

TECHNICAL DATA

GPA

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Fundo Nacional de
Desenvolvimento da
Suinocultura

OBJECTIVE

This handbook was developed by GPA and the Associação Brasileira dos Criadores de Suínos (ABCS) [Brazilian Association of Pig Breeders], through the Pig Development Plan (Plano de Desenvolvimento de Suínos), with the purpose of preparing pig farms for the new GPA requirements, which were adjusted to give more focus on a responsible, ethical, and sustainable production. It is worth noting that animal welfare has been a top priority in GPA's sustainability strategy since 2016. **Also, that such concern has been on the rise in the last years, with the public commitment being disclosed in 2020 and the Animal Welfare Policy [Política de Bem-estar Animal] in 2021.** This Policy was developed by different GPA areas, as well as external consultants and partners, like ABCS. Its content was created to support the applicability of the GPA's Animal Welfare Policy for pork supplier(s). It is structured as mandatory, auditable guidance and action plans if structural and handling adjustments are required. The handbook is based on the scientific knowledge acquired and the good pork production practices, in compliance with specific laws and the consumers, who are even more attentive to the origin of the food on their tables, which is also one of the main focuses of this partnership, that started in 2019. It is based on maintaining protocols, procedure records, action and adjustment plans, continuous training for the teams, and audits. **There are 36 checking items in four action areas:**

Please note that this handbook is a part of the GPA's Animal Welfare Policy and its commitments, therefore bringing out to you pig breeding guidance and instruc-

tions. Its content may be updated as new market trends and risk assessments are carried out and obtained. Pig farmers need to be aware of eventual publications (of new laws, regulations, and ordinances) or changes to the ones already in force, in particular, the due dates set forth for handling and facility adjustment, such as the MAPA [Brazilian Ministry of Agriculture, Livestock, and Supply] NORMATIVE INSTRUCTION No. 113 dated December 16, 2020, which covers welfare in pig breeding. It should also be emphasized the fact that this handbook covers the main points of each action area. It is crucial to advise that the guidance herein is based on laws and regulations, therefore, there is much more to be learned than only what is outlined here. We believe in productive chains and processes that can reach productivity excellence levels, but that also observe their responsibility with the environment, people, and animal welfare.

- 1** Animal welfare promotion;
- 2** Biosecurity focused on maintaining herd health;
- 3** Responsible use of antimicrobial agents;
- 4** Environmental management.

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ANIMAL WELFARE PROMOTION

01

1.1. Relevance and approach

The animal welfare promotion (BEA) does not only refer to respect for animals nor is solely a humanitarian issue, but it is also an important way to improve the herd health and productivity, being also related to the reduced use of antimicrobial agents.

On December 16, 2020, the Brazilian Ministry of Agriculture, Livestock, and Supply NORMATIVE INSTRUCTION No. 113 was published, which sets forth the good animal handling and welfare practices in Brazilian pig farmers, determining the minimum handling and facility parameters, with due dates for adjustments in case of farmers already established. In the GPA's Animal Welfare Policy, some due dates and parameters are different from those published in the IN 113.

The **BEA parameters set forth in this document should be complied as of 2028.**

Next, we have a list of BEA-related items outlined in the GPA's Purchasing Policy.

1.2. BEA checking items for audits

GROUP HOUSING FOR GESTATING PIGS

The inseminated sows remain in the gestation area until 110 days of gestation, when they are then transferred to the nursery area. From the animal welfare point of view, the best thing is to let them in collective pig pens for a greater period, then remaining for a short time in an individual place. The GPA's Animal Welfare Policy encourages the use of the system in which the sows are released to live in groups after a maximum period of 5 (five) days in isolation after insemination ("cobre e solta", in Brazilian Portuguese). The sows can live isolated until 28 days of gestation. In the collective housing, it is necessary to promote an efficient food distribution, whether through a minibox, free-access stalls, the use of electronic feeding stations, or any other technologies available.

In the collective pig pens, animals should be granted accessed to a rest area, with proper and adequate space to prevent discomfort. As of December 31, 2028, pig farmers should be in full compliance with these pre-requirements.

Audit evidence:

espaço em baias coletivas suficiente para atender à referência adotada (28 dias ou “cobre e solta”); no caso de não cumprimento da referência adotada, apresentar **plano de ação** com parâmetros de permanência em alojamento coletivo e prazos estabelecidos para esta adequação, sendo o prazo limite 31 de dezembro/2028.



