



VETERINARY INSPECTION IN EUROPEAN UNION

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Summer school 2019

THE OBJECTIVES OF MEAT INSPECTION

Ensuring

- human health
- animal health
- food hygiene



Ensuring that only apparently healthy, physiologically healthy animals are slaughtered for human consumption

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THE OBJECTIVES OF MEAT INSPECTION

- ❑ to separate unhealthy animals

- ❑ the objectives are achieved by
 - ❑ *antemortem*
 - ❑ *postmortem* inspection procedures

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FRAMEWORK EUROPEAN LEGISLATION

- ❑ Regulation (EC) No [852/2004](#) of the European Parliament and of the Council
 - on the hygiene of foodstuffs, consolidated
- ❑ Regulation (EC) No [853/2004](#) of the European Parliament and of the Council
 - laying down specific hygiene rules for food of animal origin, consolidated
- ❑ Regulation (EC) No [854/2004](#) of the European Parliament and of the Council
 - laying down specific rules for the organisation of official controls on products of animal origin intended for human consumption, consolidated

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RELATED EUROPEAN LEGISLATION

- Regulation (EC) No 1069/2009 of the European Parliament and of the Council
 - laying down health rules as regards **animal by-products** and derived products not intended for human consumption, consolidated
- Regulation (EC) No 142/2011 implementing Regulation (EC) No 1069/2009 of the European Parliament and of the Council
 - laying down health rules as regards **animal by-products** and derived products not intended for human consumption, consolidated

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RELATED EUROPEAN LEGISLATION

- Regulation (EC) No 999/2001 of the European Parliament and of the Council
 - laying down rules for the prevention, control and eradication of certain **transmissible spongiform encephalopathies**, consolidated
- Regulation (EC) No 1375/2015 of the European Parliament and of the Council
 - laying down specific rules on official controls for **Trichinella** in meat, consolidated

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ANTEMORTEM INSPECTION

- ❑ all animals have to be checked
- ❑ this inspection must take place within 24 hours of arrival at the slaughterhouse and less than 24 hours before slaughter
- ❑ the official veterinarian may require inspection at any other time
- ❑ may be carried out at the holding of provenance (=directly at the farm)



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ANTEMORTEM INSPECTION

Determination

- ❑ identity of animals
- ❑ welfare
- ❑ detection of zoonoses
- ❑ health status (OIE list)
 - administration of drugs
- ❑ documents
- ❑ clinical inspection of all animals that were put aside by the food business operator

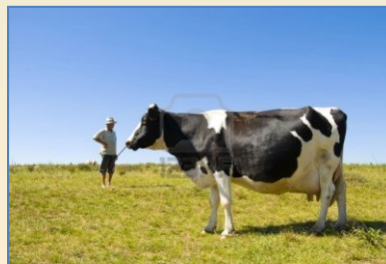


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ANTEMORTEM INSPECTION

Animals not able to slaughter:

- healthy pregnant animals



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Meat without *antemortem* inspection is considered to be condemned !



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FOOD CHAIN INFORMATION = FCHI

- ❑ food business operators must receive, check and act upon FCHI in respect of all animals, other than wild game, sent or intended to be sent to the slaughterhouse
- ❑ slaughterhouse operators must be provided with the information **no less than 24 hours** before the arrival of animals at the slaughterhouse
 - ❑ FCHI may arrive less than 24 hours before the arrival of the animals if the competent authority permits it
- ❑ the food business operator must evaluate and submit FCHI to the official veterinarian

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FOOD CHAIN INFORMATION

- ❑ If any animal arrives at the slaughterhouse without FCHI, the operator must immediately notify the official veterinarian. **Slaughter or dressing of the animals may not take place until the official veterinarian so permits!**
- ❑ The official veterinarian may allow animals to undergo slaughter even if the relevant FCHI is not available. In this case, all relevant FCHI must be supplied **before the carcass is approved for human consumption**. Pending a final judgement, such carcass and related offal must be **stored separately** from other meat.

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FOOD CHAIN INFORMATION

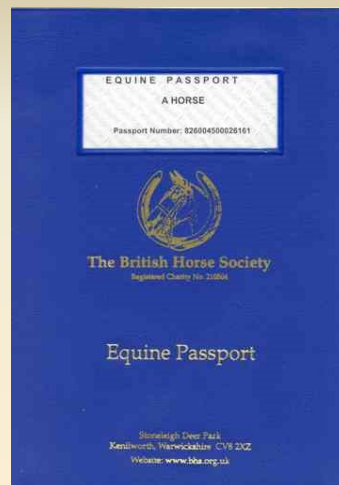
- When relevant FCHI is not available **within 24 hours** of an animal's arrival at the slaughterhouse, **all meat** from the animal **is to be declared unfit for human consumption**. If the animal has not yet been slaughtered, it is to be killed separately from other animals.

