

Explanatory notes Initiative Tierwohl

Sow production

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Note: The Explanatory notes Initiative Tierwohl Sow production are written in German and translated into English. In case of discrepancies between the translation and the German version, the German original is valid.

General information

Is it possible to participate with only part of a company or location?

The company (= site) is defined by its site number (e.g. in Germany, by its Registration number according to the German Livestock Transport Regulation) and, where applicable, the shed ID, as well as the production scope. Within a single Registration number, sub-areas (defined as shed IDs) with different shed IDs may be registered. This is subject to the condition that uniform husbandry conditions apply within a single shed or building (under one roof). All sheds under the Registration number must be certified to at least the QS standard.

How exactly is the shed ID defined? Is it possible to have two different shed IDs within a single building?

To register a shed, uniform husbandry conditions must apply within that building ('under one roof'). Exception: If areas within a building are structurally and permanently separated from one another, only part of the building may be assigned a shed ID and thus participate in the ITW. The key factor is the clear separation of the housing areas – e.g. separation of housing sections by corridors.

This separation must be clearly evident and verifiable to third parties at all times from the site plan and the farm layout diagram, and will be verified during the audit. During the first audit following the allocation of the shed ID, the auditor must include a site plan in the audit report. Detailed stock records, which are comprehensible to third parties, must be maintained for each part of the farm assigned to a shed ID. The plans must clearly indicate which areas are participants in the ITW and which are not.

What needs to be taken into account if parts of a site are participating under a single shed ID?

If selected sties at a site are participating in the ITW, records kept on the farm (e.g. sty-specific records of live-stock numbers, sty layout plans, site plans/farm diagrams) must clearly and verifiably indicate which sty is a participant in the ITW. This is also checked and documented during the audit.

All animals must be reared in accordance with the requirements throughout the entire production phase.

The traceability of animals from the specified sheds must be ensured by means of unique animal identification.

Is it possible to participate with sties that contain unused compartments in which the criteria are then not implemented?

Yes, but the compartments must have been demonstrably shut down (no water, no drinkers, etc.).

How are the criteria assessed?

The implementation of the individual criteria is assessed on the basis of the evaluations "fulfilled" (A), "not fulfilled" (K.O. criterion) and – for some requirements – "not applicable" (E) and documented in the audit report. An evaluation of "not fulfilled" leads to withdrawal from the Initiative Tierwohl.

The basic criteria and selected animal welfare criteria can also be evaluated as 'partially fulfilled' (C) and corrective actions with deadlines can be agreed. C-evaluations are possible for the following animal welfare criteria:

- 1.4 Sty climate check
- 1.5 Drinking water check
- 1.7 Daylight
- 1.9 Roughage

The nonconformities must be corrected by the livestock owner as soon as possible, which is why a short deadline must be set for the implementation of the corrective actions. For a final programme audit, the deadline must be before the end of participation.

Please note: From the time of the release of audit report until the certification body has issued the corrective actions, the location is not eligible for payment. If a corrective action is not corrected within the deadline, the audit will be considered "failed" after the deadline has expired and the company will lose its approval for the ITW.

How must regionally stricter husbandry requirements be dealt with?

As with QS, the statutory, nationally applicable requirements are taken as a basis.

To what extent are gilts/breeding sows considered in the Initiative Tierwohl?

The rearing of gilts (actually: breeding rearing) does not count as an ITW production scope. If these animals are kept separately, within the registered location number, only the QS requirements apply. If the animals are kept between the (registered) fattening pigs, the ITW requirements apply, as no differentiation is possible.

As soon as the animals become gilts (according to the TierSchNutzTV, female pigs after mating until before the first litter), the animal welfare requirements must be complied with in sow production.

Can sow owners use so-called rescue decks?

Yes, the use of rescue decks is permitted. It must be ensured that all relevant criteria are also complied with here.

What must to be considered if a sow production company loses its eligibility of delivery or fails an audit?

If a company keeping sows temporarily or permanently loses its eligibility of delivery, it must inform its piglet rearing companies that accept piglets. Because piglet rearing companies are obliged to purchase ITW piglets, they may not accept piglets from sow owners who are not authorized to supply.

Can ITW animals be marketed within a production scope?

Yes, in principle, ITW livestock owners may market their livestock freely. If the animals are marketed within a production scope - e.g. from sow owner to sow owner - a distinction must be made between the following cases:

Regular cooperation between several locations

If several locations regularly work together (e.g. division of a sow production into different locations in the farrowing area, breeding center and waiting area), these locations form a producer community. For this purpose, the participating livestock owners register together via their coordinator using the declaration of participation for producer communities, then participate together as one company and are audited together. The company that passes the animals on to the next stage of the chain - e.g. from the farrowing area to the piglet rearer - acts as the main location, with all partners acting as sub-locations. The pro rata transfer of the animal welfare payment within the producer community is regulated among the livestock owners involved.

Occasional livestock sales

If livestock are marketed occasionally/out of sequence to other livestock owners within the same production scope, this does not constitute a producer community. In these cases, if the animals are marketed within the ITW, care must be taken to ensure that they are only reported to the coordinator by the livestock owner who passes the animals on to the next production stage (e.g. to a piglet rearer). The pro rata passing on of the animal welfare payment to the previous livestock owner must be regulated between the livestock owners.

If the animals are marketed outside the ITW (to a non-ITW participant), there is no entitlement to an ITW price surcharge.

1 Requirements

1.1 Basic criteria livestock farming, hygiene, animal health

What is assessed?

It must be ensured that the animals are kept in compliance with the law and in accordance with good professional practice. During the farm tour, the focus is on observing the animals and the husbandry conditions in the sty; records and documents are consulted for support at if this makes sense or is necessary to check the criterion.

The requirements correspond to the QS requirements, see Guideline Agriculture Pig farming.

What criteria must a recovery crate meet?

In principle, all criteria must always be complied with, even in recovery crates. This also applies to the offer of 10% more space and roughage.

If the soft pad is offered over straw litter in recovery crates, it can - provided the litter is of feed quality - also be counted as either roughage or activity material.

How big does the soft pad in the recovery crate need to be?

The crates for sick and injured animals must be equipped with a soft pad (e.g. litter or soft rubber mat), which must cover the lying area per pig. This is based on the QS requirements for the size of the lying area (see QS Guideline Agriculture Pig Farming), not the increased space allowance due to ITW participation. Furthermore, it is crucial that all animals in the recovery crate can lie on the soft surface at the same time.

Do the ITW criteria for group housing have to be complied with for individually housed, group-in-compatible animals?

If animals that are incompatible with groups are kept individually during a period in which group housing is actually intended (e.g. sows in the period after successful mating up to one week before farrowing), the ITW requirements for group housing must be complied with. This also applies to the provision of 10% more space and roughage.

1.2 Participation in the antibiotic monitoring programme

What needs to be considered?

Every livestock owner must be aware of the therapy index, either via an information letter, which they receive quarterly from their coordinator, or online via the antibiotics database.

1.3 Health plan

What is a health plan?

The loss rates for the past two years must be documented in the health plan. In the event of abnormalities, action plans must be developed and implemented together with the veterinarian.

Loss rates: What needs to be recorded?

At the start of participation in the ITW, the entries and exits as well as losses of sows and piglets must be recorded.

What must be present at the end of audit?

The records of the health plan (quarterly) must be available from the second programme audit onwards, but not yet in the first programme audit. In addition, the records and, if applicable, the action plan from the veterinary stock care must be available (already in the first programme audit).