● **Photos 1 and 2.** Collective (left) and individual (right) housing for gestating sows (ABCS archives)

PAIN CONTROL FOR PIGLETS AT THE NURSERY AREA

Pain control for piglets should have an approach following this action order, if possible: abolish, replace, reduce, or refine. Just as the collective housing for gestating sows, there are due dates established by IN 113. The capacity building (training) of the operators responsible for this control is crucial.

1. TEETH CARE

Clipping is abolished by IN 113. Wear is only tolerated in occasional situations, when there are injuries in the palates of the sow or on the face of piglets, not as a routine procedure.

Audit evidence:

Piglets checked in loco and/or through a standard operating procedure; the qualification training for the employees performing teeth care should be registered.

2. TAIL DOCKING (TAIL CUTTING)

Only the final third of the tail is allowed. Tail docking is not allowed in animals over 10 (ten) days of life, and the use of anesthetics is mandatory for animals over 3 (three) days of life.

Audit evidence:

Piglets checked in loco and/or through a standard operating procedure; qualification training for the employees performing teeth care should be registered.

3. PIGLET IDENTIFICATION

Notching is forbidden and unacceptable in animals over 3 (three) days of life. This procedure should be abolished until the end of 2028. Identification methods such as tags, tattooing, or chips are allowed.

Audit evidence:

verificação dos leitões in loco e/ou procedimento operacional padrão; registro de treinamento dos funcionários que executam esse manejo.

4. SURGICAL CASTRATION

The surgical castration of pigs is allowed, provided that it is performed before the piglets complete 7 (seven) days of life, in order to reduce trauma and post-surgical issues. The surgical castration should be abolished and replaced by immunological castration as of 31/Dec/2028.

Audit evidence:

Piglets checked in loco and/or through a standard operating procedure; qualification training for the employees performing teeth care should be registered.

WEANING AGE

The pig farms should adjust their facilities and handling procedures as of 31/Dec/2018, so as to allow piglet weaning with an average age of 24 days or more.

Audit evidence:

Technical recommendation, weaning lot sheet, zoo-technical monitoring software reports.

ENVIRONMENTAL ENRICHMENT

Objects that can be manipulated should be provided (like straw, chains, and loose objects in the pig pen) for all areas so the animals can exercise their curiosity and play.

Audit evidence:

Presence of objects that can be manipulated in the pig pens.

ANIMAL DENSITY AND COMPENSATION MEASURES

The animal density (m²/head) in collective pig pens, for each phase, is outlined in IN 113 (see Table 1).

TABLE 1. Animal density (space in pig pens) per animal category, established by IN 133.

PRODUCTION PHASE	MINIMUM SPACE
Female weaners before breeding	1.30 m ² /head
Male pigs	6.00 m ² /head
Piglets < 30kg	0.27 m ² /head
Piglets > 30kg	100 kg/m ²
Gestating weaners	1.50 m ² /head
Gestating sows	2.00 m ² /head
Finishing < 110 kg	0.90 m ² /head
Finishing > 110 kg	$A = 0,036 \times PV^{0,667}$



Photo 3. Chain used as a part of the environmental enrichment in the growth phase (ABCS archives)

If the pig farmer fails to comply with the minimum physical space requirements, whether temporarily, due to production or market fluctuations (maintaining animals), or if investments are needed to adjust the space, they should establish an adjustment action plan and mitigation protocols with **compensation measures**, such as expanding the feeding space, environmental enrichment, use of climate control equipment, and so on.



Audit evidence:

space in collective pig pens big enough to meet the reference adopted;

FACILITIES AND ENVIRONMENT

The pig farm should maintain a periodical monitoring routine of the facility and equipment conditions, checking if there are damages on the floor, in the feeding and watering spaces, identifying if there are edges and punctuated objects that may cause injuries and/or discomfort in the animals, so as to provide the required repairs as soon as possible. Also on a periodical basis, the monitoring of animal behavior should take place, so as to assess the welfare degree and establish improvement plans for the housing conditions, if required. The environment (room temperature and presence of gases) should be controlled, with the purpose of, at least in parts, providing the best comfort conditions to each animal category by using climate control equipment and/or curtains, and other devices. A daily verification routine should take place for sick or injured animals, with the recommended therapy protocol being applied as soon as possible, aiming at reducing animal suffering.

