



Trends such as sustainability, naturalness, originality and the sensitivity of consumers to the subject of "packaging" make natural casings particularly attractive as sausage casings.

Photo: Frank Seifert / fotolia

A raw material with personality

Natural sheep sausage casings score with industrial processors because of their added value

Compared to craft butcheries, it is more difficult for suppliers of industrially produced sausages to position their products as original, authentic and "telling a story". The benefits of natural casings can make all the difference here.

By Heike Molkenthin

The economic boom in Germany has passed its peak and the inclination of consumers towards buying is weakening. The consequences are obvious: Prices are coming under pressure and the creation of value is suffering across the board. This makes it all the more important for a company to offer customers an "added value" that can be used as a differentiation from their competitors. This is when natural casings come into play. The natural casing gives the product the sought-after hand-crafted appearance, promotes the development of the typical sausage flavor, gives sausages an appetizing "crisp bite" – and stands out as a natural raw material on the list of ingredients. But that's not all.

Information indicating the delicately fine casing are increasingly to be found prominently displayed on the packaging.

A "natural" tailor-made suit

There are around 1,800 different types of sausages offered on the German market – and for each of them the ideal natural casing is available. Surpassed only by sheep casings in Germany, hog casings are the most commonly used natural casings, and the number one worldwide. They are tender and firm; experts appreciate their "perfect resistance" to bite. Hog casings are available in calibers from 24/26 to 40/+ . They are the first choice when it comes to Bratwurst, Frankfurters, Bavarian sausages, Knackwurst, smoked dry sausages, Cabanossi and Landjäger.

One genuine specialty is the so-called "hog chitterlings". Their distinctive shape and their diameter of more than 70 mm at times make them real eye-catchers and give homemade liver sausage and blood sausage a striking appearance. Pork's bladders for example, are

perfect for "Presssack" (brawn); hog bungs are used for salami; the blind end or bung cap covers brawn in aspic jelly and Thuringian blood sausage.

Rounds are obtained from cattle only; they extend 35 to 40 m from the abomasum to the blind end and into the middles. As a rule of thumb, rounds can be filled with one kilogram of sausage meat per meter. Many sausages typical in Northern Germany including "Hamburger Gekochte", blood sausage, Grützwurst (Kaszanka) and Lyoner sausages are filled into rounds.

For cold cuts with large cut surfaces such as Jagdwurst, ham sausages, and Mortadella, beef bung is ideal. Fatends are suitable for salami, Katzenmettwurst and other types of dry sausages.

For many sausage connoisseurs, sheep casing is the "star" among the casings. It is the most delicate and thinnest natural casing. The slightly transparent casing allows the fine stuffing to be seen while the light color highlights the high quality.

But a sheep casing can do more: As all other natural casings, it offers the unparalleled "crisp bite", an attribute of good sausage quality for consumers according to surveys. This effect is extremely distinctive in sheep casings. And so it is not surprising that many top sellers among the sausages sold in Germany are filled into the tender sheep's intestine; above all the popular Nuremberg, Vienna and Frankfurter sausages.

Elaborate refinement process

Whether from hogs, cattle or sheep – all casings are prepared by the processors in elaborate refining processes for their later use in sausage production.

The processing of the natural casing starts immediately after slaughtering. All offal is removed; the small intestine is separated as quickly as possible and emptied mechanically using rollers. Proper cooling, for example in ice water, preserves the color and quality of the cleaned natural casings. They are then preserved and transported to the casing processing plants.

Here trained specialists free the small intestines from the mucous membrane and muscle layer. For example, the serous coat, the muscular coat and the mucous coat are mechanically removed from the sheep casing, so that only the thin and slightly transparent submucosa coat is left. This part is further processed – manually or with machines – for sausage production. In any case, the know-how of specialists is required in order to guarantee an optimal end result.

The specialists check the cleaned intestines – which have been put in salt for at least 30 days to kill the last microorganisms – for diameter, structure and quality. For this purpose, small-caliber natural casings such as the narrow hog casing and the sheep casing are filled with water, while hog chitterlings, cattle middles, bung caps and other large caliber natural casings are filled with air. In this way, trained specialists can inspect the casings and make sure that they are stable and undamaged.

