On requirements „beyond law“

The requirements in the QS scheme can go beyond the legal requirements. This this applies especially for processes that have a critical impact on food safety or animal welfare. Individual measures "beyond the law" are listed in this document.

However, it is important to note first that **quality assurance** based on one another. **From farm to shop** is characteristic of QS. The binding product and process requirements apply to all system partners at home and abroad.

Ensuring process quality assurance, independent controls, comprehensive monitoring and consistent traceability...

... are the core elements of the QS inspection system for safe food, which was founded in 2001.

The companies that have decided to participate in the QS scheme are audited at regular intervals. By signing the scheme contract, the scheme partners undertake to comply with the requirements defined in the QS scheme for production and marketing. At the same time, they submit to regular **independent monitoring** by independent, accredited certification bodies (ISO/IEC 17065) and recognised, accredited laboratories (ISO/IEC 17025).

Process control in the QS scheme is supplemented by the collection of relevant data and their evaluation in the system's own **monitoring programmes**. In the meat and meat products system chain, this includes feed and salmonella monitoring as well as antibiotics and diagnostic data monitoring. In the fruit, vegetable and potato system chain, the QS residue monitoring should be mentioned here.

All system partners must always ensure traceability. The compilation of information on the purchase of goods within four hours must be guaranteed.

QS requirements "beyond law" in detail

Feed sector

Comprehensive feed monitoring

- For **feed monitoring** feeds are regularly examined for undesirable substances (e.g. mycotoxins, heavy metals and dioxins). The test results must be stored in the QS database. If it is necessary to react to special risks at short time, **ad hoc monitoring plans** or **additional control plans** are drawn up (currently valid: additional control plan for aflatoxin B1 in maize products).
- For single harmful parameters, QS goes well beyond the legal requirements with **stricter guidance values**. For example, the maximum values in QS feed monitoring for aflatoxin B1 are be-low the legal limits (e.g. compound feed for dairy cattle: legal maximum level 0.005 mg/kg; QS guidance value for deliveries to QM-Milk dairy farms: action threshold 0.001 mg/kg and maximum level 0.0025 mg/kg). QS also has guideline values for the mycotoxins DON and ZEA for products from the sugar processing industry (sugar beet pulp). There are currently no legal requirements in this area.
- Producers and traders of the following end products must subject them to batch-related **positive release sampling** before placing them on the market:
  - Fatty acids from chemical refining
  - Fatty acid distillates from physical refining
  - Monoesters of propylene glycol and fatty acids
  - Mixed fats and oils containing fatty acids and mixed fatty acids
  - Fish oil (raw)
  - Coconut oil (raw)

  This means that these products may only be placed on the market if harmless test results are available.
- If another raw material other than vegetable oil is used for the production or if they are not produced with or from fatty acids from the splitting of vegetable oil, a **positive release sampling** must also be carried out for the following products:
  - Raw fatty acids from fat splitting
  - Pure distilled fatty acids from fat splitting

- Fatty acids esterified with glycerol
- Salts of fatty acids
- Mono-, di- and triglycerides of fatty acids
- Mono- and diglycerides of fatty acids esterified with organic acids

QS-list of feed materials

- Exclusive use of raw materials according to the **QS-list of feed materials** or lists of recognised standards.
- In addition, an **exclusion list** summarises substances that may not be used as feed or fuel for direct drying in the QS scheme.

Documentation of VVVO numbers

- For deliveries of compound feed (bulk products) to livestock owners, the VVVO number (Registration number according to the Livestock Trade Ordinance) is documented for **traceability** purposes.

Cleaning requirements for the transport of feed

- Internationally harmonised specifications for the **cleaning** and **disinfection of trucks** and in-land waterways used to transport feed.

Agriculture

Antibiotics and salmonella monitoring

- All pig, **beef cattle, veal calf** and **poultry farms** are obliged to participate in **antibiotics monitoring**. In cooperation with the coordinator and the farm veterinarian, all antibiotic administrations and the stock/herd size are recorded for each individual location. The obligation applies to livestock owners in the QS scheme without consideration of a minimum number of animals kept (legislation: no reporting obligation for fattening ducks).
- **Pig fattening farms** must participate in **salmonella monitoring**. This obligation applies to all farms (legislation: only farms with at least 100 fattening pigs sold per year).
- **Poultry farms** must participate in **salmonella monitoring**. Each fattening period must be bacteriologically tested for salmonella. The salmonella category of a herd is reported to the QS diagnostic database together with the slaughter diagnosis data from the abattoir for each batch.