1.4 Sty climate check

What is the maximum period of time that may have passed since the last sty climate check for the first programme audit?

Sty climate checks that were carried out no more than 1 year (= 365 days) ago at the time of the audit can be recognized in the first programme audit.

Sty climate checks must always be carried out in occupied sties. For new sties in particular, the implementation date must be chosen so that the sty climate check can be carried out after the first animals are housed but before the implementation date. If not all sties or compartments are occupied at the implementation date, the necessary checks must be carried out as soon as the animals are housed. Proof must be provided at the end of the audit that the sties/compartments have not actually been used by the housing date and that the checks were ordered promptly. If no results are yet available, these must be submitted at short notice.

When and how often must the sty climate checks be carried out?

A sty climate check must be carried out before the initial audit and then once in each subsequent calendar year. If the first check was carried out in the previous year of the first programme audit (max. 365 days before the initial audit), a check must also be carried out for the calendar year of the first programme audit. The result must be documented. The only exceptions to the sty climate check are free-range husbandry and sties in which no technology (no ventilation, no heating, no control system for gravity ventilation, etc.) is installed.

If a programme audit is carried out at the end of participation in the Initiative Tierwohl, the sty climate check for the current calendar year must be available for this audit.

Companies that end their participation in the ITW by March 31 of a calendar year (= **deregister in the database**) do not have to carry out a sty climate check for that calendar year. If participation in the calendar year continues beyond March 31, the sty climate check must also be carried out for the current calendar year. The date of deregistration in the animal welfare database is decisive for the end of participation.

Who carries out the sty climate checks?

External experts who have previously undergone training and registered with the operating company of the initiative. All experts approved for the sty climate check pig are published on a list at www.initiative-tierwohl.de; they can be freely selected from this list.

How many sty climate checks need to be carried out?

- The **minimum scope** of the sty climate checks to be carried out is generally as follows:
 - At least **one check per sty** and at the same time
 - With one compartment per sty → **one check per sty**

- For two to eight compartments per sty with the same ventilation technology → At least **two checks per sty**
- For more than eight compartments per sty with the same ventilation technology → at least **three checks per sty**
- in sow production, at least one check per functional area (mating, waiting, farrowing area).
- If an individual compartment has a different ventilation system, an additional check must be carried out for this compartment. If several compartments are equipped with different ventilation technology, the key described above is used for each sty and ventilation technology.

Example: At a location with two sties, each with six compartments with the same ventilation technology, two checks must be carried out per sty - i.e. four checks in total.

For conspicuous sty compartments that are detected in the visual inspection of all sty areas/compartments with sensory testing, a sty climate check must be carried out in any case, even if this means that more checks than specified in the minimum scope must be carried out.

If several locations (= several location numbers) are located within a sty shell, identically equipped sty compartments can be added together and then checked according to the above key.

For compartments or areas that are only occupied for a very short time (a few days) and are otherwise empty (e.g. sow arena, outsourced recovery crates in otherwise unoccupied buildings, etc.), a sty climate check does not need to be carried out.

Are climate checks recognized that were carried out by experts before they were registered and published in the ITW list?

A check can only be recognized from the approval date of the respective expert. Experts must be on the list. The date on the list is decisive here. The first sty climate check must be available on the implementation date or by the initial audit at the latest.

How exactly does the sty climate check work?

The expert has a detailed description of this with a corresponding checklist. The focus is on the sensory test with an assessment of the air in the sty and observer of animal behavior. A functional test of the ventilation system (actuators, temperature sensors, etc.) is then carried out on a random and risk-based basis (i.e. in all cases where the sensory test has revealed anomalies). The alarm system is also checked.

What happens if defects are found?

If nonconformities are discovered during the climate check, they must be listed and, if necessary, further measurements and a review of the dimensioning of the ventilation system must be carried out. An action plan must then be drawn up with the technical expert to rectify the faults (including deadlines). These corrective actions must already be initiated and documented for the initial audit.

What must be submitted at the end of audit?

The certificate for the sty climate check (issued by an approved expert) must be shown at the end of the audit; in addition, the list of deficiencies with an action plan and proof that the corrective actions have been implemented on time.

Does the original checklist have to be used for the sty climate check?

It is possible to expand the original checklist, but the basic structure and form must be retained and recognizable. If an action plan is drawn up, deadlines must be set (either defining the time period or the date of implementation).

Note: For the exact implementation of the sty climate check (e.g. sample distribution), see "Implementation instructions for the sty climate check".

What type of alarm system must be present on a company?

For electrically operated ventilation systems, each company must have a functioning alarm device. For example, either a signal horn or a signal light or a telephone dialer must be present. Which type of device (or which combination of devices) is appropriate for a company must be decided on a case-by-case basis. It is crucial that a power failure or failure of the ventilation system is immediately noticed by a responsible person in any case (e.g. even during the night or in remote stys).

1.5 Drinking water check

What is the maximum period that may have passed since the last drinking water check for the first programme audit?

Drinking water checks that were carried out no more than 1 year (= 365 days) ago at the time of the audit can be recognized in the first programme audit.

The samples for microbiological testing must always be taken in occupied sties. For new sties in particular, the implementation date should be chosen accordingly so that the drinking water check can be carried out after the first housing but before the implementation date. If the sties are not yet fully occupied at the beginning, the following must be observed: If the number of animals increases after the implementation date in such a way that further samples must be taken according to the sampling key, these must be arranged immediately. At the end of the audit, it must then be proven (e.g. by means of a stock book) that the number of samples corresponds to the number of animals in the sty.

When and how often must the drinking water checks be carried out?

A drinking water check must be carried out before the initial audit and then once in each subsequent calendar year. If the first check was carried out in the previous year of the first programme audit (max. 365 days before the initial audit), a check must also be carried out for the calendar year of the first programme audit. The drinking water check consists of sampling and water analysis.

If a programme audit is carried out at the end of participation in the ITW, the drinking water check for the current calendar year must be available for this audit.

Companies that terminate their participation in the ITW by March 31 of a calendar year (= **deregistration in the database**) do not have to carry out a drinking water check for that calendar year. If participation in the calendar year continues beyond March 31, the drinking water check must also be carried out for the current calendar year. The date of deregistration in the animal welfare database is decisive for the end of participation.

Who carries out the sampling?

External experts who have previously registered with the operating company. All experts approved for sampling (pigs) are published on a list at www.initiative-tierwohl.de; they can be freely selected from this list.

The catalog of criteria (Annex 2) describes where and how many water samples must be taken. The sampler must document the quantity of samples as well as the respective location and date of sampling in a protocol.

Are drinking water checks recognized that were carried out by samplers before their registration and publication in the ITW list?

A check can only be recognized from the approval date of the respective sampler. Samplers must be on the list. The date in the list is decisive here. The first sampling including the analysis result must be available at the implementation date or at the latest at the initial audit.

Can an official drinking water check be recognized (chemical-physical examination)?

If water from your own wells is also used as drinking water (i.e. used for humans and animals), the official drinking water monitoring can also be used for the physical-chemical drinking water check, provided that the specified parameters have been tested and the test result clearly shows that it is an official sample. In this case, the sampler does not need to be registered with the ITW

How exactly does the drinking water analysis work?

The drinking water analysis can be commissioned from any qualified laboratories. Approval of laboratories is currently not required.

The catalog of criteria (Annex 2) describes the parameters for which the drinking water must be tested.