Audit evidence:

Monitoring procedures registered in lot sheets and/or specific sheets, and/or standard operating procedure; it is also recommended that the qualification training for the employees performing these tasks should be registered as well.

USE OF BETA-AGONISTS (RACTOPAMINE) IN ANIMAL FEED

The use of beta-agonists as feed additives is not allowed for House Brand products. GPA is committed to encourage the reduction and elimination of such chemicals by all suppliers.

Audit evidence:

tables, spreadsheets, or sheets with formulations of open animal feed for the finishing phase, which should not include ractopamine; ractopamine should not be used in the animal feed factory or any other pig farm facilities.

PRE-SLAUGHTER HANDLING (LOADING, TRANSPORT, UNLOADING)

1. LOADING

During the animal loading preparation, the following should be ensured: the fasting time recommended by the pig farmer must be aligned with the pre-slaughter operations and the pig transport logistics to the slaughter phase, with water being provided to the animals until they are transported. The loading and unloading ramp slope should not be higher than 25 degrees and must be non-slip, as well as the loading raceway, in order to prevent slipping. The personnel responsible for the loading procedure should be trained according to the best practices, so as to minimize stress and provide the best handling as possible for the animals, reducing the risk of injuries. The animals should be moved with light, easy to use handling aids, such as pig boards and/or lining, rattles/paddles, proper handling brooms, flags, or even the handlers' own hands.

It is not allowed the use of electric prods or other instruments that may cause pain and/or injuries. Sick or injured animals, which can not stand, should not be carried.

Audit evidence:

Proper ramp and handling aids for the loading procedure; standard operating procedure with steps and care, from fasting to pre-loading and loading to the truck; the qualification training for the employees performing these tasks should be registered.

2. TRANSPORT

Observe the optimal density for transport (kg/m²), according to the weather of the region and time of the year; the animals should be able to lay down during the travel. The driver should receive guidance on good transport practices. The animal transport systems should be designed and managed to ensure that they are not subject to stress or unnecessary discomfort; preferentially, the maximum transport period is 8 (eight) hours.

Audit evidence:

Standard operating procedure, with all densities recommended for trucks; the qualification training for the employees performing these tasks should be registered.

3. UNLOADING, REST PERIOD, AND STUNNING

The unloading ramp slope should be < 25 degrees and protected from the elements (rain, sun, and wind). When necessary, the use of cooling through sprinkling or nebulization should be provided in environmental conditions with temperature > 20°C and relative humidity < 80%.

Animals should be calmly moved to the rest lairage, using proper handling aids and techniques. The recommended densities should be complied with for the rest lairage, and water should be continuously provided to the animals. The rest period should be at least 2 (two) and not exceed 6 (six) hours.

All slaughtered animals should be stunned before bleeding through electric stunning (electronarcosis), or the stunning method by CO₂ (carbon dioxide) gas exposure.

Audit evidence:

proper ramp and further reception facilities, as well as loading, handling, and stunning equipment; standard operating procedure with steps and care, from unloading to rest and finally stunning; the qualification training for the employees performing these tasks should be registered.

RESPONSIBLE USE OF ANTIMICROBIAL AGENTS

02

2.1. Relevance and approach

The responsible use of antimicrobial agents in pig farms may be explained in two crucial points. The first concerns observing the antibiotic grace period, avoiding the presence of any residues in the pork meat; in order to do that, there will be a way to ensure that such a use is suspended, whether orally or injectable, at the right time, so animals' body is able to eliminate the drug. The second concerns the inadequate use, which may promote antimicrobial resistance issues.

The good practices on the responsible use of antimicrobial agents start with the proper selection of drugs, also covering the NON-PROPHYLACTIC use, with particular attention to reducing the risk of cross contamination in drugs given via animal feed. The pig farm should show, through routing records, that they control the use of antimicrobial agents, according to the veterinary physician recommendation, mitigating risks of cross contamination and observing the antibiotic grace period.

The pig farm should implement biosafety plans, ensuring the health quality of the animals, focusing on reducing and rationally using antibiotics (non-prophylactic use).

