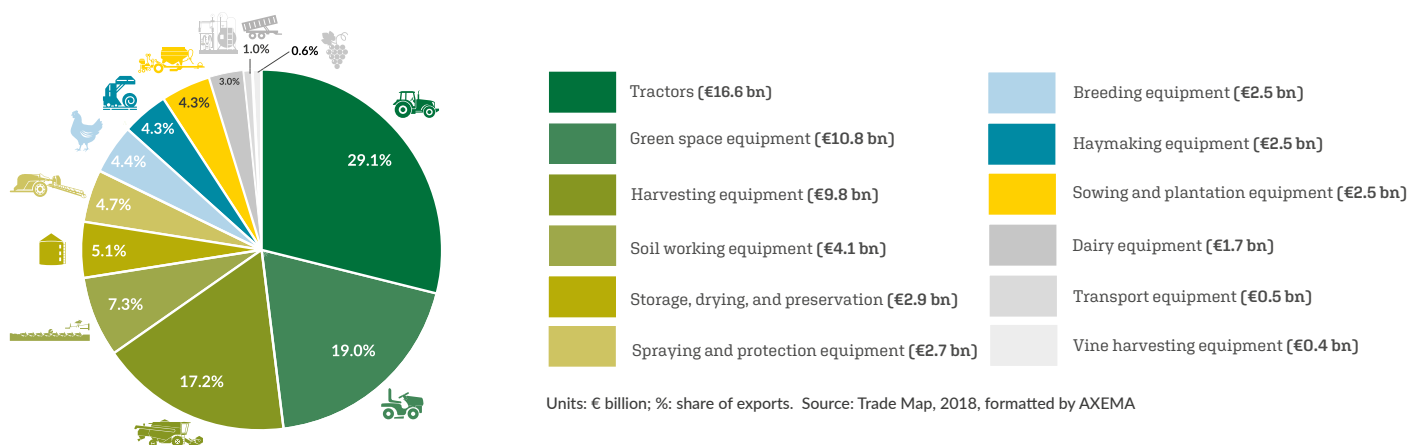
Europe was leading the world's investment in agricultural machinery from 1990 up to 2008. Since then, Asia is the geographic zone with the most opportunities.

International trade in agricultural machinery in 2018

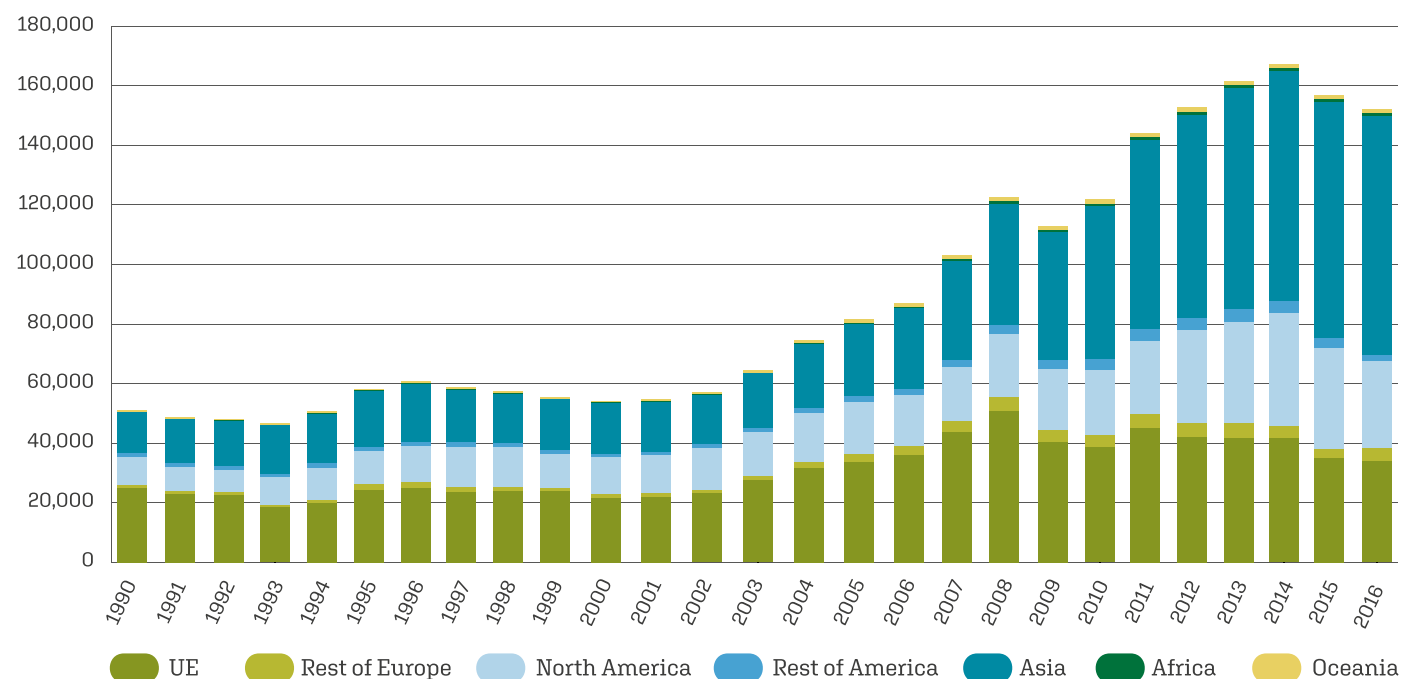


Units: € billion; %: share of imports and exports. Source: Trade Map, 2018, formatted by AXEMA

International exports of agricultural machinery per category in 2018



Variation in investment in agricultural machinery per geographic zone: 1990 - 2016



AGRICULTURAL MACHINERY

European Manufacturing

In the European Union, the manufacturing sector for agricultural machinery includes 7,245 industrial firms employing 173,142 people for a total turnover of €42.9 bn.