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FOOD CHAIN INFORMATION

- Food business operators must **check passports** accompanying **domestic solipeds** to ensure that the animal is intended for slaughter for human consumption. If they accept the animal for slaughter, they must give the passport to the official veterinarian.



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POSTMORTEM INSPECTION

- ❑ minimal handling of the carcass and offal
- ❑ *postmortem* inspection is done without delay after slaughter
 - ❑ visual inspection
 - ❑ palpation
 - ❑ incision
- ❑ laboratory tests
- ❑ routine or extended *postmortem* inspection



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POST-MORTEM INSPECTION GOALS

- ❑ to reach definitive diagnosis
- ❑ to detect the presence of:
 - ❑ an animal disease
 - ❑ residues or contaminants in excess of the levels laid down under Community legislation
 - ❑ non-compliance with microbiological criteria
 - ❑ other factors that might required the meat to be declared unfit for human consumption
- ❑ During the inspection, precautions must be taken to ensure that contamination of the meat by actions such as palpation, cutting or incision is kept to a minimum



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INSPECTION OF RUMINANTS

Bovine animals >6 weeks old

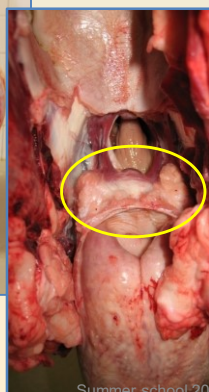
- ❑ removing legs in carpal and tarsal joints
- ❑ head separation and skinning
 - ❑ tongue releasing
- ❑ mammary gland separation
- ❑ skinning
- ❑ pluck release
- ❑ removal of viscera and urogenital organs
- ❑ decapsulation of kidneys
- ❑ Split in half
- ❑ removal of the spinal cord

Bovine animals <6 weeks old, goats and sheep

- ❑ removing legs in carpal and tarsal joints
- ❑ mammary gland separation
- ❑ skinning
- ❑ pluck release
- ❑ removal of viscera and urogenital organs
- ❑ decapsulation of kidneys
- ❑ the body **is not splitted to halves**

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INSPECTION OF HEAD

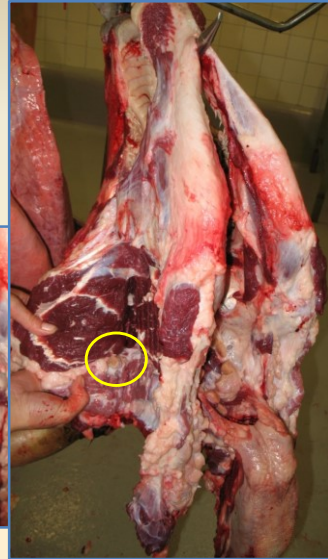
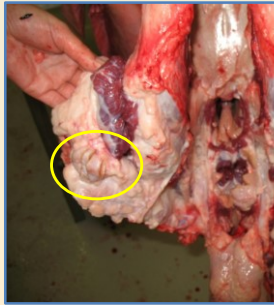
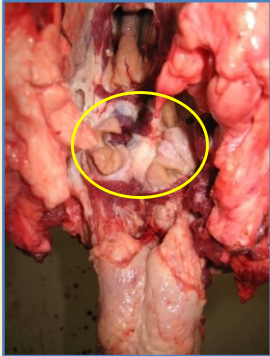


- ❑ visual inspection of the head from all angles
 - ❑ oral mucosa
 - ❑ muzzle
 - ❑ tongue
- ❑ **tonsils – removing**
- ❑ inspection of lymph nodes
- ❑ incision of masseters

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INSPECTION OF HEAD LYMPH NODES

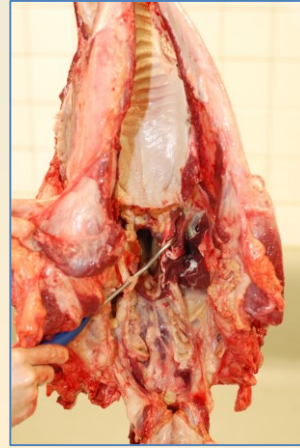
- ❑ *Inn. mandibulares*
- ❑ *Inn. retropharyngei*
- ❑ *Inn. parotidei*



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INSPECTION OF MASSETERS

- ❑ **external masseters** – double incision paralel to the mandible
- ❑ **internal masseters** – one flat cut



