CBI Product Factsheet:

Parts for agricultural equipment in Europe
Introduction

Europe is the largest producer of farm equipment in the world with a share of 31% in global production. Agricultural equipment is made in many European countries and by a large number of producers. Subcontracting of parts and systems is a commonly applied principle among equipment manufacturers as a way to reduce costs and improve efficiency. Subcontracting is mostly done to subcontractors within the own country, but also to subcontractors in Eastern Europe, and also increasingly overseas (China, Turkey and India). From a Developing Country perspective, the parts that offer most opportunities in Europe are sheet and tube metal parts, welded parts and wear parts.

Product description

When ‘agricultural equipment parts’ or ‘(metal) parts for agricultural equipment’ are referred to in this survey, this concerns the selection of products in Table 1 of Annex 1, unless stated otherwise.

Geographic scope

The geographic scope is the European Union area, however, in certain parts of this survey the focus is on a selected group of countries: Germany, France, Italy, Belgium, United Kingdom, Netherlands and Austria. These countries are among the largest producers of agricultural equipment and also among the large importers of parts for agricultural equipment from developing countries. When ‘focus countries’ are referred to in this survey, this concerns the selection of these seven countries, unless stated otherwise.

Product specifications

Specifications of metal parts for agricultural equipment as required by European buyers are described below. Furthermore, Pictures 1-6 show some examples of agricultural equipment parts that are used in Europe.

- Material and design: Agricultural machinery parts can be made using many different processes, such as casting, forging or welding. If a part is cast, the material can be gray iron, ductile iron, or steel. The parts that offer most opportunities in the European market, however, are sheet and tube metal parts, welded parts and wear parts. These parts are mostly made of steel, and increasingly of high strength steel. In general, agricultural equipment parts have moderate requirements for surface finishing, however the requirements depend on the application of the part in the machine. Of course, the exact requirements of the agricultural equipment parts are specified by the customer and can vary from customer to customer.

- Labelling and packaging: Due to the great diversity of agricultural equipment parts (and their size), there is also diversity of packaging. However, the standard means of transportation is wooden boxes for large parts; cartons can be used for smaller parts. Packaging and labelling is an aspect that is usually dealt with according to customer specific requirements.

- Quality: Since many of the agricultural equipment producers increasingly depend on worldwide exports, they have implemented stricter quality standards than before. Such quality standards impact upon many issues, such as the finishing and painting of the part (the visual-optical qualities or the appearance of the agricultural equipment part), the requirements for packaging, the accessory documentation etc.

- Packaging: Usually, welded constructions are coated with painting, before being packed and shipped. Packaging must therefore prevent the painting from damage, and sometimes oil-paper may be used to avoid the dispersion of the protective oil (if relevant). Depending on the product characteristics and customer wishes, the welded constructions are packed in wood, plastic or in containers. In the case of a heavy product, the outer package may be a heavy box. However, all of the empty space in the box must be filled up to prevent the product from moving. The package for ocean transportation may be wooden or iron pallets wrapped with plastic sheeting and packed with metal strips.

Note: If you use wood packaging materials to export products to Europe, you must consider health (phytosanitary) requirements set for these materials; in practice this means that the wood must have undergone heat treatment or been fumigated with methyl bromide.

Last but not least: packaging is always labelled, not only for the purposes of identification during transport, but also to indicate the quantity, weight, the products themselves and the producer’s name.

What is the demand for agricultural equipment parts in Europe?

Please be aware of the following, before continuing onto the figures:

- The trade and production figures in this section give an indication of the total value of agricultural equipment parts. These statistics cover only a few codes (refer to Appendix A) and cannot be further detailed, unfortunately.
• Production and demand figures of parts would be higher if in-house parts production was included. European agricultural equipment producers partly produce the parts themselves. This type of production is not included in the statistics as this data is not available.

**Imports**

Figure 1-7: Imports of agricultural equipment parts to Europe and focus countries, by main origin (2010-2014), in € million

*Europe*

*Developing Countries*

*Rest of the world*
Leading suppliers

Germany, Italy, France and the Netherlands are the four leading suppliers. The USA is by far the largest supplier in the category ‘rest of the world’. Imports from developing countries are dominated by China, followed at considerable distance by Turkey and India.