When bundling the agricultural machinery industry and trade activities, the sector accounts for 30,708 firms and 352,295 employees.

Germany is the leading European country with a turnover of €12.1 bn, ahead of Italy (€8.4 bn) and France (€4.9 bn). Together, these three countries represent 59% of the European turnover.

CEMA's membership of national associations covers 87% of the turnover, 71% of manufacturing companies and 76% of the workforce.

Agricultural machinery industry ranking per country

		Turnover (€m)	Number of companies	Number of employees
01	Germany	12,086.1	577	39,786
02	Italy	8,357.4	772	8,708
03	France*	4,923.4	546	17,261
04	United Kingdom**	2,723.7	483	7,633
05	Netherlands	2,378.6	307	7,376
06	Austria	2,043.1	120	6,066
07	Belgium	2,015.8	187	5,241
08	Poland	1,470.3	563	17,194
09	Spain	1,412.1	749	8,028
10	Sweden	1,303.3	206	3,426
11	Finland	1,180.0	139	4,196
12	Czech Republic	776.9	266	7,987
13	Denmark	608.8	156	2,765
14	Hungary	429.0	145	4,999
15	Slovakia	210.7	47	1,336
16	Ireland ***	182.9	79	1,144
17	Slovenia	161.6	56	1,345
18	Portugal	111.6	155	1,609
19	Croatia	104.0	59	1,239
20	Romania	102.3	60	2,207
21	Greece	96.4	450	908
22	Estonia	80.4	29	619
23	Lithuania	33.8	10	491
24	Latvia	28.0	22	509
25	Bulgaria	25.8	54	1,006
26	Cyprus	9.9	8	63
27	Luxembourg	0.0	0	0
28	Malta	0.0	0	0
	European Union [28 countries]	42,856	7,245	173,142

AGRICULTURAL MACHINERY

European Union Production

The European production of agricultural machinery was worth a total of €41 bn in 2017, up by 6.4% on 2016. The five largest European producers in order of importance are: Germany, Italy, France, the United Kingdom and the Netherlands.

After a drop in 2016, European production recovered in most countries in 2017. Among the main producers, Italy stands out due to a significant drop in its production (-10%).

Production and trade in agricultural machinery per EU country

	€ Million	Production			Exports	Imports	Markets
		2015	2016	2017e	2017	2017	2017
01	Germany	11,108.3	11,183.5	12,664.4	10,247.5	4,037.3	6,454.3
02	France	4,426.9	4,284.2	4,634.9	3,171.5	3,585.2	5,048.7
03	Italy	8,230.1	7,899.9	7,109.9	4,523.5	1,272.8	3,859.2
04	United Kingdom	2,623.9	2,357.9	2,512.2	2,114.6	2,183.9	2,581.6
05	Belgium	1,600.6	1,637.2	2,111.6	1,959.5	1,535.0	1,687.0
06	Spain	1,195.2	1,185.1	1,293.8	721.5	1,096.9	1,669.2
07	Poland	1,526.5	1,262.5	1,450.5	1,234.2	1,323.8	1,540.1
08	Austria	1,757.7	1,783.6	1,809.9	1,491.8	1,019.7	1,337.8
09	Netherlands	2,166.0	2,232.2	2,303.8	2,887.9	1,715.1	1,131.0
10	Sweden	903.6	899.6	1,034.7	1,037.8	960.6	957.6
11	Czech Republic	696.4	715.4	777.9	733.4	777.8	822.3
12	Romania	85.2	88.8	137.5	102.1	689.9	725.3
13	Finland	1,123.5	1,138.9	1,208.7	1,012.2	414.8	611.3
14	Denmark	538.5	549.0	530.0	841.1	901.5	590.4
15	Hungary	467.4	427.8	434.0	726.9	739.5	446.6
16	Portugal	108.2	102.8	110.5	57.4	317.9	371.0
17	Ireland	154.8	122.0	142.6	238.0	405.7	310.3
18	Lithuania	29.4	33.3	42.0	279.2	501.2	264.0
19	Bulgaria	35.5	24.8	26.7	279.2	491.0	238.5
20	Latvia	28.0	26.7	25.5	66.1	237.2	196.6
21	Croatia	95.9	105.8	114.2	85.0	165.4	194.5
22	Slovenia	132.9	142.4	153.3	162.6	191.4	182.1
23	Slovakia	191.6	209.7	229.5	409.1	353.1	173.5
24	Greece	78.7	70.7	94.3	66.4	141.5	169.4
25	Estonia	76.3	79.3	74.3	83.0	175.4	166.7
26	Luxembourg	0.0	0.0	0.0	41.0	90.2	49.2
27	Cyprus	8.8	9.9	11.1	1.2	11.5	21.4
28	Malta	0.0	0.0	0.0	0.1	2.1	1.9
	Total EU (28)	39,389.9	38,573.0	41,037.9	34,573.8	25,337.4	31,801.5