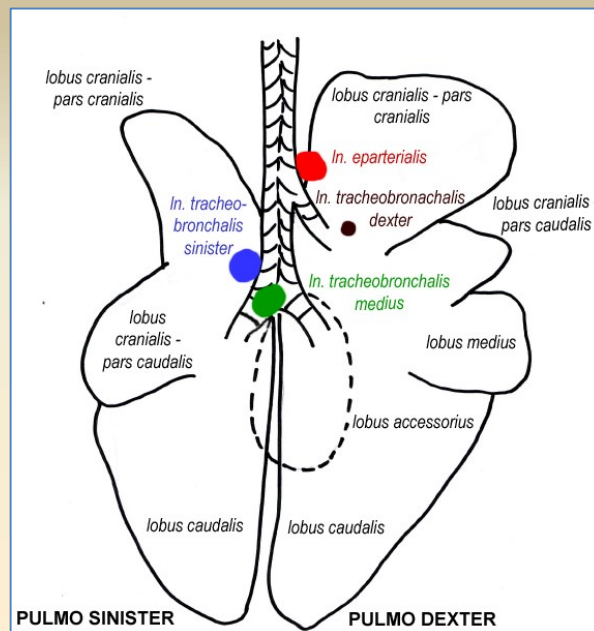
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INSPECTION OF PLUCK

- ❑ visual inspection of lungs and heart
- ❑ incision and inspection of lymph nodes:
 - ❑ **Inn. bifurcationes**
 - ❑ *In. tracheobronchalis sinister*
 - ❑ *In. tracheobronchalis dexter*
 - ❑ *Inn. tracheobronchales medii*
 - ❑ **In. eparterialis**
 - ❑ *In. tracheobronchalis cranialis*
 - ❑ **Inn. mediastinales**
 - ❑ *Inn. mediastinales craniales*
 - ❑ *Inn. mediastinales medii*
 - ❑ *Inn. mediastinales caudales*
- ❑ incision to open trachea and lower airways

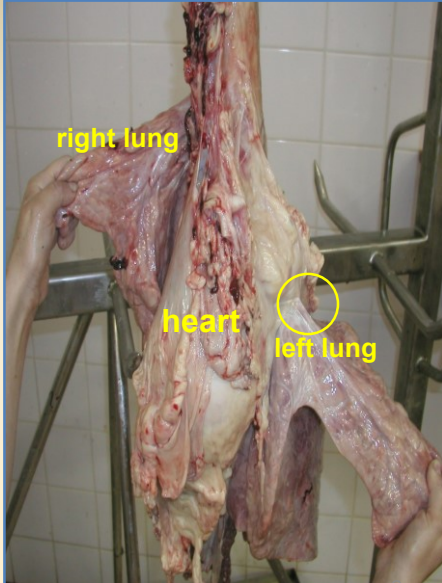


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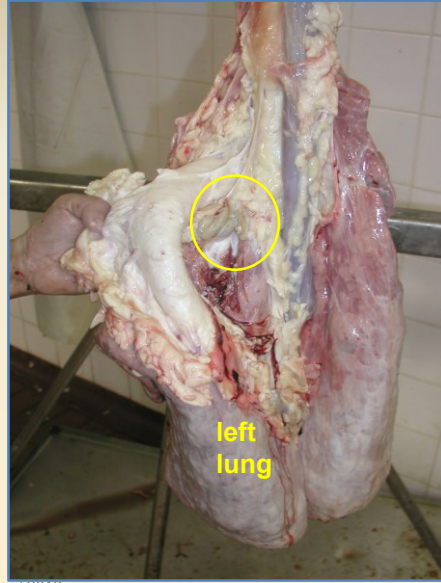


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Inn. tracheobronchalis sinister

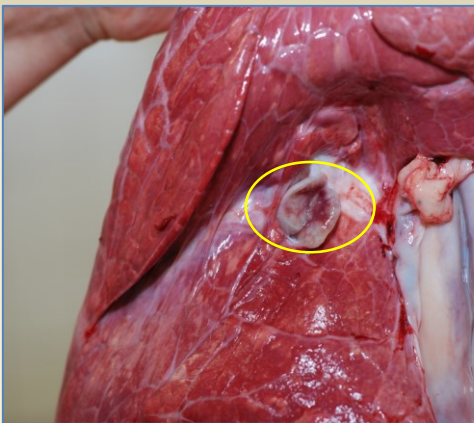


Inn. tracheobronchales medii

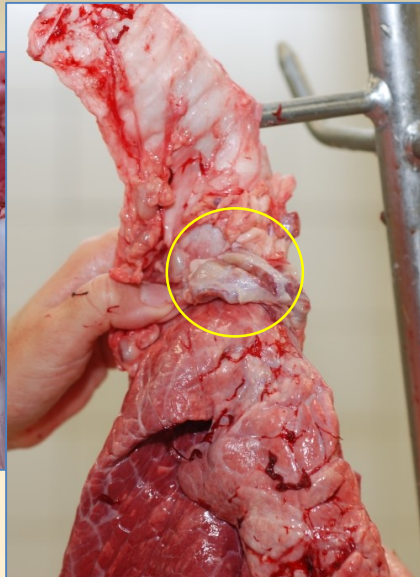


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In. tracheobronchalis dexter