2.2. Checking items for audits

PRESCRIPTION AND STRATEGIC ADMINISTRATION SPREADSHEET (ORALLY, VIA WATER AND ANIMAL FEED)

Every oral administration (via animal feed and water) should be made upon recommendations from a veterinary physician, who should write them on a specific prescription document or spreadsheet (table), as shown below.

1. VETERINARY PHYSICIAN INDICATION:

In the event of a determined disease, which requires the use of a therapy with antimicrobial agents orally, for a determined lot, the recommendation by a veterinary physician should be made, containing the following information: the product, dose level (mg/kg) or dilution (ppm for animal feed or mg/m3 for water), the lot, the phase or animal feed to receive the treatment, the treatment time, and the antibiotic grace period.

 Audit evidence:

prescriptions or lot sheets containing the information above. Keep them filed, in hard copies or electronically, for at least one year after the lot is released.

2. STRATEGIC ADMINISTRATION SPREADSHEET

Routine and strategic orally administration recommendations (prophylactic and metaphylactic), as defined by the veterinary physician, can be made through a spreadsheet or table (signed by the veterinary physician), containing the following information: the product, the dose level (mg/kg) or dilution (ppm for animal feed or mg/m³ for water), the lot, the phase or animal feed to receive the treatment, the treatment time, and the antibiotic grace period.

 Audit evidence:

lot sheets or tables, or specific spreadsheets containing the information above. Keep them filed in hard copies or electronically for at least one year after the lot is released.

LIST OF INJECTABLE PRODUCTS AND INDICATIONS

Pig farms should keep an updated and signed (by the veterinary physician) list containing all active ingredients and injectable products recommended for each disease and **production phase**. The recommendation should contain the disease (clinical symptoms), the trade name, the active ingredient, the recommended dose level (mg/kg), the treatment duration, and the grace period. The inclusion of new products in list should be made only upon assessment of the veterinary physician in charge.

 Audit evidence:

list of injectable drugs being used in the pig farm, containing the information above. Keep them filed, in hard copies or electronically, for at least one year after every update.

TREATMENTS WITH ANTIMICROBIAL AGENTS (ORALLY, VIA ANIMAL FEED OR WATER) REGISTERED

Both in the **nursery** and in the **finishing** phases, the use of oral drugs may be made as a preventive or curative measure, upon indication by the veterinary physician. Drugs via water should be written down in a specific administration monitoring sheet, or in the lot monitoring sheet, with the lot number, product, and start and end date of the treatment properly outlined. Drugs via animal feed should be registered at the animal feed factory, outlining the following information: lot number, product, start and end date of the treatment, or the period the drug has been used in the pig farm, as indicated in the item “detailed animal feed formulas”, further in this document.

 Audit evidence:

lot sheets or tables, or specific spreadsheets containing the information above. Keep them filed, in hard copies or electronically, for at least one year after the lot is released.

QUALIFICATION TRAINING OF THE PERSONNEL RESPONSIBLE FOR ADMINISTERING DRUGS AT THE PIG FARM

Only professionals who have been specifically trained for this purpose can give drugs (orally or injectable) to the animals, **regardless of the pig farm areas**. This training should be carried out at the workplace, by a qualified veterinary physician, according to specific protocols. Upon its completion, the training should be registered and signed by all participants.

Audit evidence:

the qualification training containing the name of the participants and the content provided should be registered. Keep it filed in hard copies or electronically for an undetermined period.

REMOVAL OF INJECTABLE PRODUCTS WHEN THE GRACE PERIOD ENDS, AT THE FINISHING PHASE

In addition to care related to training the professionals in charge of drug administration, attention should be paid in order to reduce the risk of improper use of products beyond the grace period due to the proximity of the predicted slaughtering date. Therefore, while in the finishing phases, un-

til the determined date after housing the animals for that purpose, all injectable drugs beyond the grace period (over one day) should be collected. The product collection date should be registered in the lot monitoring sheet.

Audit evidence:

the date in which the lot sheet was removed should be registered. Keep the lot sheet filed, in hard copies or electronically, for at least one year after the lot is released.

PREVENTION OF CROSS CONTAMINATION IN ANIMAL FEED

Aiming at mitigating the risk of cross contamination due to residues ending up in the animal feed for those types that should not contain any drug residues, which are destined to the **“sensitive animal” category**, it is necessary to establish some manufacturing sequence rules, including manufacturing order and line cleaning before manufacturing the animal feed free of any drugs. Also in the pig farm, feeders, distribution systems, and other reservoirs should be decontaminated after the use of animal feed containing drugs.