AGRICULTURAL MACHINERY

European Union Markets

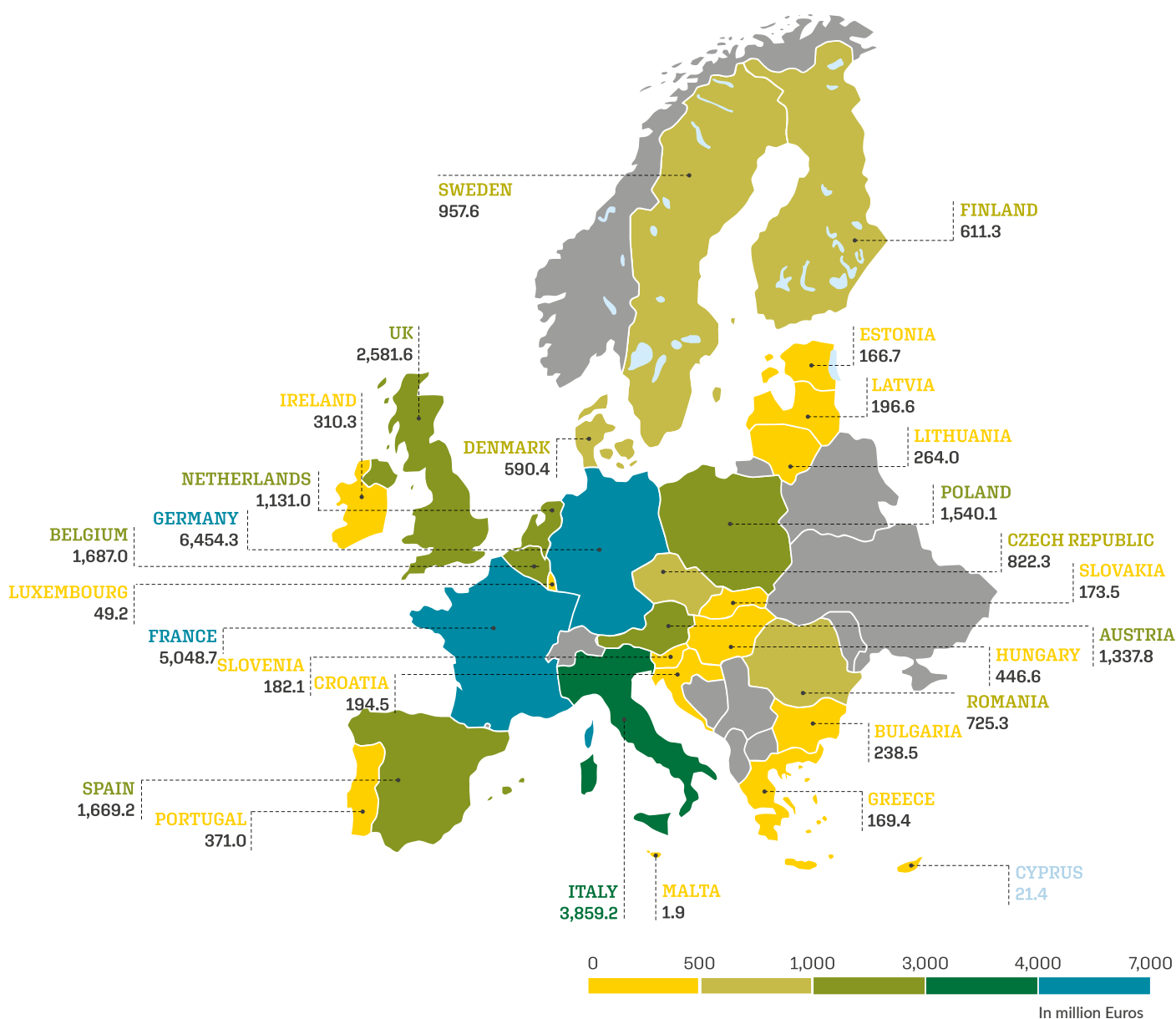
When defining the apparent markets for agricultural machinery within the European Union (Production – Exports + Imports), Germany, France and Italy stand out as the leading countries in 2017, followed by the United Kingdom, Belgium, Spain, Poland, Austria and the Netherlands.

Germany and Italy benefited from the most positive balance of trade for agricultural machinery, followed by the Netherlands. Romania faced the strongest trade deficit, followed by France and Spain.

In 2016, France generated 18.3% of the total output value of the agricultural industry in the European Union (€405 bn in full), followed by Germany (13.7%), Italy (12.9%) and Spain (10.8%). Around 10 million people worked in agriculture in the EU-28 in 2015, with almost three quarters concentrated in 7 countries: Romania, Poland, Italy, France, Spain, Bulgaria and Germany.

Source: Eurostat

European new agricultural machinery markets in 2017



AGRICULTURAL MACHINERY

Production per Type

The agricultural machinery industry is characterized by a very significant diversity in machinery types, categories, complexity, automation and digitalization levels.