A microbial test is necessary both for water from the public drinking water network and when using your own water (e.g. from a well). The physical-chemical test can be omitted for water from the public drinking water network.

How are samples for microbiological testing taken from open pool drinking troughs?

The water samples must always be taken at the last drinkers of a spout. In the case of a ring main, the sample can be taken at any point in the ring main. Before sampling, the outlet opening and, if necessary, the basin must be sterilized. This can be done by thorough scouring or using a suitable disinfectant (e.g. from a spray bottle). Drinking basins and bowls must be emptied before disinfection.

Before sampling, the water should run freely for approx. 3 minutes. Sampling is then carried out at open drinkers either directly from the outlet opening, from the basin itself or the overflowing water is collected. The sterile sampling vessel should not be filled to the brim (approx. 5/6ths). Sampling should be carried out under sterile conditions (clean hands or disposable gloves). The lid should only be removed immediately before filling and held down during filling. The inner surfaces of the container and lid should not be touched with the hands and the container should be closed with the lid as quickly as possible.

If sterile sampling at the open drinker is not possible due to the design and there is no nipple drinker that can be sampled as an alternative (e.g. only open drinkers available or branch line with open drinker as the last drinker of the branch), the microbiological sample can also be taken through an additional valve just before the drinker opening in exceptional cases. Sampling at the beginning of the line or a tap outside the animals' living area is not permitted.

What happens if defects are discovered?

If the analysis reveals that the values exceed or fall below the assessment values, an action plan must be drawn up to correct the errors (including deadlines). These corrective actions must already be initiated and documented for the initial audit. The aim is to provide the most suitable drinking water (= most important feed!). If the values

are not complied with, measures must be initiated to achieve the orientation values as quickly as possible. In the meantime, negative consequences for the animals must be kept to a minimum.

If the analysis value for **sulphate** is between 500 and 1600 mg/l, it is recommended that a health check is carried out. Only from a limit value of over 1600 mg SO₄ /l must a health check be carried out by a veterinarian to check whether the animals' health is impaired. If health damage attributable to the water quality is confirmed, the livestock owner must initiate further measures to ensure compliance with the limit value. If the test shows no abnormal findings, no further measures need to be taken. If the **pH** limit values (5 to 9) are not complied with, the animals must be checked by a veterinarian. If the veterinarian detects health impairments or reduced water intake in the animals that can be attributed to the water quality, measures must be taken to ensure compliance with the pH value. If the vet finds no health impairment or reduced water intake, no further action is required.

Minor Temperature deviations in the microbial analysis are acceptable (20 - 22 °C or 36 - 37 °C).

Does each water source and each location number (= registration number, e.g. according to location number) need its own investigation?

A physical-chemical analysis (or several if there are several water sources) must be available for each location number and production scope. If several locations (= several location numbers or several production scopes) are fed from a common water source, one physical-chemical analysis is sufficient.

This does not apply to microbiological testing: here, samples must be taken and analyzed by the registered sampler in accordance with the sample key for each location number and production scope. The sample size must include one sample for up to 300 sows or gilts and an additional sample for each additional 1,000 places or part thereof. This means that one sample must be taken for the first 300 places, a second sample for the 301st to 1,300th place and so on.

If several sties belong to one location number, it is recommended to distribute the samples representatively among the different sties or buildings.

What must be submitted at the end of audit?

The certificate for the drinking water analysis (issued by a laboratory) must be shown at the end of the audit, as must the sampler's sampling protocol. The following information must be documented in the sampling protocol: Name, address, location number of the company, sampling point (location of the tap or drinking nipple/drinking basin), name of the sampler, date of sampling. If this information is contained in full in the certificate for drinking water analysis from the laboratory, this can be used as a protocol. In addition, the action plan for remedying defects and proof that the corrective actions were implemented on time must be available.

1.6 Training

When and how often must the training be attended?

Training must be attended before the initial audit and then once in each subsequent calendar year. Training that took place no more than 1 year (= 365 days) prior to the first programme audit can be recognized in the first programme audit.

If the first training was completed in the previous year of the first programme audit (max. 365 days before the initial audit), a training must also be attended in the calendar year of the first programme audit.

If a programme audit is carried out to terminate participation in the ITW, the proof of training for the current calendar year must be available for this audit. Companies that end their participation in the ITW by March 31 of a

calendar year (= **deregistration in the database**) do not have to provide proof of training for this calendar year. If participation in the calendar year continues beyond March 31, the training must also be completed for the current calendar year. The date of deregistration in the animal welfare database is decisive for the end of participation.

Do I have to take part in training even if there is a prolonged unoccupied period?

Yes, participation in training is not dependent on occupancy of the sty. As long as a livestock owner participates in the ITW and is registered in the database, the requirements must be implemented and complied with. This also includes attending training once per calendar year.

Who has to take part in a training once a year?

At least one responsible employee or livestock owner of the location must attend a training event. This person must be designated as livestock care personnel. The certificate of attendance for the training must be issued in the name of the livestock owner/employee. If a livestock owner/employee looks after several locations, the certificate can also be used for other locations (If relevant, also other types of production scope with a relevant connection to the production scope).

The training of a person external to the company (e.g. consultant) cannot be recognized. It is also not possible to split the training hours between several people (e.g. 4 employees who have each received 30 minutes of training).

What must the proof of training look like?

A personalized confirmation of participation must be submitted as proof for each training (personalized for the person responsible for livestock farming). In addition to the name of the participant, the contents of the event must be documented on the proof of training; it is recommended that the duration of the training is stated. The duration of the training of two hours can also be proven in another way (e.g. via a programme overview, invitation or similar).

How long must the training be?

The training must demonstrably comprise at least two hours of content (equivalent to a half-day event). Different trainings can also be added together.

What content must the training include?

The content must be directly related to animal welfare. This can include topics on management, husbandry, animal health, feeding and climate control in relation to animal welfare.

These include (non-finalised list):

- Specialist events
- E-learning, webinars
- Training specifically agreed with the specialist advisor or veterinarian (e.g. on culling)
- Training on the use of isoflurane
- Insemination courses
- Working groups

Possible contents for the training events are:

- Animal-friendly culling
- Recognizing and interpreting animal signals

- Carrying out the animal observation
- Dealing with sick and injured animals
- Assessment of the transportability and slaughterability of pigs
- Tail biting, prevention and measures in case of occurrence
- Use of roughage
- Improvement of hygiene management
- Crate structuring
- Alternatives to piglet castration without anesthesia

What does not constitute training that meets the requirements?

The following are not considered:

- Advice on business development (e.g. business management advice or construction advice)
- Sty tours as part of the advisory service, unless they are expressly organized as a training measure
- Sty tours in connection with veterinary herd inspections, unless they are expressly organized as training measures
- Sty climate or drinking water checks
- Internal training for company employees
- Visiting trade fairs or exhibitions
- Subscription to trade journals
- Membership of producer/advisory boards
- Training that is not related to your own production branch (e.g. training on feeding in pre- and finishing fattening in a company that keeps sows)

Who is allowed to hold training courses?

Training may be organized and held by all persons qualified to do so. This includes, for example, coordinators, advisory organizations, veterinarians, consultants, etc. Approval from the ITW is not required.

1.7 Daylight

Which sties require 3 % light-permeable area?