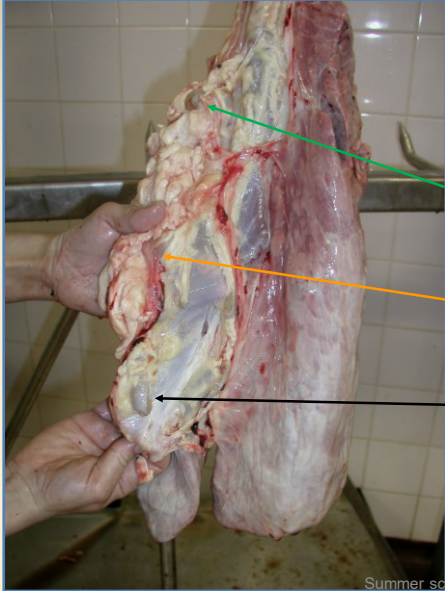


In. eparterialis



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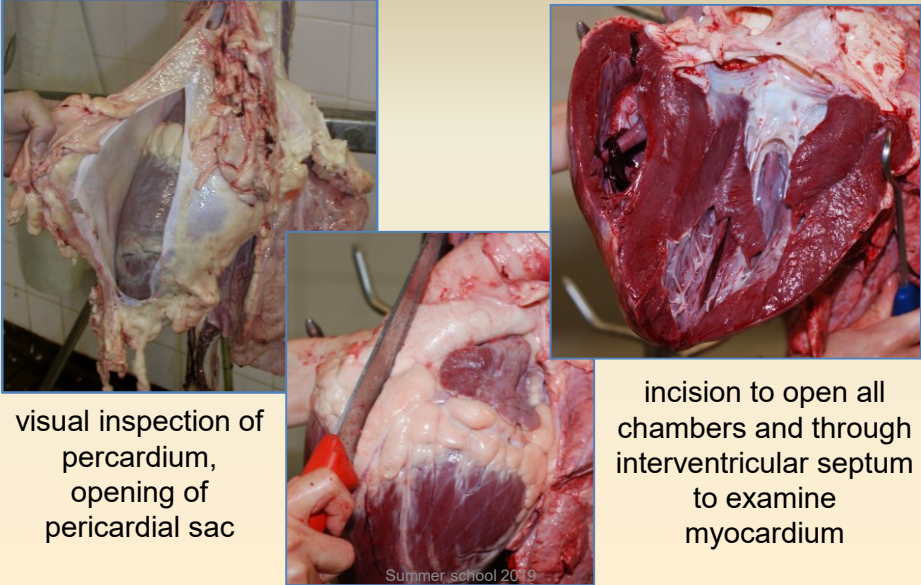
Inn. mediastinales



- *Inn. mediastinales craniales*
- *Inn. mediastinales medii*
- *Inn. mediastinales caudales*

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INSPECTION OF HEART

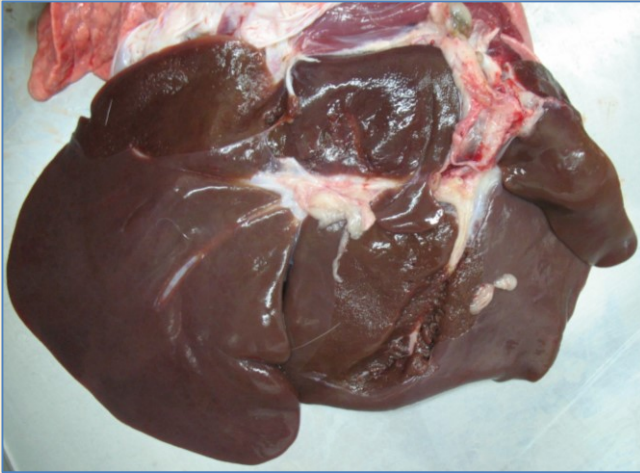


visual inspection of pericardium, opening of pericardial sac

incision to open all chambers and through interventricular septum to examine myocardium

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INSPECTION OF LIVER

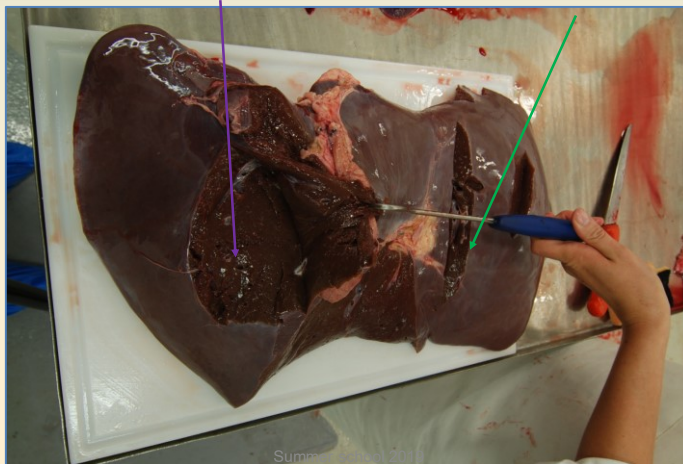


- visual inspection
- palpation
- inspection of hepatic lymph nodes
 - *Inn. portales*