Agricultural machinery produced in Europe will be sold worldwide, complying with multiple levels and variations of legislative and regulatory requirements, as well as different customer expectations.

New agricultural tractors represent the largest share of the value opportunity in 2017, followed by harvesting and wine growing equipment. Parts and accessories account for 13%.

Although some of the equipment represented by CEMA may be categorized under Garden machinery, a significant fraction in volume of these equipment will be represented by other European Trade Associations such as EGMF.

European production per type of agricultural machinery in 2017

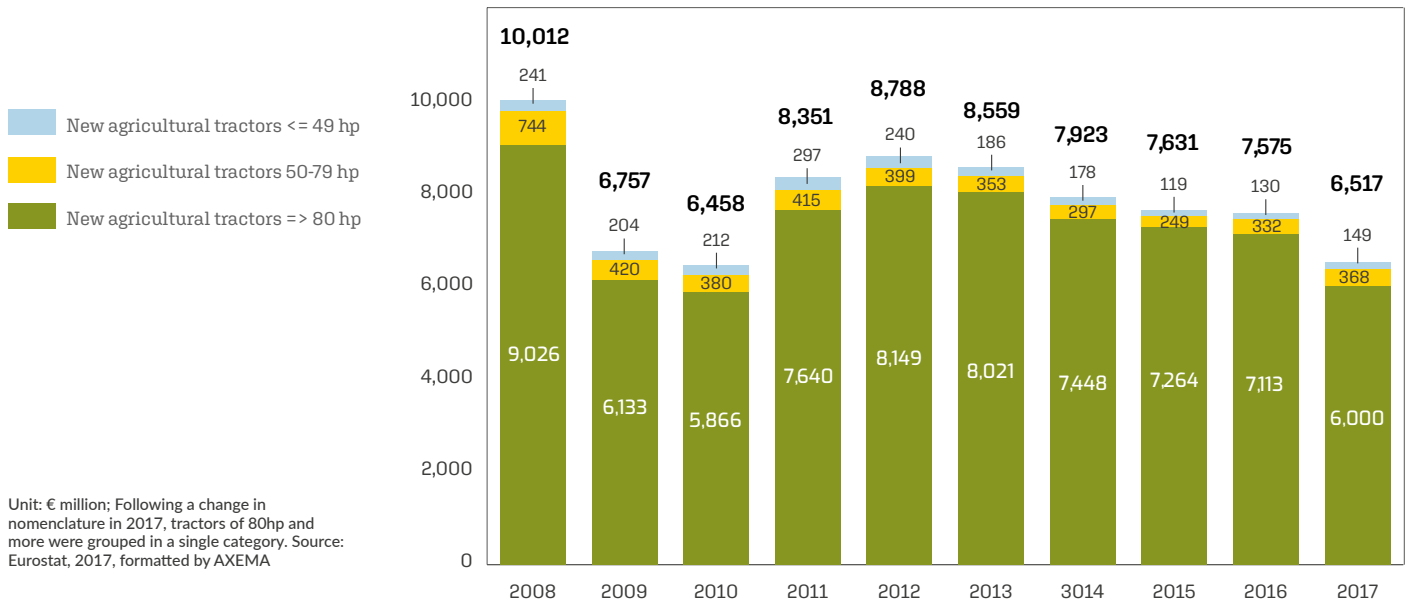
	EU (28)	
	Value (€ m)	Weighting of each category
New agricultural tractors	6,517	16%
Parts and accessories	5,166	13%
Harvesting and wine growing equipment	4,529	11%
Garden machinery	3,115	8%
Various agricultural machinery	2,669	7%
Livestock farming equipment	2,401	6%
Transport and handling equipment	1,664	4%
Hay-making equipment	1,280	3%
Watering and protection equipment	1,372	3%
Dairy equipment	1,176	3%
Sowing and planting equipment	1,088	3%
Soil working equipment	1,253	3%
Products with statistical confidentiality	8,808	20%
Total	41,038	100%

European production of agricultural tractors in 2017



The European production of agricultural tractors was worth €6.5 bn in 2017, down 14% on 2016.

The production of tractors of more than 80hp has diminished by 16%. The tractor category represents over 16% of the overall European production in terms of value.

