

Special publication

International trade journal for the meat industry

# fleisch

## magazin



**Franz Seibold**

Production manager

**Stefan Tönebö**

Master butcher

**Rudolf Platen**

Producer and pig farmer

**Christian Schiermann**

Auditor

**Maria Szeja**

Employee in food retail

## A strong partnership

From farm to shop, QS partners provide safe and high-quality food on a daily basis.



QS. Ihr Prüfsystem  
für Lebensmittel.

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***Quality assurance in practice - from farmer to food retail. Behind this is QS, recognisable by the QS certification mark.***

"Safety through controlling. Strongly based on trust" - our motto is firmly anchored in the QS scheme: All participants along the value chain work hand in hand, everybody can rely on one another - from farm to shop. Control, reliability and information are the cornerstones of a trusting cooperation, thereby documentation and transparency are indispensable.

Our more than 100,000 scheme participants from the international meat sector advocate for the production of high-quality and safe food with their daily work. In this special edition of the FleischMagazin we introduce you to five committed people working with a high level of responsibility. Because it is important to produce, process and market food according to clearly defined quality requirements. From food retail through meat processing and livestock farming to the consistent control by independent certification bodies.

*We wish you interesting insights into the daily quality assurance*

*Dr. Hermann-Josef Nienhoff and the entire QS team*

# Safe foods from farm to shop

QS has been ensuring food safety since 2001. Within the QS scheme, our scheme participants

## Food retail

Quality assurance creates customer trust

- Temperature monitoring
- Staff hygiene
- Stock control
- Storage
- Traceability
- Staff training

## Meat processing

Ensuring quality and provenance

- Temperature monitoring
- Hygiene
- Product separation
- Traceability
- Foreign matter management
- Risk analysis
- Incident and crisis management



*"Extensive controls are a must - consistently. That's what the QS certification mark stands for."*

**Maria Szeja**  
Employee in food retail

*"I know exactly what my sausages are made of! I can fully rely on my suppliers and buyers - just as they can on me."*

**Stefan Tönebön**  
Master butcher

produce, process and market safe foods in line with clearly defined criteria.

## Slaughtering/Deboning

Focussing on animal welfare and hygiene

- Accomodation of the livestock
- Slaughter process
- Assessment of the livestock and carcasses
- Slaughter of young boars
- Salmonella monitoring
- Hygiene
- Origin of goods

## Livestock farming

Animal health as the basis for safe food

- Feed
- Humane livestock production
- Hygiene
- Veterinary herd care
- Antibiotics monitoring
- Salmonella monitoring
- Crisis management

## Certification

Working for safe food

- Qualified auditors
- Audit procedure
- Internal monitoring system
- Crisis management



*"In production it must be worked 100 percent cleanly. Because in the end, it is the quality that counts."*

**Franz Seibold**  
Production manager

*"Safe food is only produced from healthy animals."*

**Rudolf Platen**  
Producer and pig farmer

*"To ensure our food can be traded and consumed carefree, its path along the supply chain has to be accompanied and checked precisely."*

**Christian Schiermann**  
Auditor

h-Kräuter-Braten  
1 kg



Maria Szeja is Germany's best Retail Trainee 2016/17 and a QS quality ambassador.

## The QS scheme in the meat industry



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Food retail



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Part 1

# The QS scheme: Quality assurance creates customer trust



Groceries that consumers trust, are the ticket into the market for producers of meat and meat products. Nowadays customers consider it almost always a matter of course that they will be able to buy high quality, safe and trustworthy products in food retail outlets. In the QS scheme, economic operators have teamed up to meet consumer wishes with a complete and consistent system of quality assurance for meat and meat products. For this, the entire value chain is represented from livestock farming and animal feeding via slaughtering and deboning right through to the food retail sector. Products only carry the QS certification mark – a symbol for buying safe food – if all those involved in the production and marketing process meet the strict requirements of the QS scheme. These foods have a carefully documented and monitored life cycle.

Who makes sure that the food is produced, processed and marketed according to clearly defined quality requirements? To openly and transparently communicate the measures and efforts of the entire value chain is a particular challenge.

In this special publication we will be introducing people from the chain. QS quality ambassadors, the “faces of quality assurance”, will give insight into their work, tell of their motivation and their professional ethos. In the first part of our series, food retail employee and QS Ambassador Maria Szeja explains how the trade benefits from the QS scheme and what the quality assurance of meats and sausage products looks like on the sales floor and in the warehouse.

# The QS scheme in food retail

The temperature of all refrigeration and deep-freeze units is registered and documented several times a day. Sales and storage rooms must be designed in such a way that the refrigeration units comply with the temperature requirements even on hot summer days (table on temperature set point values). The correct stacking height for products in the fridges and freezers, along with regular care and maintenance reduce over-icing in the chillers and help to achieve compliance with temperature requirements.

## THE AUDIT CRITERIA IN DETAIL

### TEMPERATURE MONITORING

The temperature of all refrigeration and deep-freeze units is registered and documented several times a day. Sales and storage rooms must be designed in such a way that the refrigeration units comply with the temperature requirements even on hot summer days (table on temperature set point values). The correct stacking height for products in the fridges and freezers, along with regular care and maintenance reduce over-icing in the chillers and help to achieve compliance with temperature requirements.



### Profile Maria Szeja

Maria Szeja is Germany's best Retail Trainee 2016/17 and a QS quality ambassador. After the 20-year-old spent some time working as a temp in a REWE store in Berlin alongside her studies, she decided to change career and go into food retail in 2015. „Quality assurance is top priority here,” says Maria. “in the supermarket, we are essentially responsible - as the last link in

the food value chain - that consumers only get fresh, safe and high-quality goods. This is why quality assurance measures are an integral part of every-day working life in food retail.”