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INSPECTION OF LIVER

- incision to open the bile ducts
 - across the caudal lobe
 - along the main ducts



INSPECTION OF ALIMENTARY TRACT

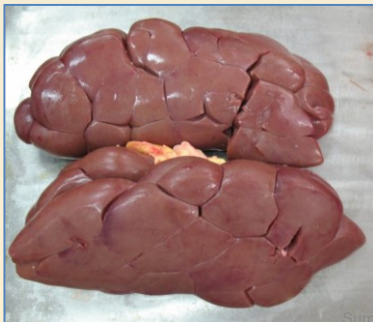


- ❑ rumen, reticulum, omasum and abomasum are fit for human consumption
- ❑ Intestines are fit for human consumption after removing their content
- ❑ visual inspection of lymph nodes
 - ❑ *Inn.gastrici*
 - ❑ *Inn.mesenterici craniales et caudales*

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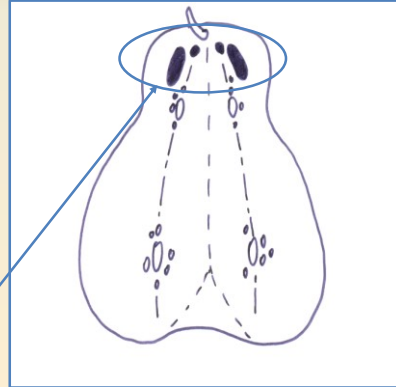
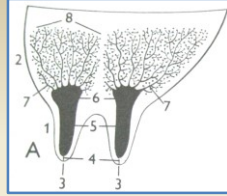
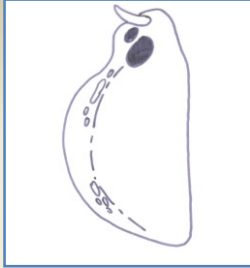
INSPECTION OF OTHER ORGANS

- ❑ **kidneys** – visual inspection, in some cases incision and inspection of *Inn. renales*
- ❑ **spleen** – visual inspection, palpation
- ❑ **genital organs** – visual inspection, palpation

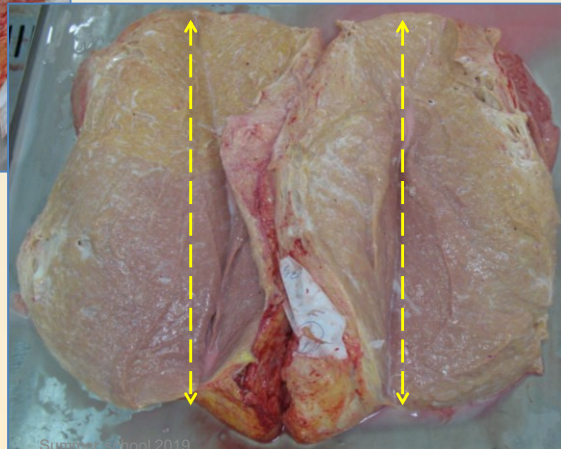


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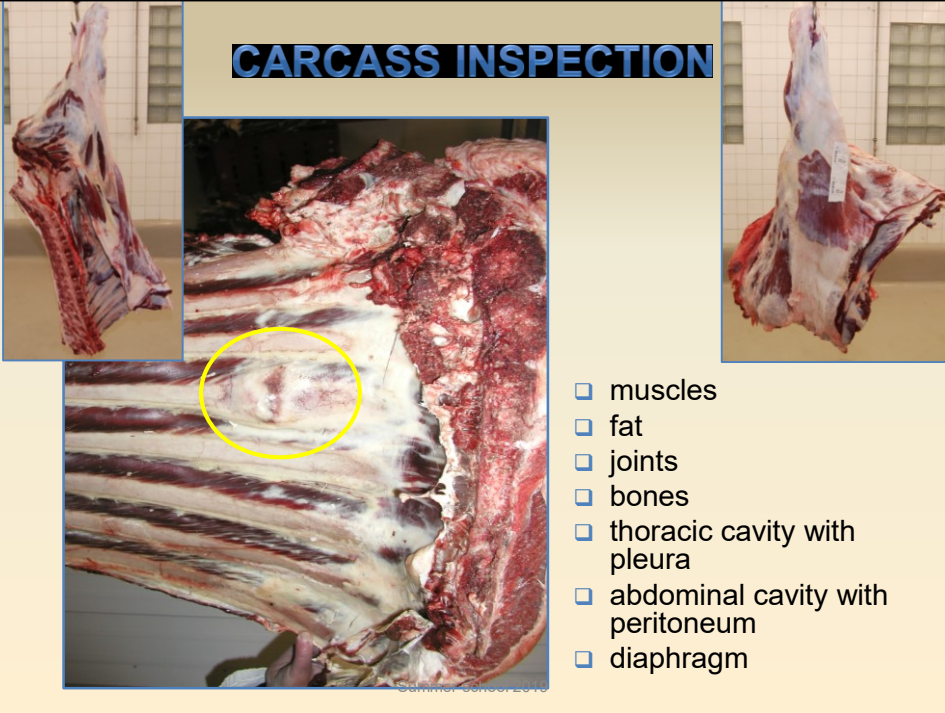
INSPECTION OF MAMMARY GLAND