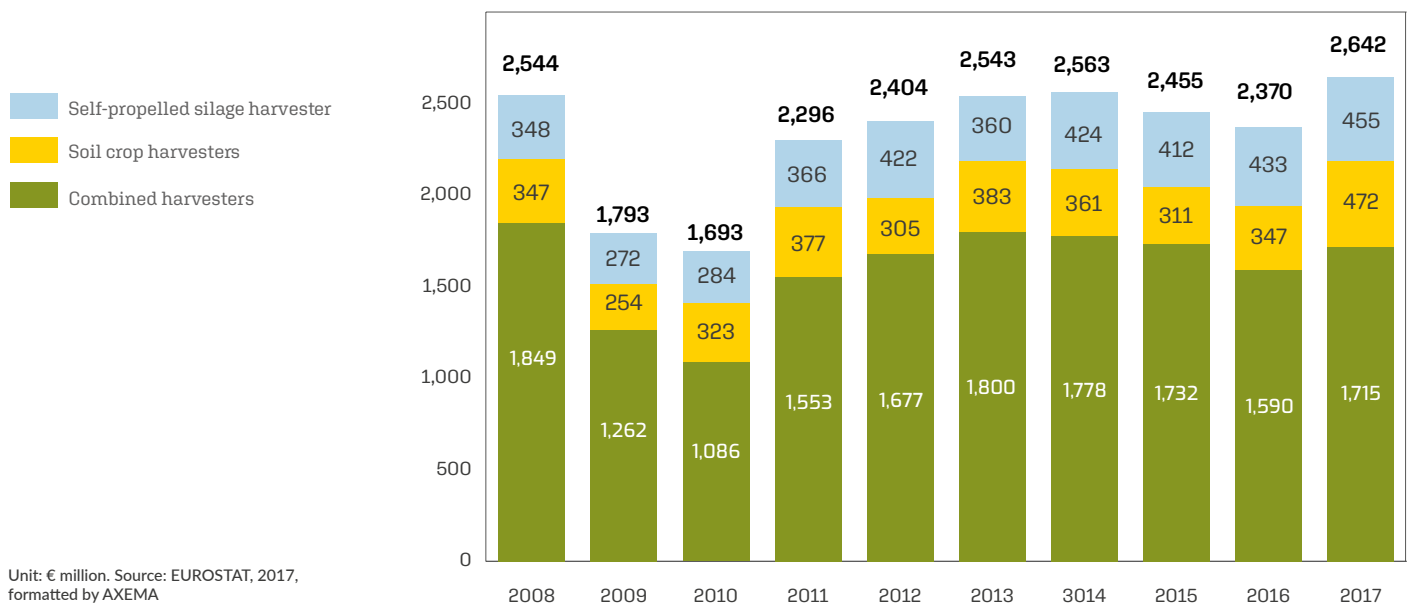


European production of cereal and root crop harvesting equipment in 2017



The European production of cereal and root crop self-propelled harvesters increased by 12% in 2017.

Root crop harvesters made the greatest contribution to this increase (+36%). The production of combine harvesters, which concentrated almost 65% of the family in terms of value in 2017, increased by 8% on 2016.

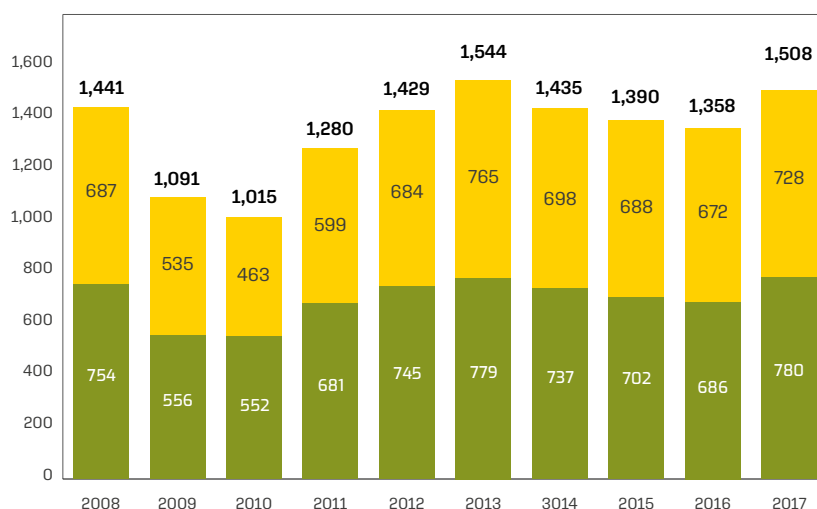
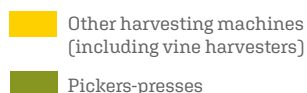


European production of other harvesting equipment in 2017



The European production of other harvesting equipment was worth €1.5 bn in 2017, an 11% increase on 2016.

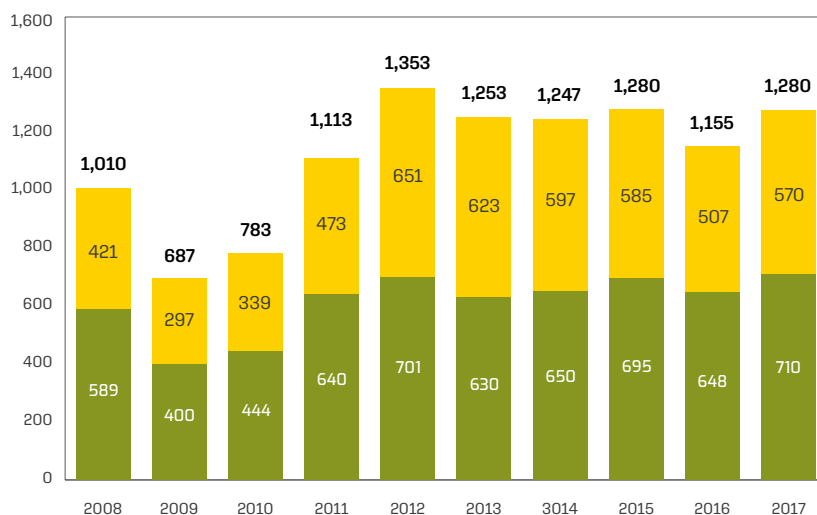
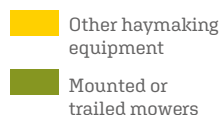
The production of balers (+14%) strongly contributed to this increase. Other harvesting equipment, which includes grape harvesters, increased by 8% in 2017.