Stock care by veterinarian

- Every livestock owner (pig, cattle and poultry) must arrange the **stock care** with a veterinarian. The relationship must be agreed upon in a written contract. The implementation of stock care is to be documented.

List of livestock care personnel

- Every poultry farmer must keep a list of the persons caring for the animals with competence if more than one person is responsible for the care of the animals. All persons who are regularly entrusted with the care of the animals are recorded.

Requirements for keeping turkeys for fattening

- **Specific husbandry requirements for turkey rearing and fattening** are defined in the *Guidelines for Poultry Production*. QS has defined requirements based on the standardised national parameters for a voluntary agreement for the keeping of fattening turkeys and made them part of the QS standard from the outset.

Requirements for keeping breeding poultry of broilers and turkeys for fattening as well as chick production

- In the QS scheme, **day-old chicks** for broiler and turkey fattening must come from hatching eggs produced in QS-certified breeding farms. The husbandry requirements for their breeding flocks are laid down in the *Guideline Agriculture Breeding Poultry*.
- To ensure maximum animal health and welfare right from the **chick's hatch**, hatcheries are also integrated into the QS scheme and must meet all specific requirements of the *Guideline Hatchery*. QS-certified hatcheries may only purchase hatching eggs from QS-eligible breeding farms to market QS chicks to QS fattening farms.

Health of footpad in poultry

- **Turkey and broiler farmers** must implement measures to improve **foot pad health** in their sheds (quality of litter) and provide evidence of annual further training.

Animal Health Index (TGI) for slaughter pigs (only german locations)

- Animal health indices **are calculated quarterly** for pig fattening farms. Based on the diagnostic data from slaughter, indices are determined for each individual farm for the diagnostic groups respiratory health, organ health, joint health and carcass integrity. They enable the livestock owners to make a compact assessment of the diagnostic data from slaughter and a direct comparison with other farms that have delivered to the same abattoir. The basis of the animal health indices are the results of the official ante-and post-mortem inspection, in each case for slaughtering of the last six months.

Fattening calves: Residue Control Programme

- Calf fatteners undergo a **residue control programme** for beta-agonists, artificial and natural hormones and other critical substances (e.g. chloramphenicol).

Incident and crisis management

- An **emergency plan to** ensure the care of the animals (in case of the farm manager being absent or apower failure) is obligatory.

Shed floors

- With a view to optimal animal accommodation and cleanliness, all housing facilities (in particular shed floors) must be designed in such a way that **the animals do not** come more than unavoidable into **contact with faeces and urine**. They must be provided with a dry lying area (legislation: only prescribed for pig farming).

Space allowances (cattle)

- a **minimum floor area is** prescribed for cattle farming: over 400 kg live weight, at least 2.2 m^2 for unrestricted use must be available per animal (special requirements: only for calves up to 6 months).

Water supply (cattle)

- In cattle sheds, the water supply is defined: In tethered housing, a **self-drinker** must be available at every place. In group housing, a maximum 15:1 animal/drinker place ratio is required for individual-animal drinkers (recommended 10:1); if trough drinkers are used, the troughs per animal must be at least 6 cm wide. If the troughs are large enough for several animals to drink from at the same time, a maximum of 15 animals (recommended 10 animals) can be counted per drinking place (= animal width).

Slaughter / cutting and processing

Water quality

- In slaughterhouses, cutting plants and processing plants, water and ice used as an ingredient and/or for the treatment of food in the manufacturing process or for cleaning objects and equipment that could come into contact with food as intended, must be sampled in a **risk-oriented manner in accordance with Purpose C of DIN EN ISO 19458**.

Criteria for the slaughter of young animals

- Companies slaughtering **non-castrated male pigs** (young pigs or young pigs treated with a vaccination against boar taint) or which cannot exclude this in the future must implement procedures to ensure **reliable detection of odour-prone carcasses.**

Designation of an animal welfare officer

- All slaughter companies must designate an **animal welfare officer to** monitor compliance with animal welfare regulations (legislation: appointment only from a slaughter volume of 1,000 live-stock units per year).
- **The animal welfare officer** must participate regularly in **further trainings** (internal/external) at intervals at least every three years.