Tip:
- Benchmark your company against your peers from China and also those from European countries. Several factors can be taken into account, such as market segments served, perceived price and quality level, countries served, etc. Find exporters of parts for agricultural equipment in ITC Trademap.
Exports

Figure 9: Exports of agricultural equipment parts from Europe, by main destination (2010-2014), in € million

- European exports of parts for agricultural equipment reached €3.6 billion in 2014. Average annual growth in 2010-2014 was 8.3%.
- The share of European exports to developing countries peaked in 2010 (14%), declining again to 11% in 2014. Nevertheless, most imports originate from intra-European sources (67% of all imports). For the coming years, the share of exports to developing countries is expected to remain stable.
- The six focus countries represented 55% of all European exports in 2014.
- The leading exporter is Germany, accounting for 27% of total exports from Europe. Italy is in the second position (13%), followed by France (9%), and by Belgium, Poland, the Netherlands and Hungary (each with a 6% share of European exports).

Figure 10: Leading exporters of agricultural equipment parts (2014), in € million

Source: Trademap
- Germany is the leading exporter to developing countries, accounting for 31% of all European exports to developing countries. Italy is in the second position, followed by France and the Netherlands.
- European exports of parts for agricultural equipment are expected grow slightly in the next few years, in the range of 0%-2%.

**Production and apparent demand**

Figure 11: European production of agricultural equipment parts (2009-2013), in € million

Figure 12: Leading European producers of agricultural equipment parts, 2013

- European production amounted to a total of €3.4 billion in 2013, following an average annual increase of 10% in the period 2009-2013.
- Germany accounted for almost 27% of the total European production in 2013.

**Tip:**
- Figure 12 shows that the two largest producers are Germany and Italy. It should be underlined here that also the other focus countries are home to considerable production output of agricultural equipment parts. All of the focus countries offer subcontracting opportunities to Developing Country exporters.
European apparent demand totalled €2.8 billion in 2013, after an average annual increase of 8.2% in the period 2009-2013.

The agricultural equipment industry (and thus also the demand for parts for agricultural equipment) experienced growth in production and exports up until 2008-2009, when it was hit by the economic turmoil, which led businesses to postpone new machinery purchases. Since 2011 the agricultural equipment production regained growth, reaching €20 billion that year. In 2012 and 2013 production in Europe increased further (€22.7 and €23.4 billion respectively), while 2014 was a year with weaker sales (-5% compared to 2013).

Macro-economic indicators

Figure 14: Real GDP, % change from previous year

The major determinant of agricultural machinery parts demand is spending activity in the agricultural sector. The market of agriculture machinery is, to a huge extent, driven by farm income (e.g. price of milk, crops etc.) and crop production projections for the next season. In addition, agricultural machinery parts demand depends both on the demand for replacement parts as well as demand for new equipment.

To some extent, the demand for agricultural equipment and parts is stimulated by economic growth too. In each focus country, GDP is expected to show continued growth year on year in the years to come (as revealed by Figure 14). Evidently, it is a profound basis for continuous demand and import growth in the coming years.
The profitability of agricultural equipment parts imports is influenced by the exchange rate between the euro and the US dollar, as parts that are sourced globally are paid in US dollars. While earlier forecasts predicted that this exchange rate would not surpass 0.80 until 2020, it reached this point in 2015, with an exchange rate of 0.90 in June 2015. This is having a major negative effect on the price of imports. Particularly if it persists for several years, this situation is likely to have a negative impact on the level playing field of European imports paid in US dollars, relative to local European production.

Tip: Although GDP growth forecasts are improving, pricing is and will continue to be a leading influential competitive factor. Competitive pricing is elementary for exporters from developing countries who are planning to enter the European market.

What trends offer opportunities on the European market for agricultural equipment parts?

Reorientation of global production capacity

As a result of the growing world population, the centres of agricultural production will shift to regions with above-average population growth, on the one hand, and to the most favourable locations for agricultural production, on the other hand. The production of machinery will – at least to some extent – follow this development.