European production of haymaking equipment in 2017



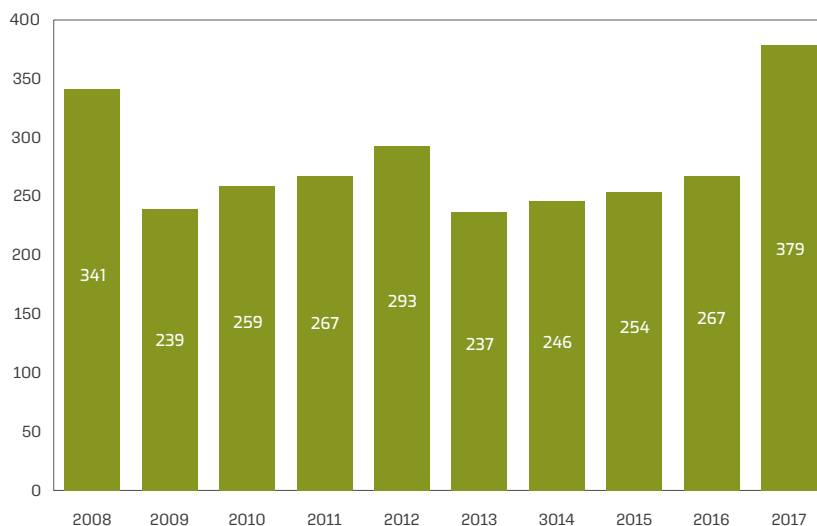
The European production of haymaking equipment was worth €1.3 bn in 2017, up by 11% on 2016. The production of mowers climbed by 10% and other equipment by 12%. This category represented 3% of European production.



European production of presses and crushers in 2017



The European production of presses and crushers for the manufacturing of wine, cider and juice was worth €379 million in 2017, up 42% on 2016.

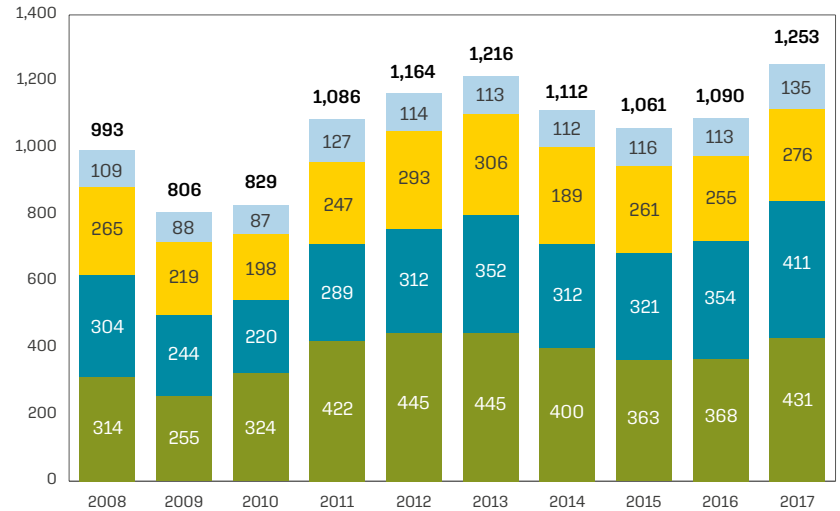


European production of tillage equipment in 2017



The European production of tillage equipment was worth €1.3 bn in 2017, up 15% on 2016. The production of harrows increased by 16% and that of scarifiers and cultivators rose by 17%.

- Other soil working equipment
- Ploughs
- Harrows (teeth, disc)
- Scarifiers and cultivators

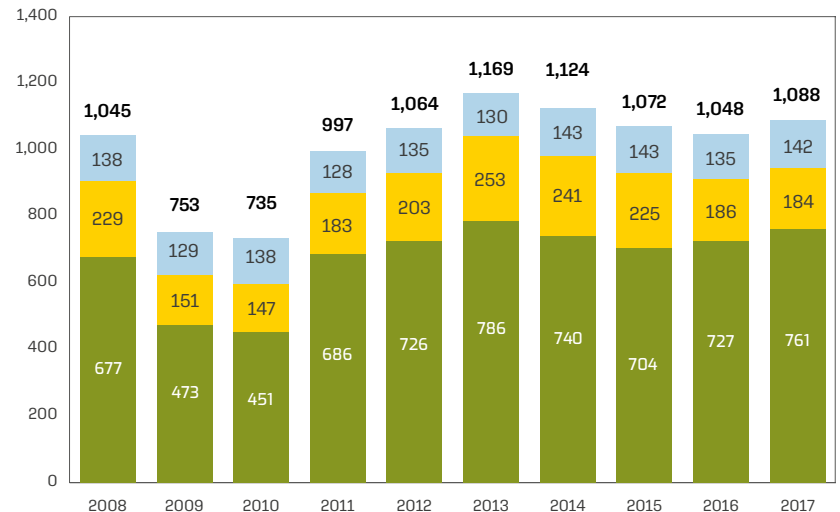


European production of seeding, planting & fertilising equipment in 2017



The European output of seeding, planting and fertilizer equipment increased by 4% in 2017, reaching €1.1 bn. This upturn was driven by the seeder production (including precision seeders), which grew by 5%, while these products represent 70% of the category in terms of value. The production of mineral fertiliser spreaders dropped by 1% in 2017.

