**Prevalence and risk factors for gastric ulceration in pigs slaughtered at 170 kg (heavy pigs)**

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**Supplementary Table S1** Description of the evaluation system of gastric lesions in the *pars oesophagea*.

|  |  |  |
| --- | --- | --- |
| **Score** | **Description** | **Illustration** |
| **0** | No injury is present.The mucosa is smooth and whitish in colour. |  |
| **1** | **Hyperkeratosis.**The mucosa appears thickened with a more or less rough texture depending on the state of progress of the damage. Often in this phase it tends to take on a greenish-yellow colour because of bile pigments which bind to it. |  |
| **2** | **Erosions and / or mild ulcers** with extended exfoliation of the epithelium. Usually linear or monofocal lesions, which frequently affect the junction of the pars non glandularis and glandularis mucosa. The presence of blood can be very variable after exsanguination. |  |
| **3** | **Severe ulcers**. Often associated with the presence of scars, which can lead to stenosis of the cardiac sphincter. The presence of blood is observed in most cases, despite exsanguination. The extent of the lesion can be variable, since the eventual introversion of the mucosa due to scar tissue can make it less noticeable. |  |

**Supplementary material S1: Copy of the questionnaire distributed to farmers**

**Study on the identification of risk factors for the development of**

**gastric ulcers in Italian heavy pigs**

*Dear sir,*

*filling in the questionnaire is very important in order to identify the risk factors that determine the development of ulcerative lesions in the stomach of your pigs and to understand as well as improve their health, well-being and productivity.*

1. **GENERAL INFORMATION:**

* Farm denomination: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Address: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Type of production:
* reproduction + weaning + fattening
* weaning + fattening
* fattening
* No. of pigs fattened: \_\_\_\_\_\_\_\_\_ No. of sows reared: \_\_\_\_\_\_\_\_\_\_
* Breed of the fattening pigs:
* Father line \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Mother line \_\_\_\_\_\_\_\_\_\_\_\_\_
* Origin of the piglets:
* One farm or from the sow unit of the same farm of fattening
* More than one farm

1. **MANAGEMENT**

* Weight of the piglet at the beginning of fattening: \_\_\_\_\_\_\_\_\_\_\_\_
* No. of times that pigs change pen after weaning \_\_\_\_\_\_\_\_\_
* No. of times that pigs are mixed in order to make more homogeneous the size of animals within pen \_\_\_\_\_\_\_\_
* No. of pigs per pen \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Space allowance per pig:
* The minimum established by the legislation (1 m2/head)
* More space than that minimum established by the legislation
* No. of diets formulated throughout the fattening phase:
* One
* Two
* More than two
* How many hours prior to transport did the animals receive the last meal? \_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Treatments against parasites:
* No
* Yes
* No. of treatments against parasites \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Products used for treatments against parasites \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Presence of the vet at the farm
* Regular (weekly)
* Irregular
* When the visit of the Vet is irregular, which are the causes for calling him?
* Drugs prescription and recording
* Enteric disorders
* Respiratory disorders
* Consulting

1. **ENVIRONMENTAL FACTORS**

* Type of ventilation
* Natural
* Forced
* Presence of heating systems:
* No
* Yes
* Presence of cooling systems:
* No
* Yes
* Type of floor:
* Bedding
* Fully concrete
* Partially slatted
* Slatted
* Presence of an outdoor dunging area:
* No
* Yes

1. **FEEDING:**

* Feed is:
* Available ad libitum
* Delivered at a specific time; no. of meals \_\_\_\_\_\_\_\_
* Distribution of the feed is:
* managed completely by the computer
* manually activated
* The feed is provided to the pigs
* always at the same time
* approximately at the same time
* The feed provided to the pigs is:
* pelleted
* dry meal
* wet meal
* The feed provided to the pigs is:
* produced and prepared at the farm
* purchased from an external supplier
* partially purchased from an external supplier
* The particles size of the diets is \_\_\_\_\_\_\_\_\_\_\_\_\_\_ mm
* In the diet which cereals are present?
* Maize
* Wheat
* Barley
* Sorghum
* Drinking water is available:
* Ad libitum
* Rationed
* During the fattening cycle are pigs provided with oral antibiotic?
* No
* Yes; which products have been used \_\_\_\_\_\_\_\_\_\_\_\_\_

no. of days of use \_\_\_\_\_\_\_\_\_

* During the fattening cycle are pigs are provided with oral FANS?
* No
* Yes; which products have been used \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

no. of days of use \_\_\_\_\_\_\_\_\_

* During the fattening cycle are pigs provided with oral Acetylsalicylic acid?
* No
* Yes; no. of days of use \_\_\_\_\_\_\_\_\_
* Throughout the fattening cycle, which environmental enrichments are available for the pigs? And where they are positioned in pen?
* hay; □ on the floor □ suspended
* straw; □ on the floor □ suspended
* logs of wood; □ on the floor □ suspended
* chain; □ on the floor □ suspended
* plastic objects; □ on the floor □ suspended
* none
* Which vaccinations are regularly performed?
* Aujeszky (product used, number of treatments and age at treatment)
* Mycoplasma (product used, number of treatments and age at treatment)
* APP (Actinobacillus pleuropneumoniae) (product used, number of treatments and age at treatment)
* PCV2 (porcine circovirus type 2) (product used, number of treatments and age at treatment)

1. **DATA ON A SPECIFIC BATCH OF ANIMALS**

**Batch number \_\_\_\_\_\_\_\_ Slaughtered (date)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_-**

* Did you have sudden deaths in the last 3 months of fattening for this specific batch of animals?
* Never
* Sometimes
* Often
* Mortality of the batch starting from the beginning of the fattening (30 - 35 kg of live weight) was \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* During the fattening period, did this batch of animals have:
* Respiratory diseases □ no □ yes
* Gastrointestinal diseases □ no □ yes
* The fattening period lasted (d) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_