Tip: If the value of the euro remains at its current low level, producers from developing countries should increasingly focus on reducing costs in order to remain competitive in the European market.

European market outlook for 2015

According to a CEMA trend analysis for the six main types of agricultural machinery (tractors, combine harvesters, forage harvesters, balers and sprayers), the total amount of machinery sold is expected to decrease across Europe in 2015. Demand in most countries is declining, although it remains relatively stable in Spain and Italy. The overall decrease in 2015 (and 2014) was largely the result of lower demand in the two largest European markets: Germany (forecast: -9%) and France (-11%). According to CEMA, although demand will decline again in 2015, the market situation is not unusual, as the agricultural machinery markets have a cyclical nature, with 2012 and 2013 having been record years in terms of agricultural equipment sales throughout Europe.

Innovation must improve efficiency and effectiveness of farming

- Precision and automation are key in farming nowadays. State of the art agricultural equipment enables - both in conventional and organic arable farming and animal husbandry – efficient and effective farming. Technologies and standards such as GPS and ISOBUS enable the efficient use of machinery and effective soil tillage, sowing, fertilising and plant protection.
- The current trend towards larger and more equipment controlled by one operator at the same time, also stresses the need for a continuous examination of components and systems. Only then, operational reliability can be guaranteed. Online monitoring technology can help a lot: it prevents machine breakdowns or reduce down times, if parts are replaced in time or, if necessary, provided at short notice by service partners.
- Larger equipment and more powerful and faster tractors have increased the demand for machinery that can endure demanding conditions of continuous wear and tear. Another demanding condition is the exposure to severe abrasion during fieldwork. This has set higher requirements to structural elements in the machinery. As a result, high-strength, abrasion-resistant steel grades have become more and more common. Such hard, tough and lightweight, but flexible steels prolong the lifetime of parts and equipment while reducing the frequency and cost of replacing worn parts.
Focus on production cost reduction

Although the agricultural equipment industry is less globalised than other industries, cost reduction is an issue for equipment producers. For example, several producers have explored and/or initiated sourcing of parts (or subcontracting) in Central and Eastern European countries. In other cases, subcontractors in Western Europe have improved production efficiency to remain competitive, such as the company Leenstra from the Netherlands.

With which requirements should agricultural equipment parts comply in order to be allowed on the European market?

Requirements can be divided into: (1) legal requirements you must meet in order to enter the market and (2) additional requirements, which are those most of your competitors have already implemented, in other words, the ones you need to comply with in order to keep up with the market.

You can find a general overview of the EU buyer requirements for metal parts on the Market Intelligence Platform of CBI. In addition, refer to the EU Export Helpdesk, the ITC Market Access Map and the ITC Standards Map for more information on gaining access to the European market.

Legal requirements

For metal parts in general, there are no specific legal requirements applicable. Also the ‘Liability for defective products (Directive 85/374/EEC)’ in fact refers to finished products and not to parts. The Product Liability Directive states that the European importer is liable for the products put on the European market. The European importer, however, can in principle pass on a claim to the producer/exporter.

Other, general legislation that must be taken into account:

- Wood packaging materials used for transport (including dunnage) (Directive 2000/29/EC): Europe sets requirements for wood packaging materials such as packing cases, boxes, crates, drums, pallets, box pallets and dunnage (wood used to wedge and support non-wood cargo).
- Another packaging related directive is the general directive about packaging and packaging waste (Directive 94/62/EC). This directive prescribes the marking of the kind of packaging material used, and the maximum levels of heavy metals in the packaging material.

Agricultural equipment parts from countries outside Europe can be exported to Europe on a duty-free basis.

Tip:

- Make sure that your wood packaging material qualifies for the European market. If you are not sure, ask your wood packaging material supplier, or your freight forwarder, for clarity. Your wood packaging material supplier should take any further action required in order to comply with the Directive.
Additional requirements

Certification according to ISO 9001 is a minimum which European buyers expect when searching for new suppliers. Other certification, such as ISO 14000 (environment) and OHSAS 18001 (health and safety), can be beneficial when promoting your company and products to potential customers.