*Maria: “Checking the test equipment is essential for reliable monitoring of temperatures. All devices and machinery used as test equipment, such as thermometers, need to function properly. To do this, they need to be calibrated correctly at regular intervals. For this, the devices are reset after comparing measurements with readings on calibrated thermometers.”*

## Temperature setpoints for meat, meat products and meat preparations

Products		Measuring point (L,P) <sup>1</sup>	Maximum temperature [°C]	Minimum temperature [°C]
Meat, fresh (except poultry), meat products		P	+7	-2
By-products of slaughter, fresh (also minced)		P	+4	-2
Minced meat/ground meat, meat preparations, bulk or self packed	- for immediate issue	L	+7	-2
	- issue on the day of manufacture or 24-hour issue with special documentation	L	+4	-2
		P	+7	-2
Minced meat		P	+2	-2
Meat preparation produced on site (for direct issue)		P	+7	-2
Poultry (incl. poultry offal)		P	+4	-2

<sup>1</sup> The storage temperature (L) is the highest temperature for cooled food up to the time. The product temperature (P) is the highest temperature for cooled food at any point.

## Current QS scheme participants in food retail

Status as of January 2017



### Compact

#### Quality assurance at the deli counter

- **Incoming goods inspection:** Amongst other things, the temperature of meat and meat products is checked and the result documented.
- **Product labelling:** Staff must ensure that there is a clear reference between the delivery bill and QS products.
- **Hygiene:** It must be ensured that all equipment and premises are in a hygienic clean condition.
- **“Best before” and “Use by” dates:** the internal guidelines for dealing with packaged goods, which are nearing the end of their best before or use by date must be borne in mind.
- **Separation of QS and non-QS products:** QS and non-QS products must always be stored separately in the stock room and on the sales area.
- **Storage:** Meat and sausage products must be stored in appropriate containers, so that the typical characteristics such as smell, taste, colour, and moisture are preserved.
- **Temperature checks and documentation:** Regular checks and documentation ensure that the required product temperatures are permanently complied with. All deep freeze and refrigeration units in sales areas and warehouses must be included in this process. Direct temperature measurements of products provide additional results.
- **Interruption of the cold chain:** each member of staff must be informed of the necessary measures in case of failure of the refrigeration equipment in the store.
- **Hygiene requirements:** Cleaning utensils (buckets, brushes, cloths) must be cleaned regularly. Wearing visible jewellery such as rings, piercings, watches, nail varnish or artificial nails is not permitted for counter staff or the persons concerned must wear gloves when handling open food.

### STAFF HYGIENE

When dealing with fresh food, hygiene is the be-all and end-all. Taking care to wash hands regularly before starting work, processing sensitive products or making a sale is just as important as a well-groomed appearance. Staff working behind the service counter should avoid long, lacquered or artificial fingernails. It is self-evident that staff in food retail outlets should wear clean work-wear.

### STOCK CONTROL

As part of incoming goods, checks are made to ensure that all criteria relevant to food safety are met. These checks are accurately recorded and documented. This means that any possible danger to the consumer through non-compliant foodstuff is already avoided as part of the receipt of goods process. Relevant points can be: maintaining refrigeration temperatures, best before and use by dates on packaging; marking or labelling, state of transport vehicle (hygienic conditions of truck, crew, transport containers etc.); accompanying documentation for the goods (proof of origin as part of traceability) and so on. As part of the incoming goods process, food retail staff conduct random checks (especially for pest infestation, contamination and damage to outer packaging). Defective goods are combed out or returned.

*Maria: “We also regularly check best before and use by dates - we use the principle of ‘first in, first out.’ In other words, we make sure that the products produced first are used or sold first.”*



## STORAGE

The containers and boxes in which meat is stored, need a segregated space in the refrigerator and must not be placed directly on the floor. As a general rule: ground clearance is required. Fresh meat and meat products must be stored at a temperature of -2 to a maximum of +7°C. The exception here is fresh poultry meat, which has a storage temperature of -2 to a maximum of +4°C. The staff in food retail outlets check and document the storage temperatures several times every day.

## TRACEABILITY

To ensure traceability, a transparent labelling and registration system comprehensible for third parties must be followed which - in addition to European and national legislation, also complies with the QS scheme requirements. This means that at any time clear identification of QS goods along with traceability and plausibility in the product flows has to be guaranteed. The labelling and registration system has to be tested at least once a year (approximately every 12 months) with all relevant product flows taken into account. It is also important to ensure that the suppliers' eligibility to deliver QS products is checked. Accordingly, at the time of transfer of goods, all companies supplying QS products, must be clearly identified as QS-authorized scheme participants.

## STAFF TRAINING

As the last link in the value chain, food retail is the direct interface to the consumer. Store staff therefore also carry the responsibility vis-a-vis the consumer of being able to provide information about the QS quality scheme for food. The respective employees in food retail therefore receive regular training from colleagues from the QS headquarters.

**Maria:** "We obtain assistance and information for our training sessions in the stores from the QS knowledge portal. With the presentations, information posters and employee information it provides, we are very well informed and can provide competent advice at the Point of Sale."

Also, staff are informed with regard to the hygienic characteristics of their workplace in terms of in-house measures and checks. In accordance with the requirements of the QS scheme, all employees working with unpackaged foods participate

## Maria's tips on hygiene in food retail

- Properly store cleaning and disinfection agents and used them according to the dosing instructions.
- Regularly clean and exchange buckets, scrubbing brushes, floor cloths and mops.
- Don't forget regular hand washing. The same applies when wearing work gloves.
- Remove or cover visible jewellery such as watches, rings, piercings or earrings.
- Don't wear nail varnish or artificial nails, or use disposable gloves instead.



in hygiene training and a course of instruction in accordance with the German Infection Protection Act at least once a year.