In the interval between the production of animal feed containing and not containing drugs, the system should be flushed. The mechanical cleaning and

****Sensitive animal” category** – animal category under risk of residue contamination by a determined veterinary use product. Example: lot of animals scheduled to be slaughtered during the grace period of the concerned drug.*

flushing residues passing through the system should be sorted and disposed of properly, or subsequently dosed in animal feed containing drugs.

Audit evidence:

animal feed production grid or matrix (manufacturing sequence); **mapping of risk points** of cross contamination in the animal feed factory, distribution lines, and feeders; **line cleaning standard operating procedure (SOP)**, the qualification training of the animal feed factory personnel should be registered. Keep them filed in hard copies or electronically for an undetermined period.

DETAILED ANIMAL FEED FORMULAS

The full animal feed formulas, including **growth-promotion antimicrobial agents, therapeutic antimicrobial agents, prophylactic or metaphylactic agents**, with eventual composition changes (with effective date and/or for which lots, sheds, or feeders they were destined for) should be filed for at least one year after their use. The respective administration and prescription spreadsheets should be filed for the same period.

Audit evidence:

tables, spreadsheets or sheets with open animal feed formulations. Keep them filed, in hard copies or electronically, for an undetermined period.

DRUG STORAGE

Drugs should be stored in a proper and identified place. The storage should be carried out according

to the manufacturer's recommendations. Only products allowed by MAPA (Brazilian Ministry of Agriculture, Livestock, and Supply) should be available for use; prohibited drugs should not be present in the facilities.

Audit evidence:

specific place to store the drugs. labeled and organized drugs. The storage should comply with the manufacturer rules (such as temperature, lighting).

DISPOSAL OF PACKAGING AND EXPIRED AND/OR UNUSABLE DRUGS

Expired and/or unusable drugs, as well as immediate packaging (vials and bags) should be removed from the use stock and kept in an isolated and identified place until its proper destination is provided.

Audit evidence:

identified place to temporarily dispose of packaging and unused or expired drugs; proof of collection (contract or payment bills) of this material for incineration by a specialized company.

BIOSAFETY FOCUSED ON MAINTAINING HERD HEALTH

03

3.1. Relevance and approach

T

he Biosafety covers all measures adopted to mitigate risks of new infectious agents entering into the pig farm environment and reduce the dissemination and manifestation of diseases that are already in place.

By increasing the biosafety degree, the sanitary challenges for the herd are consequently reduced, and it directly affects the general animal health, promoting welfare, a better zoo-technical performance and, as a result, a reduction in the use of antimicrobial agents.

3.2. Checking items for audits

PERIMETRAL (ISOLATION) FENCE

The pig farm should be isolated by a fence outlining the clean area, which is destined to sheds in which the animals, the materials, and the handling equipment are located.

The isolation fence, preferentially mesh, should prevent the entrance of people, other domestic animals, and wild animals.

If there are access gates for vehicles, they should be kept locked at all times.

The fence should be positioned at least 5 (five) meters away from the facilities.



Audit evidence:

perimetral fence installed

SANITARY BARRIER, CHANGING ROOM, AND OFFICE

The sanitary barrier to access the pig farm should be near the isolation fence, with or without an attached office. The changing room should have a dirty (external) area and a clean (internal) area, both duly identified and delimited. Everyone entering in the pig farm should change clothes (bathing is optional) before being granted access to the clean area. External clothes and shoes should be kept in the dirty area, and farm uniforms in the clean area.

If the pig farm has an internal office, the access should be through the changing room, following the same access recommendation applicable to the pig farm.

Audit evidence:

sanitary barrier, with dirty and clean areas delimited, and a established system to change clothes.

VISITOR ACCESS AND MATERIAL ENTRANCE

The access to visitors to the pig farms should be made only and solely through the sanitary barrier (changing room).

The visit will be authorized if the visitor signs the attendance book. It should contain at least the following information: visit date, visitor identification, date and place of the last contact with pigs, and the purpose of the visit.

Materials and equipment should be disinfected and/or fumigated before being allowed inside the pig farm.

Audit evidence:

attendance book and material disinfection protocol.