- ❑ visual inspection, palpation
- ❑ incision
 - ❑ incision of parenchyma of both halves of the m. gland
- ❑ incision and inspection of lymph nodes
- ❑ *Inn.supramammarii* summer school 2019



CARCASS INSPECTION



- ❑ muscles
- ❑ fat
- ❑ joints
- ❑ bones
- ❑ thoracic cavity with pleura
- ❑ abdominal cavity with peritoneum
- ❑ diaphragm

INSPECTION OF BOVINES <6 WEEKS - DIFFERENCE

- ❑ head
 - ❑ incision only *Inn. retropharyngei*
- ❑ visual inspection and palpation of umbilicus and umbilical region
- ❑ visual inspection and palpation of joints – in some cases incision of joints and inspection of synovial fluid
- ❑ carcasses and other organs are inspected in a manner similar to that for adults bovine animals

INSPECTION OF SHEEP AND GOATS

□ Head

- visual inspection
- incision of *Inn. parotidei* and *Inn. retropharyngei*
- *Without prejudice to animal-health rules, these examinations are not necessary if the competent authority is able to guarantee that the head, including the tongue and the brains, will be excluded from human consumption*
- carcasses and other organs are inspected in a manner similar to that for adults bovine animals

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INSPECTION OF SOLIPEDS

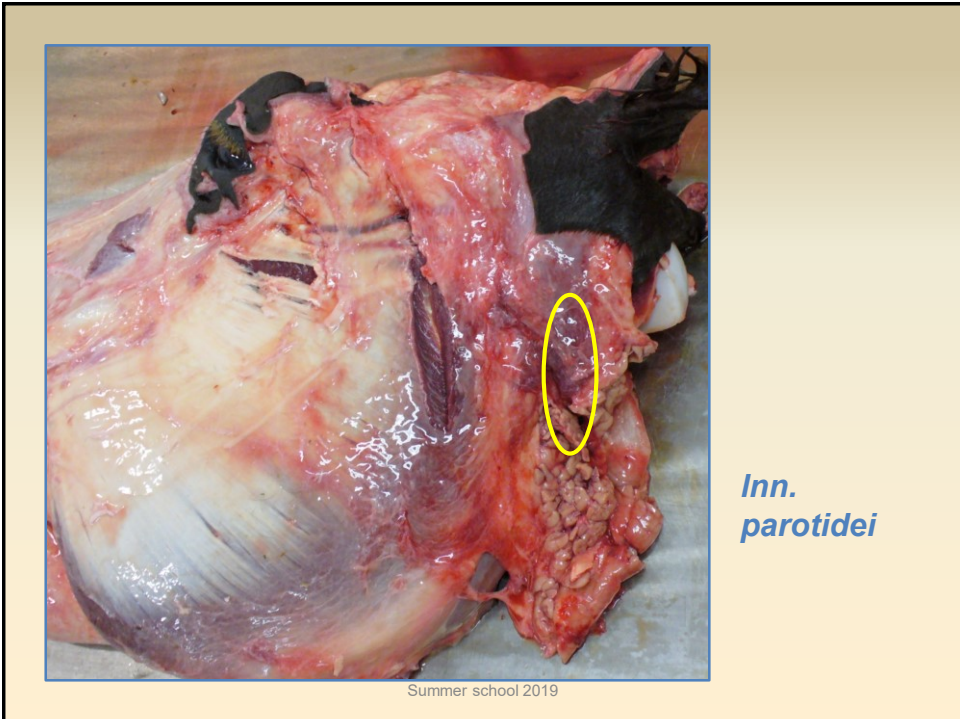
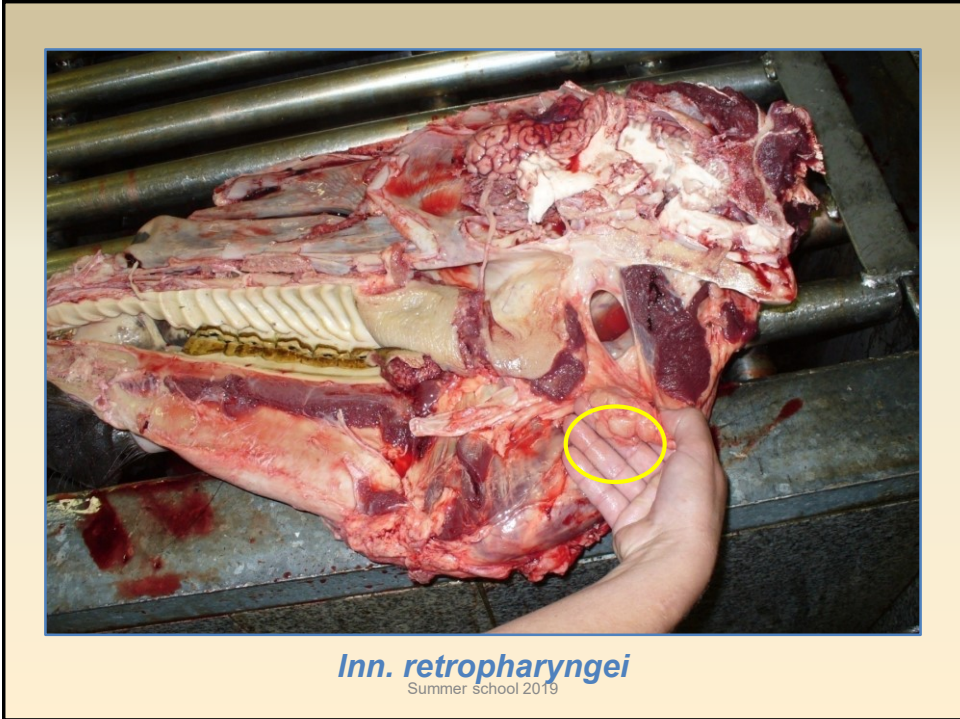
- carcasses of solipeds and their organs are prepared similar to adult bovines