According to the Animal Welfare Livestock Farming Ordinance, sties that were put into use after 4 August 2006, must be equipped with daylight-permeable areas that correspond to at least 3% of the compartment floor area. Exceptions are provided for in the law for sties,

- in which 3 % translucent area cannot be achieved for reasons of construction technology and design, or
- which are to be installed in existing buildings, insofar as illumination of the area where the pigs are kept by natural light cannot be achieved or can only be achieved with disproportionate effort for reasons of structural engineering and design or for reasons of building law and artificial lighting corresponding as far as possible to natural light is ensured.

This means that in all sties, the average light-permeable area of the company (location number) must be at least 1.5% of the compartment floor area. In sties that were put into use after August 4, 2006 (also applies to conversions), the average light-permeable area of the company (location number) must be at least 3% of the compartment floor area. If this is not the case, the sties are considered a legally recognized exception.

A company plan showing window sizes, compartment and stall dimensions and the percentage of daylight areas must be available in all companies.

What are translucent surfaces?

This includes glass panes, Plexiglas (e.g. multi-wall sheets), glass blocks, frosted glass windows, skylights in the roof, etc. Ventilation shafts can also be taken into account, provided there are no flaps or similar in the shaft that could close off the area.

Window frames, glazing bars, joints in glass blocks, rotor blades in ventilation shafts, etc. are not included in the translucent area. In the case of perforated sheets and similar materials, only the respective perforated portion can be counted as translucent area. Windbreak nets in front of openings do not have to be deducted. The translucent surface can be installed in the walls as well as in the ceiling. The openings of doorway vents can also be considered, provided that they are transparent at all times and are not closed.

The light intensity is not evaluated. Accordingly, the required amount of light of 80 lux (see basic criteria) does not have to be achieved by daylight alone. A minimum distance to neighboring buildings is not defined, but daylight must actually be allowed through.

Only the translucent surface itself is considered. The scattering width of the incident light is not decisive.

How is indirect light evaluated?

The light can be transmitted via a maximum of one intermediate space (example: from a supply corridor with an external window area into the actual compartment; from a compartment with an external window area into the compartment behind it). Daylight is not considered for a further room (in a second cascade) behind it.

(Basement) light wells also count as indirect light: Here, the surface of the (basement) well opening counts as a translucent surface and the window as the first cascade. Accordingly, (basement) light wells can only be considered if the window leads directly into the compartment.

A window with direct light incidence can be used for several rooms behind it, provided they are only considered in the first cascade. This means that an external window in the central corridor can be used for several compartments with windows in the compartment doors, for example. The window area in the outer wall must be at least equal to the total window area required in the first cascade.

How are window areas assessed if heating pipes, feeding systems or similar run in front of the window or window recess?

A decision must be made on a case-by-case basis. If part of the window area is covered, e.g. by the sty equipment, the smaller light area must be considered.



Example: If there is a distance between a heating pipe running in front of the window and the window recess so that light can also pass above and flow past the pipe, the entire area can be considered. If the window recess is reduced in size by a pipe - as in the adjacent picture - the reduced recess size and no longer the window itself counts as a light surface.

How is the size of the translucent surface calculated?

On average, the company must have at least 3 % light-permeable area in relation to the compartment floor areas, provided they were put into operation after 4 August 2006 and are not considered a legally recognized ex-

ception. For individual compartments, the value may be reduced by a maximum of 20% (= 2.4 % light-permeable area).

For sties that were put into operation before 4 August 2006 or are considered a legally recognized exception, at least 1.5 % light-permeable area must be present. For individual compartments, the value may be reduced by a maximum of 20 % (= 1.2 % light-permeable area).

In the case of indirect light, the corresponding diffusers must be present in the intermediate and outer walls or ceilings. However, translucent surfaces do not have to be exactly opposite each other; they can be offset. Compensation is possible across sties under one location number and production scope. Compensation is not possible across production scopes or across location numbers.

In the case of indirect light via a central corridor with a width of up to 2.5 m, only the compartment floor area counts when calculating the required translucent area (in the outer and inner walls respectively). The length of the central aisle is not included in the calculation. If indirect light via a central corridor or an anteroom that is wider than 2.5 m is to be considered, its floor area must also be included in the calculation of the light-transmitting area of the outer wall. This also applies to trailing roofs, halls in front or other annexes.

Example of a sty that requires 1.5 % light-permeable area: Compartment A (with a floor area of 100 m²) has no external wall, but only receives daylight via a neighboring compartment B (with a floor area of 50 m²). In this case, the partition wall from compartment A to B must have a translucent area of 1.5 m² and compartment B in the outer wall must have a translucent area of 2.25 m² (the total compartment area is therefore added together).

The chargeable translucent areas must not be blocked at any time (e.g. by machinery or straw bales) or be largely overgrown. However, it is possible to shade translucent areas to avoid intense direct sunlight (e.g. frosted glass). Openings may only be closed (e.g. in the case of outlets, ventilation openings) using translucent (transparent) material if the area is to be considered.

In the case of outdoor hutches (e.g. free-range housing), 3 % daylight must be complied with in the hutches (or 1.5 % if put into operation before 4 August 2006 or legally recognized exception); in the case of hutches or crates in the sty, the value must be complied with in the sty, but not in the hutches themselves. If the animals are allowed free-range areas, the daylight area in the sty must still be complied with (no compensation for insufficient light-permeable area due to the free-range area).

Can light from angled adjoining rooms be considered?

If an anteroom or central corridor is fed with a daylight area from rooms branching off to the side or angled rooms, this area cannot be considered for a downstream compartment. In this case, the second cascade is reached and can therefore not be considered.

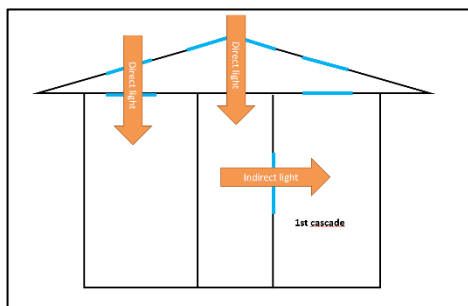
What must be submitted at the end of audit?

An operating plan must be available on which the window sizes, the compartment and sty dimensions and the percentage daylight areas are clearly shown.

How is light from the attic evaluated?

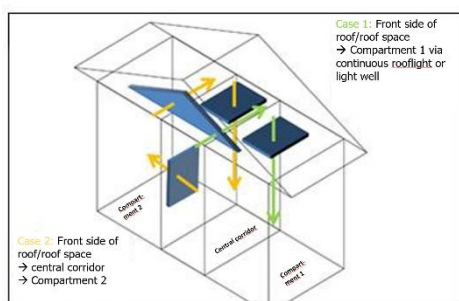
A roof space with one or more false ceiling(s) can be counted for daylight incidence at a ratio of 1:1 (i.e. as direct light) if the roof and the false ceiling(s) are each fitted with appropriate translucent panels. The height of the roof space is not considered. The position of the light surfaces is decisive, so that an individual decision may be necessary.

Example: The light enters from above via light panels in the roof



If direct incidence of light from above is made possible via a light panel, the light for the rooms below can be considered as direct incidence of light. In this case, indirect light can also be transmitted via the central corridor.

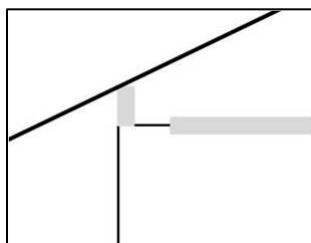
Example: The light falls into the roof space via the front side (gable front)



Light that enters the central corridor via the roof space from translucent gable fronts or from strip lighting in the roof and from there into the compartment is considered. Both cases in the adjacent diagram can be considered for the daylight criterion. The following applies: In case 1, the light can be counted as direct light; in case 2, the 1st cascade is reached.