- Organic fertilizer spreaders
- Mineral fertilizer dispensers
- Seeders, planters and transplanters

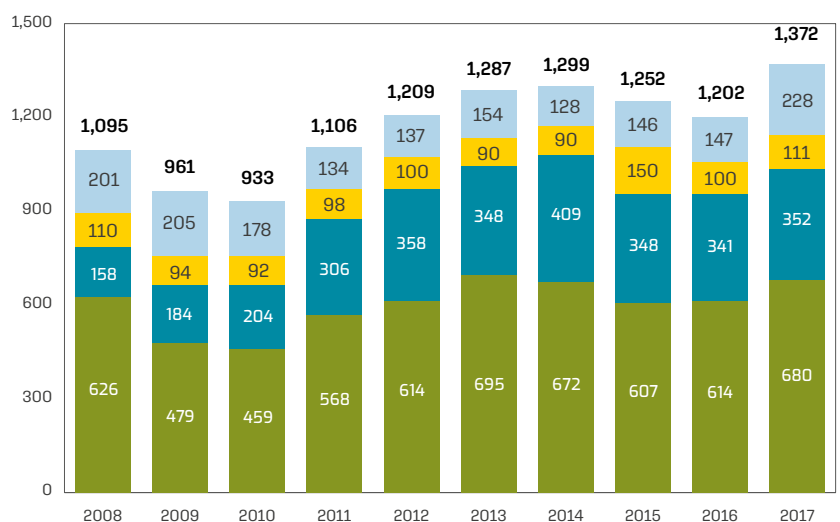


European production of irrigation and crop protection equipment in 2017



In 2017, European production of irrigation and crop protection equipment increased by 14% compared with 2016. The production of towed and mounted sprayers increased by 11% in 2017. The production of other irrigation and crop protection equipment increased by 18%. Almost two thirds of the European production originated from Germany (29%), Italy (16%) and France (15%).

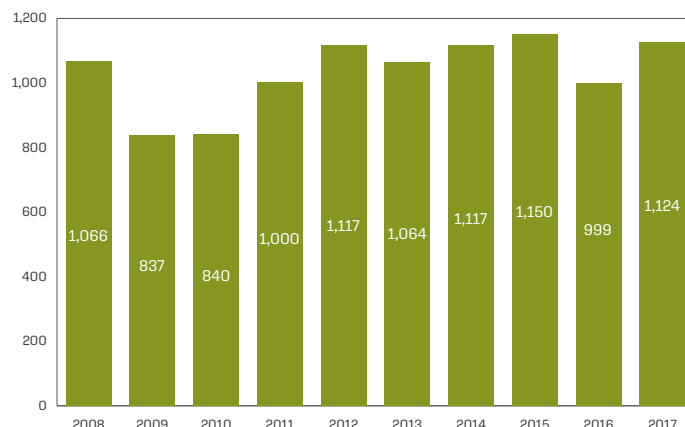
- Mechanical spraying systems
- Portable sprayers, with or without motor
- Other crop protection systems
- Sprayers, mounted or trailed



European production of agricultural trailers in 2017



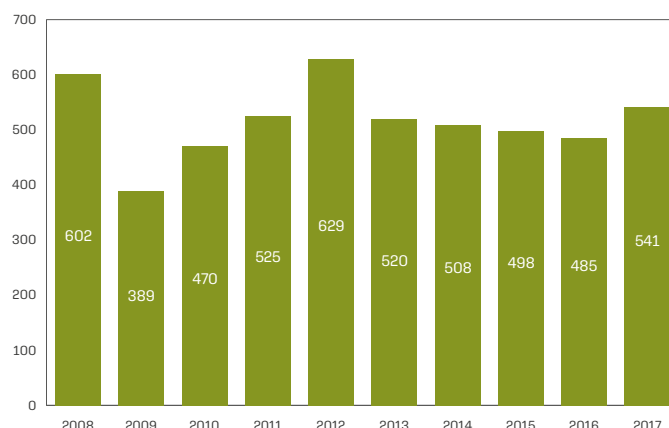
The European production of agricultural trailers increased by 13% in 2017, reaching €1.1 bn. This category mainly includes skips, flat beds, livestock trucks, manure spreaders and slurry tankers.



European production of agricultural handling equipment in 2017



The European production of handling equipment was worth €541 million in 2017, which represents a 12% increase on 2016.

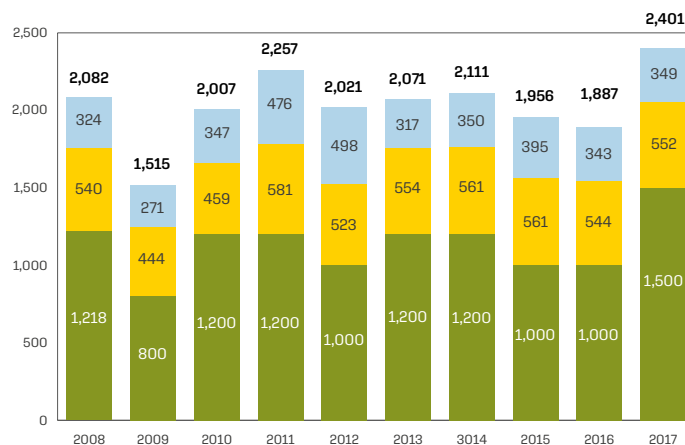


European production of livestock equipment in 2017

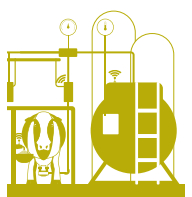


The European production of livestock equipment was worth €2.4 bn in 2017, up by 27% on 2016. The production of feed preparation and poultry breeding machinery climbed by 1% and 2% respectively. This category represents 6% of European agricultural machinery production.