PIG LOADING/UNLOADING SITES

Deve estar localizado junto à cerca de isolamento. Em granjas de terminação ou crechários que produzem suínos no sistema “todos dentro, todos fora”, que povoam e retiram todos os suínos no mesmo dia, poderão ter o embarcadouro/desembarcadouro localizado na parte interna da cerca de isolamento, junto ao galpão dos animais.

Audit evidence:

unloading/loading sites under the conditions mentioned above.

PEST CONTROL

As for rodents, the control should be made in an unified form, with both the elimination of places in which they are reproduced and use of rodenticides allowed by the relevant body. The farm should keep the registration regarding product application and mapping of bait points.

Insect control should be made by eliminating the places in which they are reproduced and the use of insecticide, considering the evolutionary cycle of insects.

Audit evidence:

mapping of bait points with registration regarding rodenticide product application.

WATER QUALITY

Water reservoirs in the pig farm should be protected and closed to prevent the access by insects, rodents, and other animals. The farm using surface water (streams, fountains, dams, shallow or rainwater harvesting wells) should use chlorine for disinfection (continued use).

The farm using deep well water, chlorine is required if the microbiological test returns positive for fecal coliform contamination.

Every 12 months, the pig farm should carry out a microbiological analysis of the water, to check if there is fecal coliform contamination and to ensure its potability, even if using chlorine or deep well water. The reservoirs should be cleaned and disinfected periodically.

Audit evidence:

manter arquivados registros de procedimentos (limpeza de reservatórios e cloração) e laudos de análise da água.

ANIMAL FEED AND MATERIAL PRODUCTION, TRANSPORT, AND STORAGE

If the pig farm produces the animal feed in its own unit or purchases it sealed: the animal feed factory or material storage place should be near or outside its isolation fence. Vehicles used to transport animal feed or materials for its production can not be used to transport live or dead animals, or any other biological material.

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If the farm purchases bulk feed, it should have the storage feeders near the isolation fence, preferentially on the inside.

The animal feed should be supplied by a bulk truck, through the external side of the fence, in a way that

does not allow the entrance of the vehicle inside the isolation fence.

Audit evidence:

factory outside the farm and peripheral feeders; own trucks or from third-parties exclusively for animal feed and/or materials.

STORAGE AND APPLICATION OF VACCINES

Vaccines are used to reduce the onset or symptoms of determined diseases, and contribute to reduce the use of antimicrobial agents. Vaccination protocols are defined by a veterinary physician, and should be fixed to a visible place in the unit. They should contain the following items: trade name of the vaccine, laboratory, antigens, dose level, administration route, animal category, production phase, date, and the person in charge for the recommendation. Changes in vaccine programs are registered in a specific spreadsheet.

Vaccine applications should be registered in the lot monitoring sheet or in a specific sheet, containing the following information: application date, the person responsible for the application, and the vaccine used. The personnel responsible for the application should be duly trained on storage and vaccine application care.

Audit evidence:

vaccine spreadsheets/tables; applications registered in lot or individual sheets; the vaccine use training for the personnel should be registered.

ENVIRONMENTAL MANAGEMENT

04

4.1. Relevance and approach

The proper handling of pig waste is important not only to reduce the environmental impact, but also to integrate other economic activities that use liquid waste as raw materials (pasture and plantation fertilization) and, alternatively, the use of biogas to generate energy and/or heat.

The farm should keep the environmental license up to date, which ensures that it is following the current laws of the region, as well as establish and comply with waste management protocols (liquid waste, dead animal carcasses, and waste management in general). It is worth noting that the regularization is not only a procedure related to pig farming, but it concerns the premises in which the pig farm is located at as a whole.

4.2. Checking items for audits

LAND AND ENVIRONMENTAL REGULARIZATION DOCUMENTS

The premises in which the pig farm are located in should have regular and up to date certificates, that is, Certidão de Cadastro do Imóvel Rural (Rural Land Register – CCIR), Imposto Territorial Rural (Rural Land Tax – ITR) returned every year, and Cadastro Ambiental Rural (Environmental Rural Registry – CAR). The pig farm should have an environmental license and water supply.

 **Audit evidence:** CAR, licença ambiental de funcionamento, quando aplicável ou liberação de uso de licença e outorga de água (ou protocolo de renovação de ambas).