Manual sorting only

During the subsequent sorting process, dexterity and good visual judgment are required. The aim is to get pieces that are as long as possible with the same characteristics. Making quick decisions is required at this step: Employees need to identify exactly where the caliber is changing and when a cut has to be made. As for the sheep

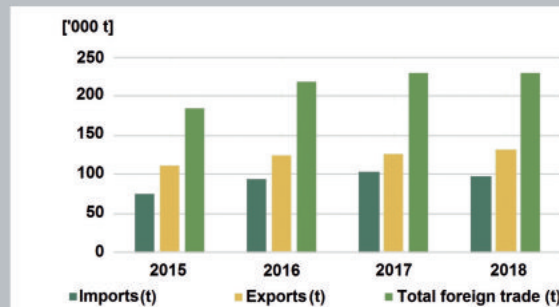
casing, its caliber varies between 14 and 30 mm. For sales, they are sorted to an accuracy of two millimeters – 14/16, 16/18, etc. The specialists also sort the casings according to quality groups. This is why calibration and sorting is exclusively carried out by hand. All casings with the same properties are then combined into 91-meter-hanks, marked with color-coded rings, preserved and packaged.

The most common preservation process involves the use of salt. As an alternative, natural casings can also be placed in saturated brine, packed and sent to the customers. In addition, the natural casing suppliers also offer ready-to-fill sheep and hog casings in bags or cans. They are kept in a solution that prevents dehydration and keeps them smooth. After a short rinse and bath in warm water they are ready to be filled.

For more efficient sausage production, tubed natural casings are used, which are also placed in a saline solution. The concentration of the solution varies depending on the desired shelf life. The casings stay softer and more elastic when kept in low concentration brine and they can almost immediately be processed. Casings kept in a higher concentrated saline solution have a longer shelf life.

In addition to the common calibers, many intermediate calibers are also available, which give

Volume

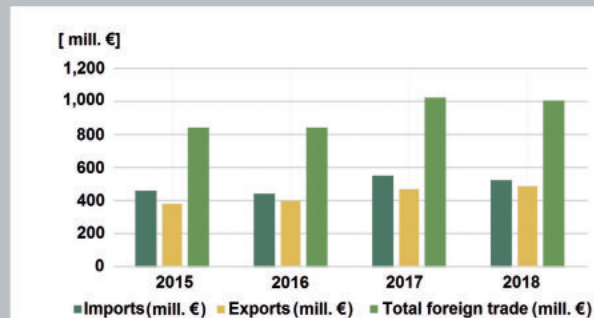


Source: Zentralverband Naturdarm

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Development of the German natural casings trade between 2015 and 2018 in t (including contract processing)

Value



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Development of the German natural casings trade between 2015 and 2018 in mill. € (including contract processing)

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Prevention: ASF in sausage casings

Article 15.1.23 of the OIE Terrestrial Animal Health Code describes the procedures for the inactivation of ASFV in casings from pigs. In these procedures the treatment of casings for at least 30 days with dry salt (NaCl) or with a saturated brine (made with NaCl, $a_w < 0.80$) at a temperature of 12 °C or above is described and considered effective for the inactivation of ASFV.

This procedure is based on the study done by WIERINGA et al. (2011), using a 3D collagen matrix model representing natural sausage casings. In order to add to this body of evidence, the International Natural Sausage Casings Association (INSCA) has

commissioned a new study on the inactivation of ASFV applying the afore-mentioned treatment. In this study live pigs were infected with ASFV and subsequent intestinal samples taken from these pigs were treated with NaCl at various temperatures over different time periods. Preliminary results from this 2018-2019 study confirm the existing results of the 2011 study and the procedure described in the OIE Code article. A full disclosure of the results of the recent study will be made later this year when the related scientific paper is published.

Christian Billon – Chairman of the Scientific Working Group of INSCA

each creation its individual look. The suppliers also score with special assortments such as “low vein” or “extra bright”.

The modern natural casing companies have adapted to the high demands of their customers and can serve almost any special requirement. This makes the “traditional natural casing” a sought-after, process-friendly raw material for artisan butcheries and the industry alike.

Close exchange with research and science

Natural casings are a natural resource. This is accompanied by

high demands on food safety with a special focus on microbiological analysis. For many years there has been a close exchange with authorities and scientific institutes. The industry sees itself as an active and competent partner when it comes to investigating and evaluating framework conditions that could have an influence on product safety. This made it possible in the 1990s to obtain reliable knowledge on the subject of BSE and after the turn of the millennium on foot-and-mouth disease and to implement appropriate measures.