Temperature recording and monitoring (poultry)

- In QS operations for poultry slaughtering, **cooling with a spinchiller or comparable cooling methods is not permitted** for hygienic reasons.

Exclusion of risk material

- **Brain** and **spinal cord of bovine animals** as well as spinal cord from pigs may neither be marketed nor processed in the QS scheme. The same applies to any kind of **mechanically separated meat**. In addition, QS products must be free of any **foreign proteins** (with the exception of hybrid products) that could increase the BEFFE value.

Annual training in accordance with the Infection Protection Act

- The system partners in the meat industry and in food retailing must provide evidence of **annual training for** employees in accordance with the Infection Protection Act (legislation: training only every two years).

Diagnostic data

- The **recording of the findings** goes beyond **the legally required findings**. In addition, the **feedback of** the findings to the livestock farmers takes place in such a way that the results are processed and give the livestock farmers the opportunity to compare themselves with other farms and to derive the need for action.
- The **diagnostic data** from **pig slaughtering** are recorded and evaluated in a **central diagnostic database**. For this purpose, data on respiratory health, organ health, joint health and intact-ness are compared. The technical facilities must be in place to record all findings in accordance with the guidelines.
- The **diagnostic data** from **poultry slaughtering** are recorded and evaluated for chickens, turkeys and Peking ducks in a **central diagnostic database**. For this purpose, data on mortality in the flock, mortality during transport, the number of discarded birds including reasons for dis-carding and changes in the foot pads are examined comparatively. In the case of turkeys, changes in the skin of the breast are also recorded.
- The **diagnostic data** from **cattle slaughtering** are recorded and evaluated in a **central diagnostic database**. Data on respiratory health, organ health, joint health and intactness are com-pared. Pregnancy in the third trimester and the degree of contamination are also considered.

Microbiology

- **Listeria spp.** must be considered in microbiological tests to check the success of cleaning and disinfection.

Food Retail Meat and Meat Products

Product temperature

- Mandatory **minimum temperature** for fresh meat: not below -2 °C for all types of meat.

System chain fruit, vegetables, potatoes

Avoidance of residues/unauthorised substances

- Producers, wholesalers, processors and food retailers are obliged to participate in **residue monitoring**. According to a risk-oriented control plan, the products are examined for compliance with the (residue) maximum levels of active substances from plant protection products and post-harvest treatment agents, pollutants, heavy metals and nitrate, as well as for the permissibility of the active substances found. If exceedances are complained, the producer is blocked from the corresponding product.
- If **active substances not authorised for** the respective crop are **detected above 0.015 mg/kg**, the producer **is blocked** in the QS scheme for the corresponding product.
- When using plant protection products, for example, **compliance with the waiting period** and **documentation** of the active ingredient or beneficial insect used are obligatory.
- After a complaint has been made, the producers concerned have an obligation to obtain individual advice based on the case in question.

Prevention of microbiological contamination/hygiene

- The use of **organic fertilisers** may only take place under consideration of specified requirements, e.g. specifications on permitted ingredients for fermentation substrates. For the use of farm manure of animal origin, there are special requirements for apllication and deadlines.
- Use of **water for irrigation** and other water use before harvesting is only permitted after risk analysis and proven water quality (E.coli < 1000 cfu/100 ml).
- At the stages Wholesale and Preparation/Processing, water that has direct contact with unprocessed products or direct or indirect contact with processed products must be sampled at least once a **year in accordance with purpose C of DIN EN ISO 19458**.
- The system partners in processing and food retailing must provide evidence of **annual training for employees in** accordance with the Infection Protection Act (legislation: training only every two years).
- **Toilets for harvest workers** must be reached in a reasonable time. The number of toilets depends on the number of harvesters and the duration of the harvesting work. Disposable towels are mandatory for drying hands.

Traceability

- It is compulsory to **indicate the identification number** of the producer on the label or delivery note.

Soil requirements/fertilisation

- For risk minimisation, information on previous crops, soil condition (soil analysis), use of plant protection products, fertilisers or the application of sewage sludge must be proven for **all areas**.
- In the case of greenhouse cultivation of fruit and vegetables, the **nitrogen fertilisation strategy** shall be outlined.

Microbiological examinations

- Processed fruit and vegetables and processed potatoes must be tested for the following **parameters**:
  - Fruit and vegetables: EHEC (VTEC, STEC), yeasts
  - Fruit: Enterobacteriaceae, coagulase-positive staphylococci.