As soon as a prospect is seriously interested, the main requirements will be related to the parts; material, dimensions and finishing must meet the customer’s specifications. In fact, these issues are key in the sample phase. If the customer accepts the samples and all other conditions are agreed upon, the contract can be signed. After that, the main challenge for the suppliers is to deliver the products according to the agreed specifications, delivery times and volumes. Suppliers should not underestimate these conditions.

**Tip:**
- The importance of customer satisfaction should not be underestimated. Of course, customers consider good quality of the products important, but they also attach great value to compliance with delivery times and delivery volumes.

Depending on the type of application (critical or non-critical), the customer may have process certification requirements, and material and/or testing requirements.
- Process certification: In case of welded constructions customers may require certifications on Welding Procedure Qualifications (WPS) as per ISO 15607 – ISO 15614 and/or qualifications of welders (ISO 9606).
- Material requirements: the metal that is used must be covered by an (international) standard and approved with a material certificate, which can be stated in an EN10204 - type 3.1 certificate. This type of certificate is internationally accepted.
- Testing requirements. The customer may also have testing requirements, such as NDT (non-destructive testing) surface (MT or magnetic testing, PT or penetrant testing) and section (UT or ultrasonic testing and RT or X-ray testing) tests.

Note that in the case of some finished agricultural equipment parts, there are international ISO standards that may be relevant and demanded by customers.

**Tip:**
- Go to the ISO Catalogue - Search with "agricultural" for an overview of relevant ISO standards (note that most of them are related to agricultural machinery and not to parts).

What do the trade channels and interesting market segments for agricultural equipment parts look like in Europe?

The most common market channels are producers of (parts for) agricultural equipment, followed by importers. For more information also refer to CBI’s 1) Market Channels and Segments and 2) Competition for Metal Parts and Components. Sources to find prospects are included in the section “Useful sources”.

**Figure 15: Trade structure for parts for agricultural equipment in Europe**

Developing country → Trade in Europe → Market segments in Europe

- Developing country → producer of parts for agricultural equipment
- Importer
- Producer (of parts)
- Distribution: OEM market (agricultural equipment manufacturers) or aftermarket
Europe is home to several interesting players. As each company is unique, with its own customers, market segments and products, the profile of the potential partner is very important. You are very likely, however, to find a match.

Each of the seven focus countries is home to a different set of agricultural equipment manufacturers, which can be seen from this list of examples of companies per focus country:

- **Italy:** Agrarex, Agricoma (consortium of twenty Italian producers of agricultural machinery), M, Mascare, Matermacc, SDF, Zanon.
- **Germany:** Amazone-Werke, Fella, Grimme, Krone, Lemken, Stoll, Strautmann.
- **United Kingdom:** Armstrong & Holmes, Bomford, Crop Sprayer, Hay Grove, JCB, Majorfax, New Holland, Richard Pearson, Shelbourne, Trantor Tractors.
- **Belgium:** AVR, CNH (global manufacturer with location in Belgium), Delvano, Dewulf.
- **Austria:** Bauer, Hydrac, Kirchner & Soehne, Lindner Traktoren, Pöttinger, Reform, Steyr, Vogel & Noot Landmaschinen.
- **France:** Berthoud, Desveys, Nicolas, Pellenc, Vermande, Joskin.
- **Netherlands:** Bliksema Hercules, Evers Agro, Koning Machinefabriek, Miedema, Peeters landbouwmachines, Schouten, Struik, Veenhuis Machines, Visser.

Europe is also the home region of a few large multinational agricultural equipment (mostly tractors) producers, such as Agco (France/Germany), Argo (producer of agricultural tractors, part of the Fiat Group) and Kuhn (France).

Please note that the foregoing enumeration is not complete and is only meant as illustrative of this category of companies in the focus countries.

### Trade channels for wear parts

Wear parts can be, for example, drill points, tips, ripper points, spikes and shanks. Most of these parts are worn out by regular contact with soil. The requirements for these parts are higher than for most other agricultural parts, since they need to withstand intensive use in harsh conditions for a certain period of time. As an indication, the demand for wear parts for crop harvesting machinery is about 15-20% of the total parts demand in the aftermarket. Furthermore, the demand for wear parts is mostly seasonal. Most maintenance activities take place in the early winter (November-December), thus demand for wear parts also peaks in that period.