It may be necessary to decide on a case-by-case basis, as it depends on the lighting surfaces and their location.

Example: There is a strip light in the roof space directly under the roof overhang



In this example, the light entering through the light strip can be counted as indirect light for the adjacent compartments in the first cascade. It is not possible to redirect the light via the central corridor and then into the compartments.

In an open sty, is it sufficient to fit a spacer to the flaps to prevent the flaps from closing?

Yes, if the spacer is firmly screwed in so that 3% or 1.5% of the translucent surface is guaranteed at all times.

Can daylight luminaires compensate for a lack of daylight incidence?

No, every compartment needs (at least indirect) daylight incidence. Lighting systems that artificially generate the daylight spectrum cannot compensate for a lack of translucent surfaces.

Do clearly demarcated lounging areas have to be equipped with surfaces that allow daylight through?

No. Clearly defined lying areas may be darkened - these areas do not have to be equipped with 1.5 % or 3 % translucent surfaces. However, the lying areas themselves still count as part of the compartment floor area and must be considered when calculating the daylight for the individual compartments and the entire sty.

1.8 10 % more space allowance

How is the space calculated?

This refers to the area that can be used by the animals without restriction, i.e. the area on which the sows and gilts can move freely (internal dimensions of the crate; definition of gilts: from first mating to first farrowing). To calculate the net crate area, the area under troughs, feeders, scouring trees, partitions, watering bowls, etc. is not considered. The area under the partitions in feeding pens or feeding stalls is not deducted, provided the partitions are at an appropriate distance from the floor (approx. 15 cm).

The space allowance is specified in the catalog of criteria. It is based on the legally prescribed area for the respective category (sows, gilts, group size) in Germany. The space allowance per animal may be rounded to two decimal places.

Example: Calculation of space for sows (group size 6-39 sows):

Net pen area: number of animals kept = space must be sufficient for the number of animals kept, rounded to two decimal places.

- 74 m²: 30 animals = 2.467 m², commercially rounded up to 2.47 m² → too little space
- 74.3 m²: 30 animals = 2.477 m², commercially rounded up to 2.48 m² per animal → sufficient space

The space allowance for mixed sow groups is calculated as an average value: number of old sows x space allowance + number of gilts x space allowance = total space allowance for all animals in the group. The total group size is decisive for the minimum space available per animal.

Group housing in the waiting area is relevant. The waiting area is the area in which sows and gilts are kept in the group no later than 28 days after successful mating. Farrowing crates as well as individual and group housing in the breeding center or individual housing in the waiting area (first four weeks of pregnancy, corresponds to the time before the pregnancy check) are not affected here. If there is no separate breeding center and the animals that have not yet been tested for pregnancy and the so-called waiting sows are kept in a group, the requirements apply to all animals in this group.

Important: The larger space allowance must be complied with for every crate and at all times (even during marketing bottlenecks).

Does the space allowance need to be adjusted to the new group size when animals are moved out?

In principle, the space allowance for the group size of the animals actually housed must always be complied with. If the group size changes permanently or regularly or can be planned, this must be considered and the space allowance must be adjusted accordingly to the changed group size. However, if, for example, a single animal from a group of 40 sows is moved temporarily and unplanned (e.g. to a recovery crate) and then returns, the space allowance does not have to be adjusted to the new group size.

Do upstands and steps count when calculating the area?

Upstands, e.g. in front of troughs, and steps, e.g. between the straw and slatted areas, are included in the area calculation.

How do raised levels, such as "animal balconies", which are intended for animals to stay on, count when calculating the area?

Raised levels specifically designed for the animals' stay do not count as unrestricted usable space. However, a raised level can be used as additional space allowance - i.e. in addition to the minimum space allowance required by law - for example to create the 10% more space allowance required for the ITW.

The area below the ramp does not have to be deducted from the unrestricted usable area of the crates. However, the ramp itself must not be counted as (additional) space.

The area below the raised levels may only be considered if it can be used without restriction.

How is the area underneath sty equipment considered when calculating the area?

The area underneath straw racks, hanging roughage dispensers, sloping scrubbing options etc. and within a call feeding system can be considered, provided the animals can use this area without restriction. Droppings slots on the walls can also be considered. The area under raised troughs and under deflectors on the trough is not considered as net available space.

Feed bays are also considered for the net bay area.

What must be submitted at the end of audit?

There must be an operating plan showing the available net bay area.

1.9 Roughage

What is roughage?

Roughage is feed that is rich in crude fiber and structure. It must be edible, chewable, inspectable, moveable and workable. This includes (non-finalised list):

- Straw and hay in long, short and pellet form
- Silage (maize silage, grass silage, cob silage)
- Dry pulp
- Alfalfa, alfalfa pellets
- Pea, sunflower and soy hulls
- Pomace, spent grains
- Cereal bran (also cereal husk bran)
- Grain husking
- Green meal cobs
- Straw press molds, straw/molasses press molds
- Miscanthus
- Peat (feed material)
- Employment (roughage) feed (here: with crude fiber content from 20 % in relation to dry matter)
- etc.

CCM, extraction meal, grain, grain meal, semolina bran, grain maize, wood, hemp ropes, jute sacks, natural rubber (e.g. teething roll), molasses blocks or mineral lickstones (non-finalised list) are not recognized as roughage.

Is switching between different types of roughage allowed?

Yes, different types of roughage may also be offered within a company or sty.

When must roughage be offered?

The roughage must be offered in the waiting area in the group housing. The waiting area is the area in which the sows and gilts are kept in the group no later than 28 days after successful mating.

In farrowing pens as well as individual and group housing in the breeding center or individual housing in the waiting area (first four weeks of pregnancy, corresponds to the time before the pregnancy check), no roughage must be offered. If there is no separate breeding center and the animals that have not yet been tested for pregnancy and the so-called waiting sows are kept in a group, roughage must be offered to all animals in this group.

How can roughage be presented?

In addition to the legally required activity material, the animals must be given access to roughage.

The form of administration is variable: via racks, separate troughs or automatic feeders, on the floor. *(Note: there is no general approval of specific products or designs).*

The width or diameter of the container or rack is measured at the animals' head height.

The roughage must be offered in addition (=separately) to the actual feed so that the animals can choose freely. The requirements for feed hygiene must always be complied with.

Racks and feed dispensers may also be placed above the actual feeding trough if the roughage can then be eaten separately above the trough rather than from it. This applies regardless of the feeding system.

Even when feeding on slatted floors, it must be ensured that the animals can also pick up the roughage. For pellets or similar, a floor slab may be required.

How much roughage must be offered?

With all forms of presentation, it must be ensured that all animals - both the largest and the smallest - can reach the roughage and thus eat it. For this purpose, the roughage must be offered in such a way that all animals can easily access the roughage, i.e. approximately between the floor of the sty and head height. It is possible to offer the feed above the animals' head height as long as they can stretch out their heads to eat it. If the animals have to climb or make greater efforts to eat roughage, this form of presentation is not suitable.

What quantities of roughage must be offered?