## WHOLESALE, BROKERS AND WAREHOUSING COMPANIES ARE INTEGRATED INTO THE QS SCHEME

Due to the cross-stage quality assurance, the principle applies within the QS scheme that each owner of QS products and any company which can have an influence on the food safety of QS products through its processes, must have its own QS approval. Therefore, not only individual branches of the food retail and meat wholesale plants are part of the QS scheme, but brokers too, who do not have any physical contact with QS products, but share responsibility for them. As part of their trading activity they make an important contribution in the value chain and ensure food safety across the entire supply chain.

Currently, 140 wholesale companies (including brokers), as well as 172 food retail outlets are participating in the QS scheme. Since the beginning of 2017 and against this backdrop, companies for the warehousing of meat and meat products are also being integrated into the QS scheme with an own guideline. Through these novelties, transparency within the QS scheme will be increased and quality assurance across the supply chain will be optimised. QS certified food retailers, meat wholesalers, brokers and warehousing companies all stand for safe, high-quality meat and meat products reaching food retail outlets and being offered for sale to customers. ■

## The QS scheme in the meat industry



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# Meat processing

## Ensuring quality and provenance



The range of meat and sausage products is ever increasing. The latest trend: convenience products. They meet the needs of the speed of everyday life, the demand increases constantly. More than ever before, the constantly growing, multifaceted meat market is calling for a reliable system of monitoring along the entire supply chain to ensure food quality and safety. For this, QS can make a decisive contribution. Master butcher Stefan Tönebön has been a QS scheme participant since 2003 and reports in the second part of our series about the areas of focus of QS at this stage and the benefits they yield.

# QS in meat processing

Companies that process meat within the QS scheme, source their raw material from abattoirs and deboning plants that are also QS certified. The meat and meat products are produced and marketed according to QS requirements. Alongside classic meat and sausage produce, convenience products are also part of the range of goods bearing the QS certification mark. The 457 processing and butchering companies operating in the QS scheme guarantee by participating that they meet the requirements stipulated by QS. They thus contribute considerably toward safe meat products being available as an extensive range in the shops all bearing the QS certification mark. Special emphasis in the QS requirements for meat processing is placed on traceability, performing risk analyses, maintaining the cold chain and hygiene compliance. Attention is also paid to the correct separation of QS and non-QS products. This ensures the safety of the food on all levels across the supply chain.

**I** To expand the availability of goods, QS is working in a targeted manner to further increase the number of scheme participants. Moreover, QS is actively developing cooperation with other standard owners in Europe. Amongst others, bilateral agreements exist with standard owners in Belgium, the Netherlands, Denmark, Ireland and Austria.

## THE AUDIT CRITERIA IN DETAIL

### TEMPERATURE MONITORING

When processing raw meat, precise adherence to specified temperature requirements is the be-all and end-all. The refrigeration and deep-freeze units need to cool the meat in accordance with the specified temperatures. Different storage temperatures apply depending on the animal species and product. To ensure the functioning of the equipment and the compliance with temperature specifications, cold stores must be checked and measuring devices, such as thermometers, must be checked and calibrated regularly.

In other processing steps, such as warming or heating, there are temperature and time guidelines that



### Profile Stefan Tönebön

Stefan Tönebön is master butcher with a passion. After commercial training and his butcher's apprenticeship, he studied at a technical college for the butchery trade where he successfully passed as a master butcher. Today he is the owner of the innovative family business „Fleischerei Tönebön“ (Tönebön the Butchers) in Barntrop. The 50-year-old is able to look back on 34 years of professional experience

and as a forward-looking entrepreneur was one of the first QS scheme participants: „Being a QS scheme participant means much more to me than it just being a good sales argument. With the support of a good consultant, a look at your own business from the outside can be a real asset. Working with QS has broadened my horizons.“

must be observed in any case. Only through correct and sufficient heating are unwanted germs killed and an appropriate consistency of sausage products are achieved.

### HYGIENE

To ensure high levels of product and process hygiene, samples of raw materials and finished products are carefully examined in laboratories. However, it is not possible to guarantee compliance with the product and process hygiene requirements without adequate levels of staff hygiene. So, it is especially important that all staff who come into contact with the meat, comply with the staff hygiene rules. This is ensured via separation of the dressing rooms into black and white areas.

Outdoor clothing is removed and left in the black area and then staff change into their clean workwear in the white area. Moreover, hair nets must be worn and shoe soles and hands must be washed and disinfected. Depending on the production area, for example in high-security sections such as a slicer room, disposable gloves, gauntlets or face masks may also be used.

**Stefan Tönebön:** *“How does my company differ compared to a non-QS operation? We have clear structures and only source our pigs from QS certified farmers. Traceability and product separation are everyday practices for us. As well as all this we have internal and external audits.”*



### PRODUCT SEPARATION

For processing operations and butchers it is important to make sure that only QS meat is used in QS products. To guarantee this, it is important to ensure that QS produce is strictly separated from non-QS goods. For this, the raw materials delivered are already clearly labelled as QS products. Only if the QS codes on the delivery note matches the product labelling and the supplier is eligible to deliver into the QS scheme, can the products delivered be processed and marketed as QS produce.

### TRACEABILITY

A traceability system must ensure that the suppliers and buyers of a product can also be identified by tracing back along the supply chain. In the case

of food product recalls, for example, the responsible links in the chain can thus be identified quickly. At the same time, the risk for the individual company is limited.