Wear parts are thus somewhat different from most other agricultural equipment parts. Of course, they are used by machinery producers in the initial production of machinery (called ‘OEM’ market which stands for Original Equipment Manufacturers market). However, most demand for wear parts comes from the aftermarket. This market covers the replacement of worn parts, during the lifetime of machines. Therefore, there is also an additional trade channel for these parts: distributors of (agricultural equipment) parts. Often, these distributors trade in certain brands of machinery in several categories, such as agricultural machinery and/or construction equipment and/or earthmoving equipment. Usually they also supply the accessory parts and maintenance services for these machines, including wear parts. Some examples of companies in Europe are Granit Parts, Kramp, TSP and MDT-Aqui.

The aftermarket is the market for replacement and improvement products. These parts can be ‘OES’ (which means that they have been made by original equipment suppliers or qualified suppliers) or ‘IAM’. IAM stands for independent aftermarket and means that the parts have been made by companies that have not been officially approved by the OEMs. Especially the IAM aftermarket offers opportunities for suppliers from developing countries, as it is easier to enter than the OES aftermarket.

**Tips:**

- Suppliers from developing countries suppliers of wear parts should focus on companies that operate in the IAM aftermarket, as theIAM aftermarket is the largest market segment for wear parts.
- Suppliers from developing countries suppliers who already supply wear parts to OEMs in their home country or region, could opt for the OES aftermarket. Still, be prepared that it will cost more time and efforts to enter the OES aftermarket.

### What are the end-market prices for agricultural equipment parts?

To establish an export price, you need to consider many of the factors involved in pricing for the domestic market:

- **Aim to charge the price the market will bear and keep in mind the quality-price ratio of your products. It should be in line with competitor prices;**
- **Pricing is a mix of knowing your domestic costs and calculating costs you will incur in delivering and supporting your activities in a foreign market;**
Use contracts with variable material costs. It is important to set the reference-index for the fluctuations in agreement with the buyer. Use, for example, the steel index of the London Metal Exchange.

- Fluctuations often vary from country to country due to differences in import taxes (not yet complying with WTO regulations) and European buyers will not pay extra simply because of fluctuations in one particular country;
- Bear in mind that it is not easy to increase prices once you have agreed to deliver at a certain price. The negotiated price should never be below your cost price (except for the first order; in this context you may accept a loss if larger quantities and thus lower costs are expected for the following orders). No European buyer will accept an unreasonable/unexpected price increase after the first order;
- The negotiated price depends on the delivery conditions, the means of payment, credit terms and currency risks, quantities and the means of transport;
- Exchange rates fluctuate. Cover this risk by including the currency risk in the contract. This practice has been accepted in international business transactions for a few years.

**Tips:**
- Use contracts with variable material costs
- Include the currency risk in the contract

In general, the more common the product, the more competition there will be and the lower the margin for the producer. On the other hand, the more sophisticated the product, the higher the labour factor in the landed cost price and the greater the interest of European companies in sourcing in developing countries. This is due to the fact that manufacturers in developing countries have a competitive edge in terms of labour compared to European manufacturers. This provides an opportunity in relation to labour-intensive products, as up to 50% of the European manufacturer’s cost price may be made up of labour. See Table 1 for a comparison of cost price elements in Europe and developing countries.

Table 1: Price level of cost price elements in Europe and Developing Countries, in €

<table>
<thead>
<tr>
<th></th>
<th>Europe</th>
<th>Developing Countries</th>
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<tbody>
<tr>
<td>Labour (per hour)</td>
<td>35-40</td>
<td>0.7-1</td>
</tr>
<tr>
<td>CNC machining (per hour)</td>
<td>50-120</td>
<td>5-12</td>
</tr>
<tr>
<td>Set of tooling (example)</td>
<td>10,000</td>
<td>1,000-2,000</td>
</tr>
</tbody>
</table>

Source: Lichthart Solutions and Globally Cool (2014)

The difference in labour costs is partly compensated by higher labour productivity in the countries under review, however, a difference of about 30-40% in cost price is possible in many cases. Of course, cost price calculations depend on the amount of labour necessary to make a specific part. For example, parts that need a great deal of TIG welding are labour intensive and therefore the price difference between a European manufacturer and a manufacturer from a developing country can exceed 200%. Experienced buyers in Europe consider a cost advantage of 30% necessary to cover all costs involved in global sourcing (such as inspection costs, transport costs, costs on maintaining overseas relations including visits, higher stock levels because of longer delivery times, import duties, extra quality assurance costs).