The exchange with the science community is also an important

part of the work of the associations of the casings industry, which in Germany is the Zentralverband Naturdarm e.V. (Central Association of Natural Casings), on a European level the ENSCA (European Natural Sausage Casings Association) and globally the INSCA (International Natural Sausage Casings Association).

Currently, the global meat industry is predominantly focused on the issue of African swine fever. Here again, the associations have actively approached the authorities in order to verify the relevance for the casings trade and to quickly create clarity in the interests of all parties involved. Study results that are now available provide assurance to the industry.

The trade with natural casings is changing

When viewing the development of the membership figures of the German Association for Natural Casings it shows: Concentration does not stop at this industry either. Fewer and fewer companies generate a turnover that has remained largely stable over the years.

Companies are having to adapt to the changing framework conditions. Large enterprises are focusing on their direct access to the raw material and are attempting to combine all stages of the value chain under one roof.

Small businesses are benefitting from their flexibility and lean cost structure, while in the mid-range segment companies are combining the advantages of both models.

Many of today's casing companies were established as family businesses in the post-war period and are now managed by the second or third generations. Today the natural casings trade is a powerful branch of the modern food industry. What has remained is the familiar and trusting cooperation that characterizes cooperation in the Central Association of Natural Casings.

Germany is the global hub

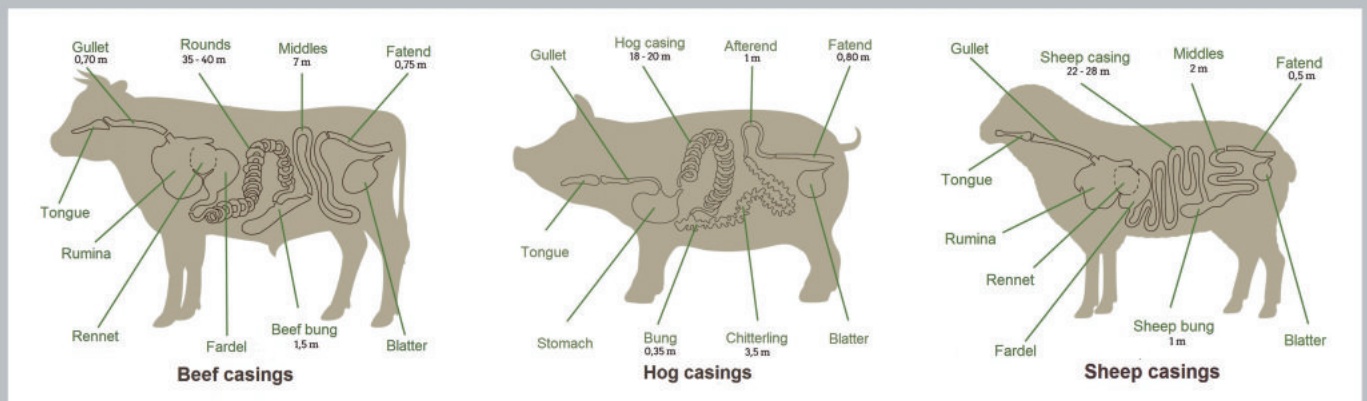
In the global marketplace, German natural casings companies play a decisive role. For 2018, the Central Association of Natural Casings in Germany reported a positive development and is confident about the future. Mega trends such as sustainability, naturalness, originality and the high consumer awareness to the “packaging issue” make natural casings particularly attractive as sausage casings.

In 2018, Germany was the most important hub for the international natural casing trade. Foreign trade turnover was almost stable at €1.006 bn. compared to €1.022 bn. in the previous year. The import share was 48%. A total of 229,182 t of natural casings were traded by German companies, 130,750 t of which were exported, 98,432 t were imported into Germany.

A summer's tale for sausage producers in Germany

In the super summer of 2018, customers displayed a large appetite for barbecuing for months on end, which put smiles on the faces of the German sausage producers.

Overview



Source: Zentralverband Naturdarm

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Overview of the different types of natural casings and their origins. Each type of casing has special characteristics which are advantageous for different types of sausage.

A raw material with personality

And despite the perceived hype about veggie products, Bratwurst remains the undisputed favorite on the BBQ grill from Kiel to Garmisch. This was also a source of joy for the casings producers – although with the small setback that, in view of optimistic forecasts for 2017, they had stocked up on goods, but sales then fell short of expectations. As a result, the import volume of 98,000 t was slightly below the level of the previous year, with a rising demand.