There are no fixed quantity specifications. However, it must be possible to ingest a quantity that can actually have a dietary effect in the gastrointestinal tract of the animals. Depending on the feed used, approximately 50 g per animal per day can be used as a guide. A quantity calculation or documentation is not necessary. It is also not necessary to prove that the animals eat exactly 50 g of roughage per day - but they must have the opportunity to consume an appropriate amount of roughage. Roughage can be fed at intervals so that there is always an incentive to eat it. To ensure that roughage is always an incentive, it can be fed at intervals by taking short breaks. It must be ensured that it is available for the majority of the day (i.e. more than 12 out of 24 hours), day and night and especially during the animals' activity periods. The supply of roughage must be plausibly recognizable.

The catalogue of criteria specifies which feeding system of which size can be used for how many animals at most. When selecting the feeding system and substrate, care must be taken to ensure that a sufficient amount of feed can be provided per day for the actual number of animals. It should be noted that the animal numbers given in the tables in the catalogue of criteria are maximum figures. For example, the actual number of animals per object may be considerably lower due to the capacity of the storage container or the feeding management.

How can it be checked whether a roughage system allows sufficient feed intake?

It is sensible and necessary to regularly check - both by the livestock owner and in an audit - whether a roughage system allows sufficient feed intake. In principle, the animals must be able to reach and eat the roughage easily and without major effort.

If the roughage is eaten by the pigs directly from the roughage system (e.g. troughs, racks, holders), it must be ensured that the openings of the roughage system are large enough so that – depending on the animal size and the roughage used – a sufficient amount can be taken. Characteristics for this are e.g.:

- When providing long straw, hay or silage: The openings are large enough so that several stalks always protrude from the roughage system, which the animals can take into their mouths and pull out, or so that the animals can reach into the opening(s) with their snouts.
- When presenting pressing cylinders: The openings are so large that the animals can reach into the opening(s) with their snouts and bite off pieces of the pressing.

If the roughage is dispensed from a roughage feeding system, e.g. automatically at certain time intervals or after activation by the animals, it must be ensured that an appropriate amount of roughage is dispensed for the number of animals throughout the day.

To check whether a roughage system provides sufficient quantities of feed, the following approximate calculation can be made: Roughage consumption (amount of self-produced roughage used (e.g. straw/hay/silage bales) or amount of purchased roughage (e.g. press cylinders, straw bales, hay cobs) in relation to the number of animals fed.

If the roughage consumption in several animal groups or in the entire company and over a longer period of time deviates significantly from the orientation value, the roughage system may not be suitable or not set appropriately. There is a need for action here because the ITW criterion is not met.

How can I tell if a roughage feeding system is not suitable for roughage supply?

Roughage feeding systems are not suitable for roughage supply in the sense of the ITW if, among other things, the pigs cannot consume a dietarily effective amount of roughage. If the roughage is not consumed by the animals over a longer period of time, or only in very small quantities, the scheme or the roughage itself is not suitable or has not been adjusted correctly.

Signs of this are, example:

- One press cylinder is sufficient for several weeks in group housing
- A thick layer of dust forms on the roughage as, for example, racks do not need to be refilled
- On pellet machines, individual pellets are only dispensed after repeated operation
- Although the roughage is dosed out, it is not consumed by the animals (e.g. not tasty enough or of inferior quality)
- Long straw or similar materials are offered in racks with very narrow grid spacing or very small openings
- Openings to the roughage are so small that the animals may occupy themselves with the roughage, but cannot eat it
- The lower part of a rack narrows so that the roughage does not slide down on its own

What should you do if you notice that the animals are eating very little or no roughage?

If the roughage is not eaten or only eaten to a very small extent in several groups of animals or throughout the company and over a longer period of time (e.g. several weeks), there is a need for action because the ITW re-

quirements are not met. In this case, both the feed quality, the selected roughage and the form of administration must be checked. Depending on the situation, it may be necessary to change the roughage or the delivery system.

Are pressed cylinders (e.g. made of straw) in tubes suitable as a form of delivery for roughage?

In principle, such a roughage presentation is conceivable (also for the presentation of activity material). It is crucial that all points of the criterion (especially the intake of a dietary effective amount etc.) are complied with.

When using press cylinders in pipes, it must be ensured in particular that the cylinders can slide down at any time. If the press cylinders are to be used as roughage and not just as activity material, they must be offered in such a way that the animals can actually eat them. If this is not the case, the scheme is not suitable for feeding roughage. It must be plausibly recognizable in the audit that the animals can consume a dietary effective amount of roughage and that the scheme used is not designed for significantly lower consumption.

One press cylinder is sufficient for a maximum of 20 animals.

Are pressed cylinders (e.g. made of straw) in troughs suitable for roughage?



With this dosage form, the distance between the rods is important.

If the pellets can be nibbled and consumed accordingly, then the variant is acceptable as roughage. If the animals occupy themselves with the pellet due to the small distance between the sticks, but cannot eat enough of it, the material can be considered activity material, but does not meet the requirements of the roughage criterion.

It should be noted that the full width of the rack is not recognized here, but only the width of the pellet, if it is loaded as shown in the picture.

Are free-hanging press cylinders (e.g. made of straw) suitable as a form of delivery for roughage?

In principle, such a roughage presentation is conceivable (also for the presentation of activity material). The decisive factor is that all points of the criterion (available for the majority of the day, possibility of ingesting a dietary effective amount, etc.) are complied with.

One press cylinder is sufficient for a maximum of 20 animals.

Are racks with adjustable openings or very narrow bar spacing suitable for roughage?

Care must be taken to ensure that the openings are large enough for the roughage offered and that the animals can remove a dietetically effective amount of roughage. Such racks may not be suitable for long straw, hay and silage in particular (depending on the size of the openings/spacing of the bars).

Do free-hanging roughage dispensers always have to be fitted with a base plate?

Such roughage dispensers (e.g. free-hanging pellet dispensers) do not necessarily have to be fitted with a base plate. Whether this makes sense must be decided on site - depending on the material used: if the animals can eat directly from the pellet in the pipe, a base plate is not necessary. However, if there is a risk of the roughage falling through the slats, a base plate is recommended so that the animals can pick up feed.

Is roughage feeding also possible via dry feed and liquid feeding systems?

Roughage must be offered separately and in addition to the actual feed. Accordingly, dry feed or liquid feeding systems can only be used for roughage feeding, if it is ensured that the feeders, troughs etc. are used separately

and exclusively for the roughage and not for the actual feeding. In the case of additional, separate liquid feeding systems for pure roughage feeding, it may be possible to add small amounts of water to improve the flowability of the roughage.

The following special case of rationed feeding must be observed:

Troughs used for rationed feeding with a 1:1 animal/feeding place ratio can be used to present roughage between feeding times, if it is ensured that the roughage is offered for the majority of the day and separately - i.e. separately from the actual feed. The feeding times for the normal feed must be correspondingly short and the troughs must be clean and empty after feeding (feeding methods such as sensor troughs with ad libitum feeding are therefore ruled out). An appropriately hygienic presentation must be ensured for both the feeding of normal feed and roughage.

Can roughage only be offered in feed lying pens?

Yes, if access is guaranteed for all sows for the majority of the day (more than 12 hours). This means that roughage must be available in all feeding pens. Separation from the feed must be ensured, i.e. the roughage must not be placed in the normal trough.

What trough width counts when feeding over a pipe?



If the pipe extends into a trough and the roughage is distributed in the trough (e.g. pellets), the width of the trough counts as per the table (in the case shown, racks, troughs, wall-mounted, open side walls) in the catalog of criteria. If the feed is not distributed in the trough (e.g. press cylinders), the width of the trough cannot be considered.

How many animals does a 125 cm trough hold?