- Aviculture machines
- Animal food preparation machines
- Other breeding equipment

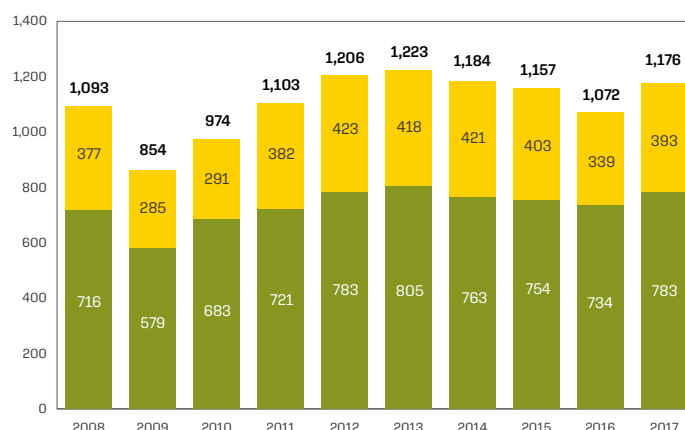


European production of dairy equipment in 2017



The European production of dairy equipment was worth €1.2 bn in 2017, up 10% on 2016. Dairy machines and systems, which represent some 2/3 of equipment manufactured in this product category, increased by 7%.

- Milking machines
- Dairy machines and systems



AGRICULTURAL MACHINERY

Business Climate

The *CEMA Business Barometer* – published monthly – captures the industry's mood based on current business sentiment and the expected turnover in the next 6 months.

Taking into account many other factors and data sets available, the industry currently forecasts a slight decrease for the overall market in the European Union for 2019, with different variations to be expected at national levels.

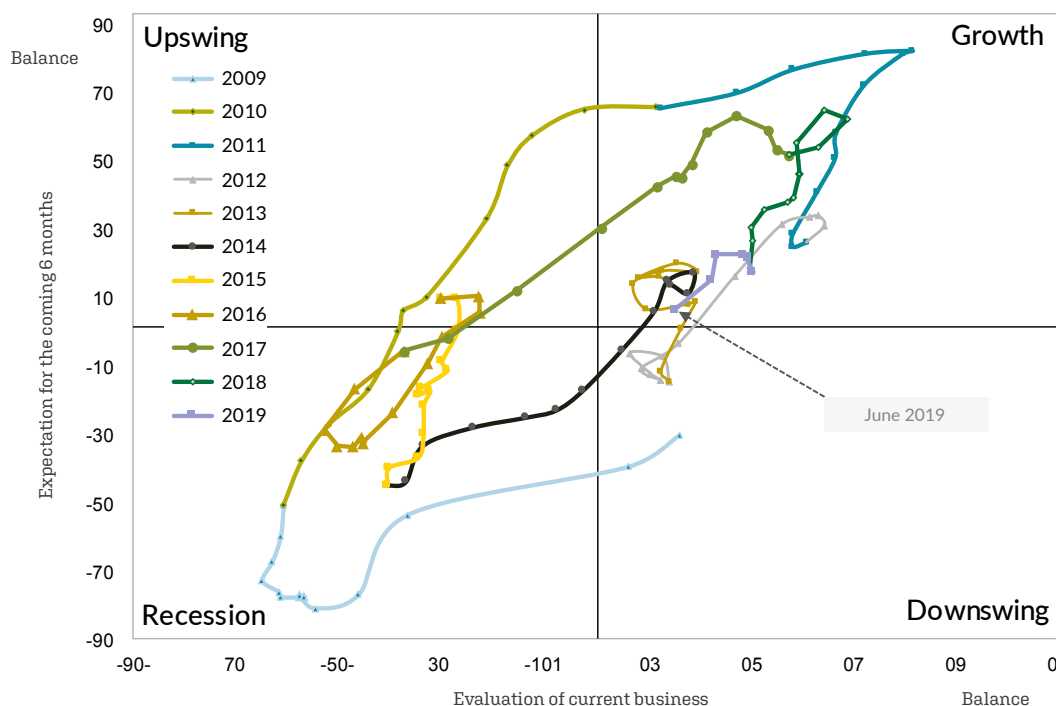
Business Climate - Index Development

CEMA Business Climate Index (CBI) - Total



Source: CEMA Business Barometer, June 2019

Business Climate - Illustration of Business Cycle



CEMA Business Barometer, June 2019, each value as an average of the last two months

CEMA



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Source: PÖTTINGER

Strategic partnerships



EU funded projects under Horizon 2020*



* Ongoing projects as of June 2019