Head

- *tongue is a part of the pluck*
- the head is split along the median line for inspection of nasal cavities, sinuses and septum (glanders) – not mandatory
- inspection of lymph nodes
 - *Inn. retropharyngei*
 - *Inn. mandibulares*
 - *Inn. parotidei*

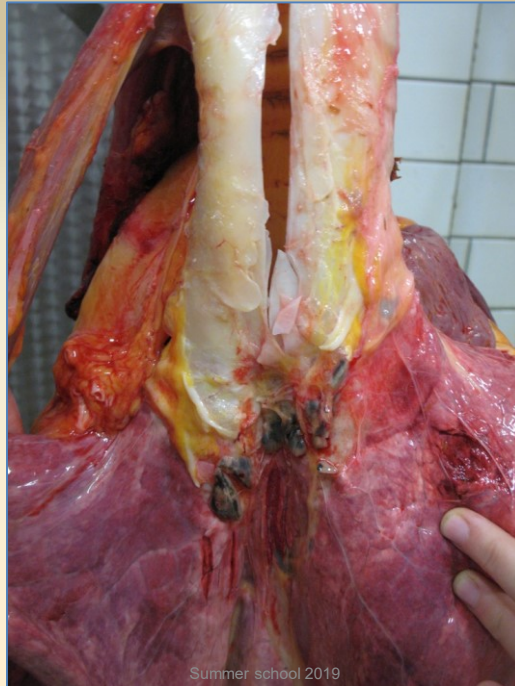
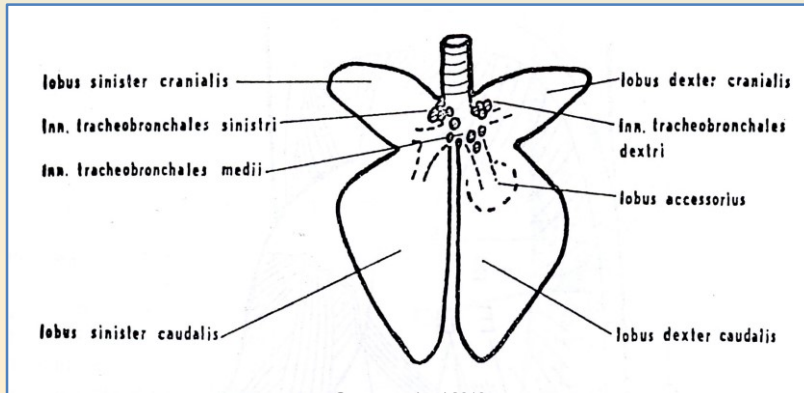