**Tip:**
- Exploit your advantageous low labour costs by specialising in labour-intensive processes such as welding.

**Useful sources**

**Trade fairs**

- Leading trade fairs in Europe are:
  - Agritechnica Hannover - Hannover, Germany biennially in November.
  - Sima Paris – Paris, France in February in uneven years.
  - EIMA International - Italy, Bologna, biennially in November, even years. One subsection of the fair is ‘EIMA Components’.
- Leading agricultural trade fairs in the focus countries with mainly national visitors are:
  - Agribex - Belgium, held in Brussels every odd year (December).
  - Lincolnshire Agricultural Machinery Manufacturers Association (LAMMA) - United Kingdom, held in Nottinghamshire yearly in January.
- Subcontracting trade fairs can be also interesting to visit:
  - Hannover Messe - world’s leading annual industrial technology exhibition, held in Germany, Hannover in April.
  - ESSE - Netherlands, held in Utrecht every even year (March).
  - MECSPE - held in Parma in Italy annually in March.
- Midest - annual fair in Paris (November).

**Trade Press**

- Leading agricultural magazines in the focus countries: AgrarHeute (Germany, click on "Landtechnik"), AgriSalon (French).
- DLG Verlag - publisher of several German agrarian magazines.
- Industrie Anzeiger - German monthly subcontracting magazine.
- Landwirtschaftsverlag Münster - leading European agricultural publisher. Main magazines: Top Agrar and Profi.

**Trade and Industry Associations**

- CEMA – European Agricultural Machinery Association.
- Agricultural equipment Manufacturers Associations in the focus countries: United Kingdom: AEA and BAGMA, France: AXEMA (member company under 'Annuaire des adhérents'), Belgium: Agoria and Fedagrim, Netherlands: Agrotechniek, FEDECOM, NEVAT, Italy: FEDER UNACOM, Austria: FMMI, Germany: VDMA (choose 'Associations, then 'Agricultural machinery').

**Trade directories**

- United Kingdom: Stackyard (agricultural focus), Applegate Directory, Hotfrog, Sharelook
- Agent directories: Manufacturers’ Agents’ Association (MAA) (United Kingdom), German Commercial Agents Directory (Germany).
- Germany: Sachon (select menu - 9 (Maschinen- und Anlagenbau; Maschinen für Landwirtschaft, Forstwirtschaft und Gartenbau), Wer liefert was?

**Other useful sources**

- Trade fair databases: AUMA, Eventseye
- Other: EU Export Helpdesk, Kwintessential.
This survey was compiled for CBI by Globally Cool – Creative Solutions for Sustainable Business in collaboration with CBI sector expert Peter Lichhart

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Annex

Two codes have been selected for agricultural equipment parts. Also refer to Table 1 below for the classification. Table 1 also shows the accessory Prodcom code used for the production statistics of agricultural equipment parts.

Table 1: Selected products, based on CN and Prodcom nomenclature

<table>
<thead>
<tr>
<th>Subsector and product groups</th>
<th>CN code</th>
<th>Prodcom code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parts of harvesting machinery, threshing machinery, mowers and machines for cleaning, sorting or grading agricultural produce</td>
<td>84339000</td>
<td>28309100</td>
<td>Parts of harvesting or threshing machinery and apparatus</td>
</tr>
<tr>
<td>Parts of agricultural, horticultural or forestry machinery for soil preparation or cultivation or of lawn or sports-ground rollers</td>
<td>84329000</td>
<td>28309200</td>
<td>Parts of agricultural, horticultural or forestry machinery for soil preparation or cultivation</td>
</tr>
</tbody>
</table>

Source: CN and Prodcom Nomenclature