Companies have to ultimately be able to prove to QS auditors which raw materials were delivered by which suppliers, which products were manufactured from those raw materials and to whom these products were eventually delivered.

*Stefan Töneböen: "I document everything and know exactly what is in each sausage. "Because of the cross-stage quality assurance in the QS scheme, I can fully rely on my suppliers - just as they can on me."*

### QS and VLOG avoid duplicate auditing

QS scheme participants can also have the requirements of the "No Genetic Engineering" standards of the Association for Food without Genetic Engineering (VLOG - Verband Lebensmittel ohne Gentechnik e.V.) checked as part of a QS audit. QS (Qualität und Sicherheit GmbH) and VLOG have jointly developed the "VLOG add-on module". The costs and efforts of duplicate auditing are therefore avoided. Passing a QS audit together with a successful audit of Chapter I - VLOG-Additional Module "Ohne Gentechnik" is equivalent to passing a VLOG

### FOREIGN MATTER MANAGEMENT

Effective foreign matter management is also important to ensure a high level of safety in the production of meat and sausage products. This also includes the avoidance of rodents. All QS processing plants must therefore pass the production areas as safe on a daily basis and take precautions to avoid foreign bodies and pests. As part of a comprehensive self-assessment system, companies determine and evaluate possible sources of contamination and then determine appropriate precautionary measures.

## RISK ANALYSIS

In addition, every company is required to conduct a risk analysis of its in-house production and to identify those points in standard operating procedure that are particularly critical for food safety. These so-called critical control points (CCPs) must be checked regularly using control measurements. If CCPs are not under control, predetermined, appropriate countermeasures must be taken to bring them back under control and to ensure compliance with the requirements again.

**Stefan Tönebön:** *“In manufacturing, established procedures and the constant monitoring thereof guarantee the highest possible level of safety. What helps us here is the HACCP concept that has been tailored to the company and which is checked annually both internally and as part of the QS audit.”*

## INCIDENT AND CRISIS MANAGEMENT

Crisis management means not only avoiding damage to one's own company but also protecting all companies involved in the supply chain. Quality management is the best form of crisis prevention here. Nevertheless, incidents can still happen. In the case of complaints concerning manufactured foodstuffs, it is important to be able to react quickly and appropriately to the situation. This means, exact procedures must be determined in advance for any situations or scenarios that could possibly occur. In any such case, the QS office must be informed. The QS crisis team examine the facts and provide guidance to the scheme participants concerned.



Brains and spinal cord from cattle and spinal cord from pigs are not permitted to be marketed or processed within the QS scheme. The same is true for MSM (mechanically separated meat).

## MORE AND MORE CONVENIENCE WITH QS CERTIFICATION

Convenience products are also available with the QS certification mark. The labelling of these products with the QS certification mark is clearly regulated and supports those companies that want to demonstrate their commitment to safer food with the QS certification mark. In the great and varied range of convenience products, the QS certification mark is a visible indication of quality and increases consumer acceptance of the products.



In accordance with the requirements of the QS scheme, all chunky ingredients from fruits, vegetables or potatoes used in composite convenience products, which account for at least 10 percent of the recipe and fall under the scope of the Guideline “Preparation/Processing Fruit, Vegetables, Potatoes”, are required to be QS products. Products where the name emphasises a fruit, vegetable or potato ingredient such as “paprika pate” must also be made of QS products. The Guideline Preparation/Processing Fruit, Vegetables, Potatoes can be read and downloaded in the document center on the QS website. Moreover, the principle still applies: all meat and meat products used, for which requirements are defined in the QS scheme, must originate 100 percent from QS certified companies.

**Stefan Tönebön:** *“The consumer is completely clear as to which ingredients comply with the QS requirements. This creates trust.”*



## The QS scheme in the meat industry



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# Slaughtering and deboning

## Focussing on animal welfare and hygiene

Slaughtering and deboning have a decisive influence on the quality and safety of the meat. Treating animal livestock responsibly both before and during slaughtering is essential in relation to animal welfare, as well as in ensuring the highest possible product quality. Deboning plants are careful to ensure that the strictest hygiene requirements are met. To achieve this, they receive active support from QS. The company in which master butcher and meat technician Franz Seibold works, has been a QS scheme participant for years – out of conviction. In the third part of our series he tells how he benefits in his everyday work from QS requirements.

# QS in slaughtering and deboning

Within the QS scheme, slaughterhouses are the interface with agriculture. They are equally concerned with food safety and animal welfare. In particular, the treatment of livestock during transport, as well as before and during slaughter must meet animal welfare standards. Key factors for the welfare of the animals are the design of the waiting area and stunning chute. In addition, slaughterhouses contribute to the quality assurance of foodstuffs by conducting salmonella monitoring as part of the QS scheme.

## THE AUDIT CRITERIA IN DETAIL

### ACCOMMODATION OF THE LIVESTOCK

If the animals are not due to be slaughtered immediately after delivery, they must be accommodated appropriately - for example in holding pens. For these, requirements similar to the ones for animal sheds of livestock producers apply. It is important that sufficient space is available for the animals. Also, a sufficient number of watering troughs must be available in each holding pen. In addition, sprinkler systems offer a way of cooling and calming especially in summer.