The European Union (EU) remains the most important supplier to the German natural casings trade, accounting for 55% of the total volume. Leading positions are held by the Netherlands with Rotterdam as the port of transit – through which a large part of the goods originating in China come – and Poland, which is important for contract processing.

Outside the EU, China leads the import statistics by a wide margin with 25,980 t – this result is also largely due to contract processing. In addition, goods of Chinese origin also come to Germany. The increase in slaughter weight in Chinese pig production can now be felt because smaller diameter hog casings are scarcer than in previous years. And this has consequences, because well-known national specialties made by German sausage producers such as Bockwurst and Weisswurst are made with this special casing. For beef casings, Brazil remains the most important trading partner of the German natural casings companies, while Iran – ahead of Turkey, Egypt and Lebanon – is the main supplier of oriental sheep casings. This includes, first and foremost, the particularly delicate natural sheep casing that gives the legendary “crisp bite” to Vienna, Frankfurter and Nuremburg sausages.

The Chinese love sausages “Made in Germany”

China and Germany have a close trade relationship when it comes to sausages and natural casings, which is also reflected in the export statistics. Of the 60,216 t exported to non-EU countries in the reporting period, 22,677 t were sent to China, which again is characterized by the finishing of the goods. In addition, there is also a growing enthusiasm among Chinese consumers for sausages “Made in Germany”:

Artisan products from Germany are held in high esteem among premium customers who are willing to pay the price for example, for the original “sausages in a jar” from a German producer, which are fast-moving items on Chinese supermarket shelves. The members of the Natural Sausage Casings Associations are right on the button of this huge market and are excited by the enormous future potential for their products.

EU market also benefits from the weather

The long and hot summer also fuelled the barbecue season throughout Europe and thus the export business of the German natural casing companies. In particular, sales to Italy and Spain picked up, despite the rather subdued overall economic situation in these markets. Natural casings traditionally have a particularly high significance for French consumers – the famous “Andouillette” is made exclusively from casings and the stomach. Passionate sausage fans can also be found in Switzerland, Austria – and above all in Eastern Europe.

Outside the EU, South Africa and Brazil, as well as China, have been reliable trading partners that have been showing a high level of demand for many years. Within the reporting period, South Africa was slightly below the previous year's volume, while Brazil grew significantly.

Natural casings trade cautiously optimistic

Across all markets, the German natural casings trade is cautiously optimistic about the overall situation. The demand for high-quality, artisan food is growing and buyers are prepared to pay a reasonable price for it. The Asian region in particular offers great opportunities for growth, with constant solid demand from traditional European and non-European markets.

2019 will show what effect the African swine fever has had on the market. In view of the high number of slaughtered animals in China, a shortage of goods cannot be ruled out in the long term.

Sustainability and added value have high scores

As a high-quality raw material, natural casings are more up-to-date than ever before. Naturalness and

sustainability are strong sales arguments today, especially for younger and more demanding customers. Natural casings are catering for this trend. Consumers consider the packaging material as very important, and in times of “no plastic”, natural sausage casings convincingly provide for a higher added value. The product of the members of the Natural Sausage Casings Associations is a raw material with personality – it places slightly higher demands on processing, but more than makes up for this in terms of added value.

The Association invests in an image campaign for sausages

Promoting the image of sausages has been the focus of the activities of the Natural Casings Association for many years. The “Save the Sausage's Cultural Heritage” campaign is also aimed at young consumers and focuses on the iconic character of the product. The Facebook page “Bock auf Knackwurst” (I am up for knackwurst) with almost

20,000 followers and the innovation award “Wurst hat Zukunft” (Sausages have a future) are just as much a part of this as is the website www.naturdarm.de, where professionals can find exciting insights and sausage lovers can for example, learn by watching the video “Wurst it yourself” how to make their own sausages.



Heike Molkenthin

has been working for the natural casings industry since 1973. She founded her company “Heike Molkenthin

Natural Casings” in 2004. In 2001 she was elected chairwoman of the Central Association for Natural Casings in Germany. The association currently has around 30 member companies that employ approximately 6,000 people in Germany and abroad. She was elected President of ENSCA for the second time in October 2019.

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