Depending on the type of object, i.e. the design of the trough or rack, the number of animals that can be fed at one object varies (see table in the catalog of criteria). It should be noted that the maximum number for the calculation always refers to a maximum of 100 cm. Even if the object is longer than 100 cm, no more animals may be considered for roughage than for an object of 100 cm. If more animals are to be fed, an additional object must be offered.

Example of a wall-mounted rack with closed side walls and a width of 125 cm: maximum 50 animals. If 75 animals are to be fed, a second trough 40 to 50 cm wide is required.

The same calculation applies to straw bales: here too, 100 cm width or diameter determine the maximum number of animals.

How many animals fit on one roughage dispenser if it only has single openings?

The catalog of criteria specifies how many animals a particular feeding system is sufficient for. The specifications for the various racks, troughs and objects are calculated in such a way that the animals have access to the roughage on all open sides. If the accessible area is reduced by the fact that there are only single/few openings in the trough, rack or container, this may reduce the number of animals that can be provided with an object.

As a rule of thumb, if there are only a few openings (large enough for feed intake), a maximum of 20 animals can be counted per feeding place. The accessibility of the feeding places (distance to pen corners, sty equipment, other openings, etc.) must be considered.

What distance must a roughage dispenser have from crate corners or other feed dispensers?

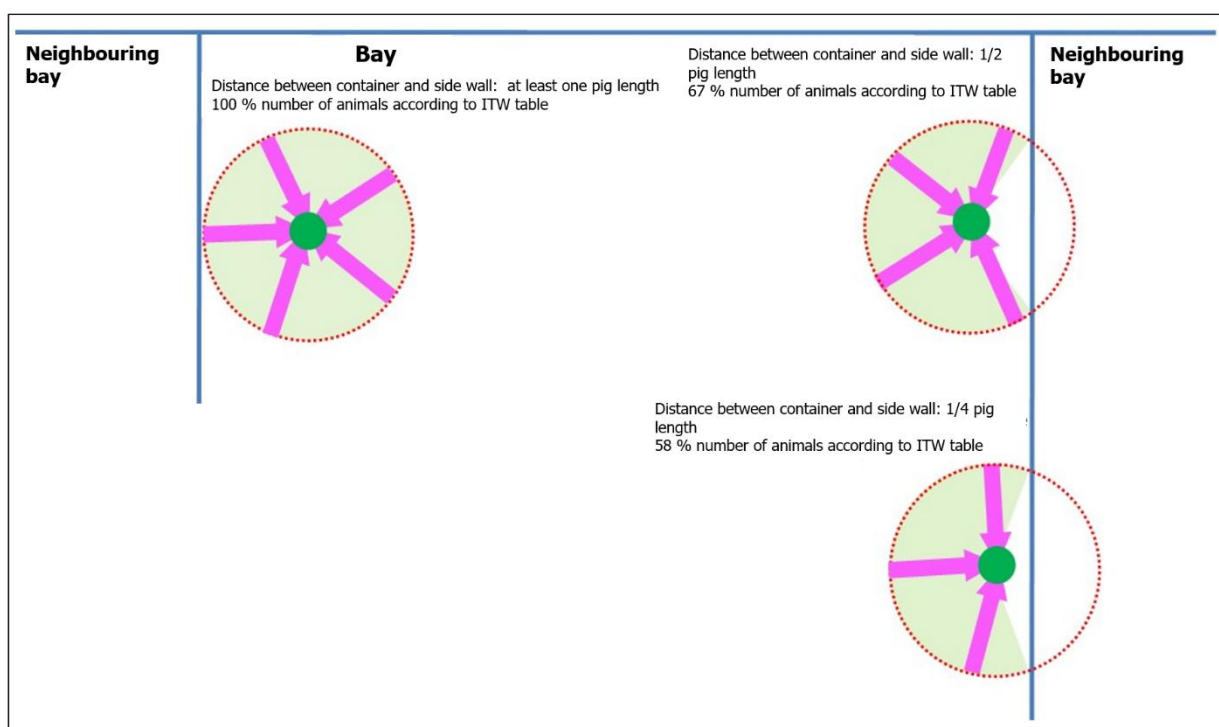
The catalog of criteria specifies how many animals a particular feeding system is sufficient for. The specifications for the various racks, troughs and objects are calculated in such a way that the animals have access to the roughage on all open sides. If access to the feed dispenser is restricted, for example because it is

- in a corner or
- next to another automatic feeder or
- for free-standing versions close to a wall

the container is proportionally sufficient for fewer animals. The following applies: In the case of feed dispensers that are accessible from several sides, approximately one pig length of distance must be maintained from pen corners or walls or other furnishings, so that the feed dispenser can be fully counted. In the case of feed dispensers that are only accessible from the front, the distance to the side walls and other sty equipment must be such that at least one pig can stand there without difficulty. It is also important to consider whether access to neighboring supply facilities (e.g. automatic feeders, etc.) is restricted.

For how many animals is a free-standing feeder placed near a crate wall sufficient?

The catalog of criteria specifies for how many animals which feeding system of which size must be available. The specifications for free-standing or suspended containers are calculated in such a way that the animals can stand freely around the container - with their heads facing the container. If a feed dispenser is located close to a wall or in a corner, then the container is proportionally sufficient for fewer animals. The following image shows examples of the calculation of animal numbers for different positions of such a container. Such accessibility restrictions must also be considered for other forms of roughage dispensers.



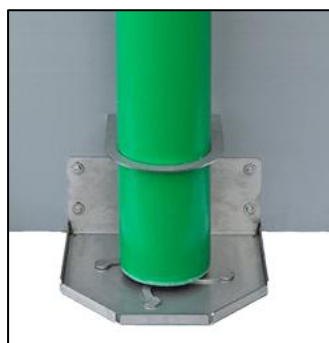


If a feed dispenser hangs on a pipe at approx. 20-30 cm distance from the crate wall and near a corner, as shown in the adjacent picture, the container is proportionally sufficient for fewer animals than indicated in the table.



A special case are round containers like the one shown in the adjacent picture, which are built into the wall of the crate and from which the feed is dispensed into a trough or bowl or onto the floor.

Such feed dispensers are not classified as round containers, but as wall-mounted troughs with open side walls (column b) in the table in the catalog of criteria) and can - considering the distances to crate walls, corners and other sty equipment - be counted with the corresponding number of animals. The number of animals can be considered separately for both sides of the pen wall.



Feed dispensers that use a pipe to fill wall-mounted troughs or collecting trays with open side walls are also classified in column b of the table in the list of criteria - taking into account the distances to pen walls, corners and other sty equipment.

How is a feeder that stands freely in the crates but is only accessible from one side classified?

Feeders that are only accessible from one side - even if they are not mounted on the wall but placed freely in the crate - are not classified as free-standing but as wall-mounted (column a) "Racks, troughs, wall-mounted, closed side walls"). Only objects that offer feeding areas for the animals at both the front and rear are classified as "free-standing with closed side walls".

What area is considered for ground feeding?

If roughage is offered on the floor, the area on which the feed is **distributed** always counts for the calculation of the maximum possible number of animals. The size of any existing floor plate or the area on which the animals distribute the feed is not relevant for the calculation.

It should also be noted that floor feeding, which is dosed directly at the crate wall, in contrast to feeding in the middle of the crate, can be classified in column b) in the table in the catalogue of criteria (see criterion 1.9 *Roughage*) - taking into account the distances to crate walls, corners and other sty equipment.