COLLECTION, STABILIZATION (OR TREATMENT), AND STORAGE SYSTEMS FOR LIQUID WASTE

The waste collection system in the premises and the transfer to stabilization compartments should be made in water-proof tubes or ducts, with no direct contact with the soil.

Stabilization can be made in aerobic, waterproof stabilization tanks (with no soil infiltration) or in lakes, with storage capacity consistent with the waste volume and the distribution demand.



Audit evidence:

canaletas, calhas, canos e caixas de inspeção do local de alojamento dos animais até o local de estabilização dos dejetos. Lagoas ou tanques de estabilização impermeáveis (sem infiltração no solo).

DESTINATION OF LIQUID WASTE AFTER STABILIZATION (OR TREATMENT)

Upon completion of the minimum stabilization (or treatment) period, waste can be used as fertilizers in pastures and plantations, with a technical handling and fertilization plan, considering the chemical composition of the referred waste, the area to be used, the soil fertility and types, as well as the culture requirements. If the volume of waste is not consistent (that is, superior) with the agriculture areas of the premises, it should be donated to nearby premises, with a proper cession agreement.



Audit evidence:

technical plan to apply waste with mapping of the own area or at third-parties, when necessary (with a proper cession agreement). Fertirrigation structure to distribute waste in the defined areas.

DEAD ANIMAL DESTINATION

Dead animals should be properly handled, using specific technologies approved by the environmental body, such as carcass composting, incineration, and biodigestion. External carcass processing can be made, provided that it is under the specific laws of transport and destination, as well as the recommended biosecurity measures.



Audit evidence:

equipment or compost bins for dead animals in the premises or a contract with a company that processes such materials.

DESTINATION OF NON-ORGANIC SOLID WASTE

Recyclable materials (plastic, glass, paper, and metal) should be sorted and stored temporarily in a proper place. Immediate packaging of vaccines and veterinary drugs (vials and bags), as well as expired or unusable drugs should be destined to incineration at a company qualified to do so.

Piercing or cutting materials (like needles and scalpel blades) should be stored in proper packaging, like PET bottles, for subsequent incineration. Contaminated papers should be destined to composting and those non-contaminated may be recycled;



Audit evidence:

recycled residue storage **area identified**. Identified waste collectors (recyclable and non-recyclable). Waste destination registered.

MAIN CURRENT RULES AND OTHER RECOMMENDED BIBLIOGRAPHY

Brazilian Ministry of Agriculture, Livestock, and Supply – MAPA – NORMATIVE INSTRUCTION 113 dated 16/Dec/2020 – boas práticas de manejo e **bem-estar animal** nas granjas de suínos de criação comercial.

MAPA – Ordinance 365, dated 16/Jul/2021 – Regulamento Técnico de Manejo Pré-abate e Abate Humanitário e os métodos de insensibilização autorizados pelo Ministério da Agricultura, Pecuária e Abastecimento [Technical Regulations for Pre-Slaughter and Humanitarian Slaughter Handling and stunning methods authorized by the Brazilian Ministry of Agriculture, Livestock, and Supply].

MAPA – INORMATIVE INSTRUCTION 04 dated 23/Feb/2007 – Procedimentos básicos de higiene e de **boas práticas de fabricação para alimentos** fabricados e industrializados para o consumo dos animais [Basic hygiene procedures and good manufacturing practices for feed manufactured and industrialized for animal consumption].

MAPA – INSTRUÇÃO NORMATIVA 65 de 21/11/2006 e INSTRUÇÃO NORMATIVA Nº 14, DE 6 DE JULHO DE 2016– Procedimentos para a **fabricação e o emprego de rações, suplementos, premixes, núcleos ou concentrados com medicamento** para os animais de produção.

Agência de Defesa Agropecuária do Paraná (ADAPA) – Portaria Nº 265 de 2018 – **Biosseguridade mínima** para estabelecimentos que produzem suínos para fins comerciais no Estado do Paraná.

Sindicato Nacional da Indústria de Alimentação Animal (National Animal Feed Industry Union – Sindirações) – Manual Feed & Food Safety, gestão do alimento seguro [safe feed management]–. 2008.

Cartilha Boas práticas de produção em fábricas de ração para uso próprio em granjas de Suínos / SEBRAE, ABCS.– Brasília, DF, 2019. 43 p.



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