### THE SLAUGHTER PROCESS

Slaughtering is defined as causing the death through blood withdrawal. It is important to stun the animal before it is exsanguinated. Only when it



### Profile Franz Seibold

Franz Seibold seems to have been born with a passion for meat. Growing up on a pig farm with its own sausage making operation, the now 35-year-old quickly realised that he wanted to gain a foothold in this industry. He trained as a butcher and then went into further education as a meat processing technician. Today, Franz Seibold is head of sausage production at a meat processing plant

in Heilbronn. The avid barbecue fan is convinced about QS: „QS certification proves that all processes involved are monitored by independent bodies. Both consumers and businesses can therefore depend on the quality and safety of the food - from farm to shop.“

is in a continuing state of complete unconsciousness, can the animal be slaughtered. Slaughterhouses are required to monitor the success of the stunning process on a significant proportion of the animals immediately after stunning, as well as before and during exsanguination. If one of the animals still exhibits signs of consciousness after stunning, it must be re-stunned in any case. As most of the stunning methods used are reversible - i.e. the animals can wake up again after a certain time- it is important that exsanguination takes place as quickly as possible after stunning. For this, certain periods have been defined, which must in any case be observed and may not be exceeded. Further work on the carcass, such as the removal of limbs or opening of the abdominal cavity, may only be carried out if the animal has bled out completely. ▶

## Maximum duration between stunning and exsanguination cut

Stun type	Seconds
<b>Bolt</b>	
■ Cattle	60
■ Other animals or other position	20
<b>Eletro-stun warm blooded animals</b>	10 (lying) 20 (hanging)
<b>Carbonic acid gas</b>	20 (after leaving chamber) 30 (after last stay in CO2 atmosphere)



QS requires that an animal protection officer be appointed in each slaughterhouse. The said person will ensure that there is compliance within the company with all animal welfare requirements.

**Franz Seibold:** "Depending on the stunning method used, the maximum time between stunning and exsanguination is 10 to 60 seconds. The observance of these time-scales is precisely checked as part of QS audits."

## ASSESSMENT OF THE LIVESTOCK AND CARCASSES

When unloading or in the holding pens all animals are examined by a veterinarian. Should some animal exhibit abnormalities, it will promptly be killed or placed in a separate area and killed after appropriate care at the end of slaughtering.

Each carcass is examined within the framework of an official ante-mortem or post-mortem inspection by an official veterinarian or an assistant. In addition to external abnormalities (e.g. inflamed joints or skin lesions) this also takes into account if there are changes in internal organs. Only when the official staff have declared the carcass fit for human consumption, is the meat sent for processing as food.

## Facts about the QS-recording of diagnostic data

- To date, **over 70 million pieces of diagnostic data** have been collected since 2015
- Diagnostic data is available for **more than 85 percent of all animals slaughtered** in Germany.

### Recording of diagnostic data

Abnormalities on the live animal or the carcass are documented. The farmer is informed on which of his animals the respective findings were observed.

Recording the diagnostic data and especially the feedback of the findings to the farmer are an important tool, from which the farmer can derive possible need for action within his operation. Through analysis of the diagnostic data abnormalities such as a sudden increase in the frequency of a specific finding may be discovered and appropriate measures initiated if necessary.



**Franz Seibold:** "The diagnostic data is an important indicator of animal health and animal welfare. It's clear that I'll forward this data to QS."

## THE SLAUGHTER OF YOUNG BOARS

QS certified slaughterhouses have committed to separate out any carcasses with the striking odour of boar taint during the slaughter of young boar. Experienced, odour-sensitive staff check every carcass on the slaughter line for odour deviation.

## SALMONELLA MONITORING

In 2003, the QS salmonella monitoring programme was started with the aim of minimising the risk of salmonella entering the meat production chain through infected or contaminated fattening pigs. For this purpose, the slaughterhouses take samples from slaughtered animals supplied by QS certified farmers. Here, the number of samples to be taken depends on the number of animals delivered annually. The samples are tested as part of a fast track



procedure by QS approved laboratories. The farmers are divided, depending on the proportion of positive results, into one of three salmonella categories (Category I, II or III).

The slaughter often takes place in a specific order. This means that the salmonella categories can be considered so that pigs with the lowest risk level are slaughtered first. This means the risk of transferring salmonella between individual herds as well as between individual animals is minimized. Besides samples for the fast track procedure, more random samples have to be taken from the carcasses, which are then checked for salmonella in a conventional procedure. The results are collected by the slaughterhouse as part of its self-assessment.

**Franz Seibold:** "If a farmer doesn't meet his required number of samples and cannot therefore be categorised, he loses his authority to deliver into the QS scheme."

## HYGIENE

In addition to the slaughter of the animals by salmonella category, the slaughterhouse has to keep other things in mind to prevent salmonella and other germs from spreading. Knives used for deboning must be cleaned at regular intervals, to avoid spreading germs. Annual training is used to communicate the safe use of equipment and tools, as well as the proper cleaning thereof to employees. Also, the employees are trained in the safe production of food. This includes, for example, the correct use of a hygiene sluice.

**Franz Seibold:** "It is particularly important that my staff and I regularly wash and disinfect our hands. Shoe soles, cut protection and other work-wear are all cleaned in the hygiene sluice station."

## ORIGIN OF GOODS

In the case of unprocessed pork that is packaged and sold to customers in the retail outlets, the origin of the animal must be stated on labelling. Therefore, abattoirs and deboning companies are bound to strictly separate animals of varying origin according to their source countries. On incoming delivery of

the animals, the origin is precisely noted in the accompanying documents, so that the animals can be housed and slaughtered separately and not mixed in a single batch.