Can the criteria of roughage and legal activity material be combined?

The roughage must be offered in addition to the legally required activity material.

They must always be different materials and must be given separately from each other. An offer in a trough or rack is recognized if the two materials are separated from each other (e.g. board inside the rack) and access is possible for several animals at the same time. It is not possible to offer roughage and activity material on the same chain.

Can straw pellets be given as roughage and straw as activity material at the same time?

Straw and straw pellets, which also consist exclusively of straw, are considered the same feed and are not accepted. A combination with other straw feeds such as molasses straw pellets (compound feed) is possible.

Can the roughage also be counted as activity material?

No, roughage cannot be used as activity material at the same time. These must be different materials and they must be given separately from each other.

Different types of a material (e.g. wheat and barley straw) count as one material. Rapeseed or maize straw are classified as different materials from cereal straw.

Do littered sties have to offer additional roughage?

Companies with littered sties do not have to offer additional roughage as long as the litter is of feed quality. This means that the litter must be in a very good hygienic condition, at least in areas that cover a sufficient area for the animals to feed on the floor and must not be contaminated with feces or urine because it can be eaten. If it cannot be ensured that the litter is of feed quality in at least these areas, i.e. that it complies with the Feed Hygiene Ordinance, a separate presentation (e.g. via a rack) is necessary. The same material as the litter or a different roughage can be used.

Does a company that uses straw bedding as roughage need any other activity material?

No. If straw litter or other litter (of appropriate quality) is used as roughage, no further activity material must be offered. The prerequisite is that at least the lying area (in accordance with the QS guideline Agriculture Pig Farming) is completely littered. Minimum bedding is not sufficient. If less than the required lying area is littered, the litter can be used either as floor feeding roughage or as statutory activity material, provided it is in a suitably hygienic condition. Consequently, it is then necessary to provide additional material - either as activity material or as roughage.

Can the roughage also be offered on raised levels?

Yes, roughage may also be offered on raised levels for ITW.

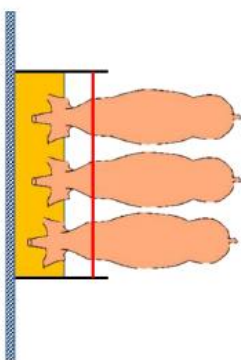
What needs to be considered when purchasing roughage?

- All feed must always meet the QS requirements.
- In the case of mixed or processed feed materials, manufacturers and traders must be eligible to supply QS (due to certification). This also applies to straw pellets that are pressed with molasses, for example.

- If the products are Agricultural primary products (see definition in the QS Guideline Agriculture Pig Farming) (hay, straw, silage or similar; pressed straw that has only been pressed with water and under pressure), these may be produced or purchased without special requirements.
- Livestock owners who combine the feed materials into a complete ration (i.e. all those who do not only purchase complete feed) are considered on farm mixers by QS. They must participate in feed monitoring (organized via the QS coordinator).
- Primary feed is therefore exempt from the certification requirement, but not from consideration in feed monitoring.
- Drying companies that carry out direct drying are subject to QS certification.

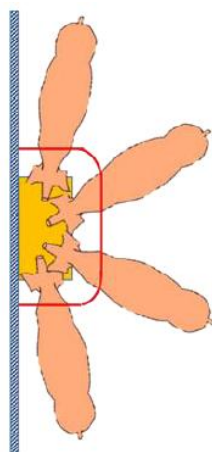
What are the basic patterns of roughage and employment facilities?

- a) Racks and troughs with walls, closed side walls



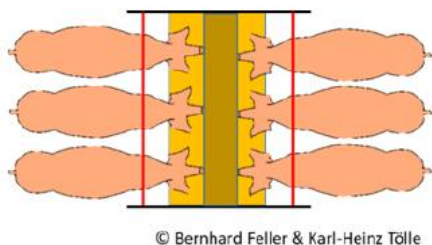
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- b) Racks* and troughs are wall-mounted, open side walls (also roughage dispenser in the partition wall) (*in the case of racks, it must be checked in each individual case to what extent the narrow sides are actually accessible to the activity material for the pigs due to the structural design and installation height)

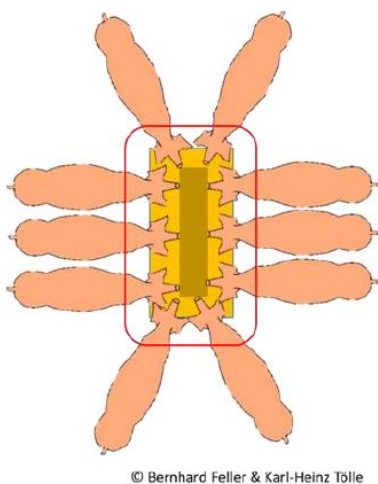


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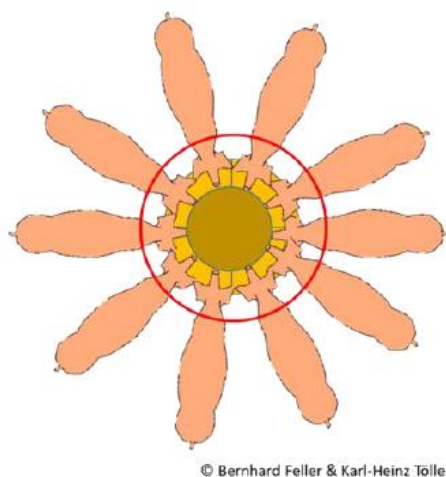
- c) Racks and troughs free-standing or hanging, closed side walls



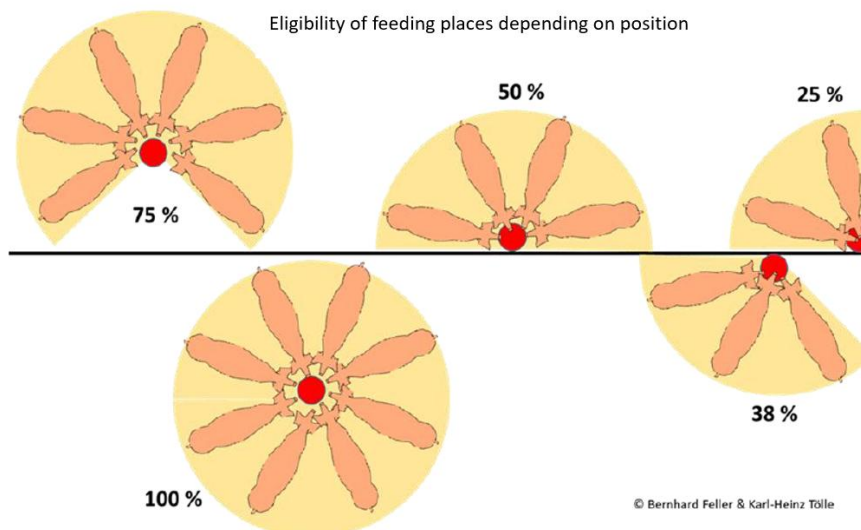
- d) Racks and troughs free-standing or hanging, open side walls



- e) Free-standing or suspended round containers or selective floor feeding



- f) Restricting the accessibility of roughage facilities and activity material for free-standing or suspended systems



Initiative Tierwohl GmbH

Managing Director: Dr. Alexander Hinrichs, Robert Römer
Schwertberger Str. 14 53177 Bonn
Tel +49 228 336485-0
Fax +49 228 336485-55
info@initiative-tierwohl.de