## KEEPING ANIMAL WELFARE IN MIND DURING TRANSPORT TOO

As part of a closed chain system, it is logical that the transport companies responsible for moving the cattle, pigs or poultry within the QS scheme, also have QS certification. The transport of animals is closely linked to slaughtering and deboning. The well-being of animals during transport has tremendous impact on the quality of the meat. Therefore, strict requirements are placed on the transport of live animals. These include:

- ▶ Evidence of appropriate expertise in transporting animals
- ▶ Permanent access of the animals to safe drinking water in sufficient quantity for shipments with a duration of over 8 hours
- ▶ Compliance with feeding and drinking terms
- ▶ Breaks at livestock collection points in case of longer transport time

On delivery of the animals to the slaughterhouse, checks are conducted as to whether the livestock producer and the transport company have a valid QS certificate. In QS-audits the handling of the livestock is checked. ■



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Part 4

# Livestock farming

## Animal health as the basis for safe food



For farmers who keep pigs, cattle or poultry, healthy and lively animals are their greatest asset. Only through scrupulous care, hygienic animal husbandry and needs-based feeding, abattoirs are able to rely on the delivery of healthy animals for slaughter. Careful transport of the animals is of course also of the highest priority. Only in this way is it possible to create the basis for safe food, as expected by the consumer. QS supports farmers in this through clear guidelines. In the fourth part of our series, pig farmer Rudolf Platen provides insight into his work and the daily implementation of QS requirements.

# QS in livestock farming

Over 75,000 farmers participate in the QS scheme along with their cattle, pigs or poultry farms - around 17,000 of these are located outside of Germany. All the steps - from sourcing feed through to loading the animals for slaughter are carefully monitored and documented by the livestock producers. In regular independent inspections, compliance with QS requirements is checked by qualified auditors. Particular emphasis is placed here on animal welfare-friendly farming conditions, animal care and animal health, shed hygiene and traceability.

## THE AUDIT CRITERIA IN DETAIL

### FEED

Quality assurance in livestock production starts with the careful selection of feed. High-quality animal feeds are the basis for good livestock nutrition. A consistent monitoring of feed is therefore of central importance - no matter whether the feed is produced and manufactured by the livestock farmers themselves or obtained directly from QS approved suppliers, feed manufacturers or via feed merchants. As part of QS feed monitoring, our own quality assurance system, is also monitored by analysing feed samples for compliance with limit and guideline values, for example for mycotoxins, dioxins, pesticides and heavy metals. This is true both for producers of simple and compound feed and farmers producing their own animal feed.

**I** For meat, livestock and feed there are three comprehensive monitoring programmes as part of the QS scheme: these are the antibiotics, salmonella and feed monitoring programmes. The systematic collection and analysis of data from the monitoring programmes helps the early identification and evaluation of possible risks to food and feed safety.

**Rudolf Platen:** "A high standard of hygiene in the sheds and similar husbandry conditions are essential. This is the only way animals and humans can stay healthy in the long term."



### Profile Rudolf Platen

Rudolf Platen is not just a farmer - he is an enthusiastic pig farmer. His bright, modern pigsty on the Lower Rhine provides space for 2,500 pigs. In addition to pig fattening, Platen also grows mainly wheat, barley, edible peas and bush beans on 70 hectares of arable land. The grain is milled on his farm and fed fresh to the animals.

From QS scheme partner to QS quality ambassador - the transparency in the QS scheme has convinced Rudolf Platen: „With the help of documentation I can show that I work well. Apart from that, traceability throughout the entire chain also provides security for the consumer.“

### HUMANE LIVESTOCK PRODUCTION

A good climate in the shed is decisive for the welfare of animals. Lighting, ventilation and utilities are therefore checked daily. Lighting intensity and duration must be adapted to the specific needs of each livestock species.

**Rudolf Platen:** "My livestock should feel well looked-after the whole time - 24 hours a day. To ensure this, I check the temperature, lighting and feed daily and I use a centralised computer control."





Pig farmers allow their animals access to adjustable manipulable material at all times. For this purpose, for example, wood or hard rubber, straw or roughage can be used, which the pig can investigate and move - thus encouraging its natural exploratory behaviour. The welfare of the livestock is regularly monitored by those responsible for the feeding and care. If abnormalities are observed during the rounds in livestock accommodation, precautions to protect the health of the animals are taken immediately.

**Rudolf Platen:** *"Pigs are particularly sensitive animals. If they don't feel completely well cared for, this will influence the quality of the meat later."*

### HYGIENE

In livestock farming, good operational and shed hygiene is paramount to delivering safe and high-quality food to the market. Clean work clothes, proper waste disposal and effective pest control are a matter of course for Rudolf Platen. Even external visitors are equipped with suitable protective clothing before entering the livestock areas. Between animals

being moved out and restocking, the vacated shed, including all fittings and equipment is properly cleaned and disinfected.

### VETERINARY HERD CARE

To ensure that the animals are and stay healthy, regular veterinary livestock visits take place. The health of the individual animal and the herd as a whole is thoroughly monitored so that early intervention is possible if needed. If abnormalities become evident among the livestock, a customised animal health plan is produced for the operation. All preventive and curative measures are documented by the veterinarian.

### ANTIBIOTICS MONITORING

Veterinarians also deposit all relevant data in the antibiotics database if antibiotics are prescribed and used to treat veal calves, pigs and poultry. The QS antibiotics monitoring programme was called into being to optimise the use of antibiotics in livestock production and thus reduce the risk of antibiotic resistance developing in the long term. Only nationwide collection and analysis of data can help reduce risks posed by resistant germs.

**The therapy index** indicates how many units of treatment have been administered per animal. It is calculated from the application period (no of days used), number of active ingredients and number of animals treated in relation to the total number of animal livestock.

**Since 2011** it has been possible to reduce the amount of antibiotics used in livestock farming by 53%. For groups of active ingredients with particular relevance to human medicine (so-called critical antibiotics) a clear downward trend has been observed for poultry and pig farmers in the QS scheme. Last updated: January 2017

**Rudolf Platen:** "With the aid of the therapy index I can compare my individual use of antibiotics with the average of all farms in the QS scheme."

### SALMONELLA MONITORING

The QS salmonella monitoring programme aims to identify and eliminate potential sources of salmonella contamination on livestock rearing farms. In the case of fattening pigs, meat juice samples, taken at the slaughterhouse are tested for salmonella antibodies. In addition, veterinarians can also take blood samples at pig farms and check the livestock for salmonella. In poultry farming, all flocks are tested for salmonella before they are delivered to the slaughterhouse.

Read more about the QS salmonella monitoring programme on page 16.

### CRISIS MANAGEMENT

In the case of unforeseen failure of important technical equipment, such as heating, ventilation and feeding systems, or if the manager is suddenly taken ill, a so-called emergency plan comes into effect. The emergency plan is a special feature of event and crisis management at an agricultural level: it ensures that the animals are always properly looked after. Amongst other things, contact details of the farm vet, technicians and advisers, or family members are listed here, all of whom are familiar with the circumstances of the operation and can be contacted in case of emergency.

## PHASING OUT PIGLET CASTRATION WITHOUT ANAESTHESIA - A CHALLENGE FOR THE ENTIRE INDUSTRY

As of January 1, 2019, the ban on the castration of piglets without anaesthesia comes into force in Germany. However, it continues to apply that all alternatives and procedures which are in accordance with the German Animal Welfare Act, can be used, i.e. surgical castration with anaesthetics, entire male production or entire male production with vaccination (immunocastration). In the QS scheme, the requirements apply for all pig producers, i.e. also for fattening animals or their meat, which is produced abroad and delivered into the QS scheme and marketed through the recognition of other standards.



The entire economic chain is affected by the phasing out of piglet castrating without anaesthesia. All alternative methods currently still harbour major challenges because various aspects have yet to be reconciled, such as consumer acceptance, management effort in husbandry and care, detection of boar taint, job security and quality of meat. QS is chairing the coordination platform "Renouncing Piglet Castration without Anaesthesia" in order to quickly find and implement workable solutions. Amongst other things, the platform brings responsible parties involved in pig production, the meat industry and the food retail sector to the same table. Numerous scientists, vets, the German animal welfare association Deutscher Tierschutzbund and ministerial representatives are also actively involved. This is the only way of achieving a concerted approach, which offers an economically viable way out of the surgical castration of piglets without anaesthetic.

## The QS scheme in the meat industry



Part 1  
Food retail



Part 2  
QS in meat processing



Part 3  
QS in slaughtering and deboning



Part 4  
QS in livestock farming



Part 5  
QS certification



# Certified from farm to shop

## Working for safe food



The level of consumer sensitivity related to the production and sale of food is high. Food safety is therefore of the utmost priority. The food retail sector requires certification of its suppliers as a matter of course. So that our food can be safely traded and consumed, its route from production all the way to food retail outlets must be closely monitored and verified. Certification bodies and their auditors are required as part of this process.

# QS certification

QS approved certification bodies and auditors contribute significantly to the functionality and credibility of the QS scheme. Their involvement increases consumer confidence in safe food.

It is task of independent certification bodies and their auditors to carry out regular inspections in the companies participating in the QS scheme. Through their work, they ensure that all scheme requirements are implemented sufficiently from farm to shop.

**Christian Schiermann:** *"It's also part of our task to point out potential for improvement in operational quality assurance and to provide impetus for its further development."*

## REQUIREMENTS ON MONITORING CHECKS

### AUDITORS - QUALIFIED EXPERTS ON SITE

To be able to work for QS as a certification body or auditor, a number of requirements have to be met. Particularly in the case of auditors, these requirements ensure that enough experience, working in the agricultural and food sector is on hand.

For the respective QS scope, the certification body must already be accredited by the responsible accreditation body according to DIN EN ISO/IEC 17065.

The auditor needs to demonstrate specialist knowledge and skills in the context of the standard DIN EN ISO/IEC 17065. The basis here being agricultural or food-related education or training.

The following are regarded as technical skills:

- ▶ Extensive product and process knowledge in stage of the process to be audited
- ▶ Knowledge of agricultural, feed or food legislation
- ▶ Comprehensive knowledge of the scheme manual
- ▶ Command of auditing techniques



### Profile Christian Schiermann

During his studies of agricultural sciences in Göttingen with a focus on agribusiness, Christian Schiermann discovered an interest in quality assurance of agricultural produce. Armed with practical experiences from the parental farm and with his scientific degree in the bag the now 31-year old first enters the meat industry in 2011 and a year later a certification authority, where he begins work

as an auditor. In 2013, this cooperation is intensified by him becoming responsible for the coordination and processing of certification systems for animal products (including QS and ITW, Animal Welfare Initiative). Since 2015 he is operational head of this division.

Prior to QS approval, each auditor must attend an initial training held by QS and pass a test. In addition, specific QS training is to be attended annually for each approval stage and concluded with further tests.

**Christian Schiermann:** *"With our independent expert assessment we issue the companies a certificate. I am of course fully aware of the possible implications of my decisions. Before an auditor can independently inspect companies, he should first shadow ten audits. The first three audits which he performs independently, are conducted in the company of an experienced colleague. That's what actually makes you fit for the task - the experience gained under exercise conditions."*

The qualification of auditors must also be regularly reviewed by the certification body using witness audits, the frequency of which is determined on a risk-oriented basis. Each auditor shall be shadowed (witness audit) by the certification body while performing a QS audit at least once every three years. Witness audits shall also be carried out on the part of QS. "Inspecting the inspections" ensures that certification bodies and auditors reliably perform their work and highlights areas where there is potential for improvement in the auditor's daily work. To have sufficient practical experience, auditors must perform a specified minimum number of audits per year, otherwise they lose their approved status. ▶



## AUDITING

As part of an audit it is verified whether an operation meets the technical, organisational and content-related requirements for participation in the QS scheme. The aim is to inspect operational processes and to uncover any potential for improvement.

**Christian Schiermann:** *“Being well prepared for an audit is the most important thing for me. Before the audit starts, I carefully study the last audit report for the operation concerned and transfer important points into the current report. Also when scheduling, I leave nothing to chance: here I always try to take operational requirements, particularly with regard to the hygiene regulations, into account. For example, amongst other things, I have to remain “pig-free” for 48 hours before auditing in an operation rearing pigs, which means I can’t audit any other pig farming sites during this exclusion period.*

The prerequisites for conducting an audit are given, when the operational processes at the site can be comprehensively assessed, for example if animals are in the sheds or being slaughtered.

If during an audit, the auditor finds any deviations from QS requirements, he will agree corrective measures to be taken with the respective operation. These must be implemented within a defined period. In the case of particularly serious deviations, the auditor can issue so-called “knock-out” or K.O. evaluations. In addition, the sanction proceedings may be initiated. A panel of experts dis-

cusses possible sanctions, which can range from fines to the withdrawal of authority to deliver in the QS scheme.

**Christian Schiermann:** *“Only a successfully completed regular audit creates the conditions for certification and approval of a scheme participant for the QS scheme.”*

## INTERNAL MONITORING SYSTEM

For monitoring the functioning of all quality assurance measures, interconnected, QS-initiated checks are used. These are aimed at the inspection quality of certification bodies, the way the QS scheme functions along the entire supply chain, as well as at compliance with the requirements by partners participating in the scheme. These control measures serve to check the status quo whilst at the same time aiding continuous development and optimisation of processes within the QS scheme.

## RESPONDING QUICKLY TO CRISIS SITUATIONS

To counteract acute risks to humans, animals and the environment, or to food safety, QS has introduced its “Incident and Crisis Management” system. As part of this, QS actively supports its scheme participants in addressing incidents and crises at







an operational and communicative level. Circumstances are determined, flows of goods tracked and information provided to economic operators. Certification bodies and auditors also have the possibility here to directly report potential incidents and crises to QS. This ensures that it is possible to react promptly to the relevant situations. One of the most important measures on the part of QS is the carrying out of special purpose audits. These help to investigate potential incidents and emergencies. In such cases the scheme partner concerned is inspected immediately and without prior notice. Using the knowledge gained, QS can work out measures to cope with the corresponding crisis together with the scheme participant.

### INTERNATIONAL COOPERATION

As an internationally operating standard, QS has made it its task to be able to guarantee the quality and safety of food across national borders and to secure the availability of the goods. Its success speaks for itself: There are now more than 21,000 foreign companies participating in the QS scheme and with their work contribute greatly to the production of safe food across national borders.

The foreign companies either directly participate in the QS scheme or do so via recognition of an equivalent standard. For this to be possible, QS works closely with foreign standard setters, such as IKB or GMP+. Mutual recognition between the different quality assurance systems avoids duplicate auditing and allows an international flow of goods between reliable partners. For the cooperation with foreign standards organisations, a detailed comparison of system requirements is essential, to ensure the equivalence of the criteria examined as part of the audits. Once this is done, foreign companies can deliver their animals or their meat into the QS scheme without additional QS certification requirements. Conversely, QS certified companies can market their products in accredited foreign systems.

Together with the other European standards bodies, QS organises audits at those establishments participating in the QS scheme on the basis of a bilateral recognition. To this end, special auditors appointed by QS are on site to inspect the operating principles of the approved systems to ensure compliance with QS requirements. Joint conduct of audits strengthens confidence in the reliability of the European standards and the mutual trust between standards organisations. ■



# The blue certification mark: a symbol that is worth paying attention to.



## Mutual responsibility

The circle symbolises the commonality and unity of all scheme participants in their joint responsibility for the product. Only after the safety of a foodstuff is verifiably confirmed throughout all stages and participants may the product bear the blue QS certification mark.

The blue colour stands for freshness and hygiene.



## Consistent quality assurance

The arrow conveys the focus on the common objective: the consistent quality assurance for safe food from farm to shop. It also indicates that it goes even further: because after the purchase – during the transport, storage and preparation of fresh food – the responsibility for quality assurance lies with you as the consumer.



## Cross stage scheme

The stages within the circle stand for all groups involved in the production and marketing of the food: feed material producers, farmers, abattoirs and deboning plants, processing companies, wholesale, food retail.

# Your contact persons at QS



## **Food retail, Wholesale**

Marcella Baur  
marcella.baur@q-s.de  
0228-35068-183



## **Processing**

Henning Ossendorf  
henning.ossendorf@q-s.de  
0228-35068-182



## **Slaughtering/Deboning**

Dorothee Gödde-Sowa  
dorothee.goedde-sowa@q-s.de  
0228-35068-181



## **Livestock Farming**

Lena Meinders  
lena.meinders@q-s.de  
0228-35068-213



## **Certification**

Marleen Schultheiß  
marleen.schultheiß@q-s.de  
0228-35068-291



QS has been ensuring food safety since 2001 – from farm to shop. Today, 95 percent of the pork and poultry meat and 90 percent of the beef produced in Germany comes from QS-certified companies. A total of around 75,000 livestock farmers take part in the QS scheme. 13,300 producers of fresh fruit, vegetables and potatoes can be added to this number. Within the QS scheme, they produce safe foods in line with clearly defined criteria with the support of all upstream and downstream commercial processes. The joint goal: conducting consistent self-assessments and comprehensive process controls and verification of origin. Consumers can recognise safe foods from the QS scheme by the blue certification mark which can be found in more than 24,500 food retail outlets.