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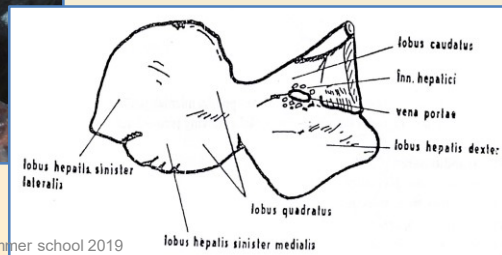
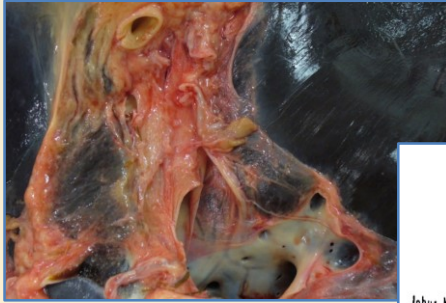
INSPECTION OF PLUCK

- ❑ there are not **Inn. eparteriales**, solipeds have not lobus cranialis of right lung
- ❑ other parts of inspection of pluck are similar to adults bovines



INSPECTION OF LIVER

- ❑ visual inspection
- ❑ palpation
- ❑ inspection of hepatic lymph nodes
 - ❑ *Inn. portales*



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INSPECTION OF GIT, SPLEEN AND KIDNEYS

- these organs are inspected in a manner similar to that for adults bovine animals



INSPECTION OF CARCASSES

- all grey or white horses must be inspected for melanosis and melanoma by examination of the muscles and lymph nodes (*Inn. subrhomboidei*) of the shoulders beneath the scapular cartilage after loosening the attachment of one shoulder.
- the kidneys must be exposed and examined by incision through the entire kidney



Carcasses are inspected in a manner similar to that for adults bovine animals

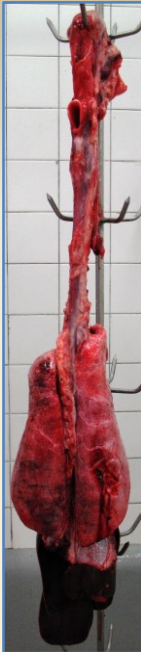
INSPECTION OF PIGS



- ❑ scalding
- ❑ dehairing
- ❑ pluck release
- ❑ removal of viscera and urogenital organs
- ❑ decapsulation of kidneys
- ❑ splitting down the spinal column
- ❑ removal of the spinal cord and brain
- ❑ **inspection is only visual**

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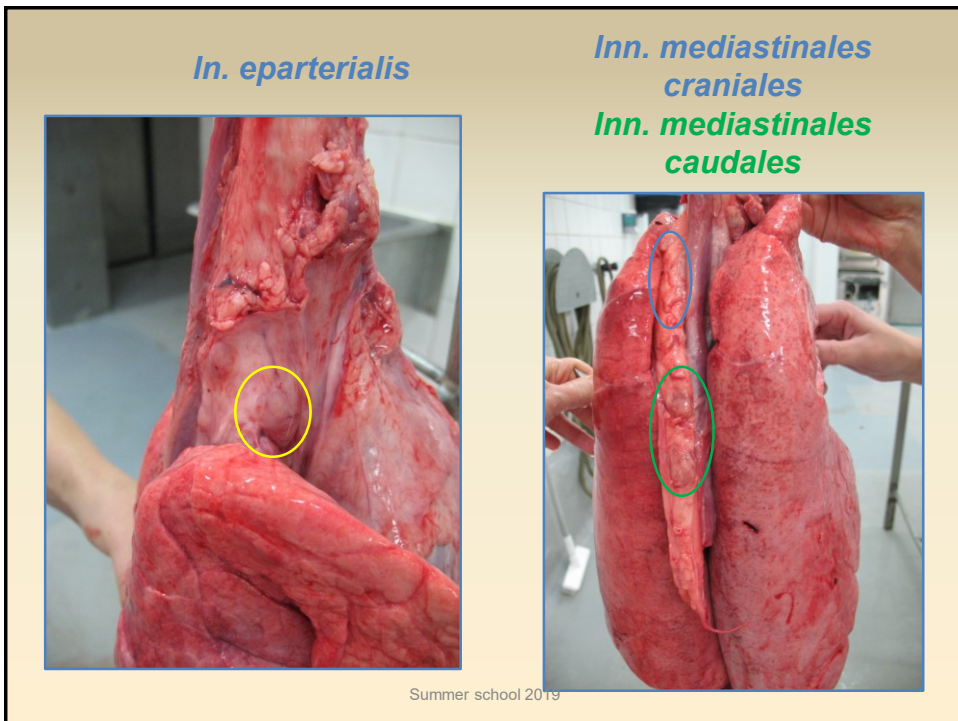
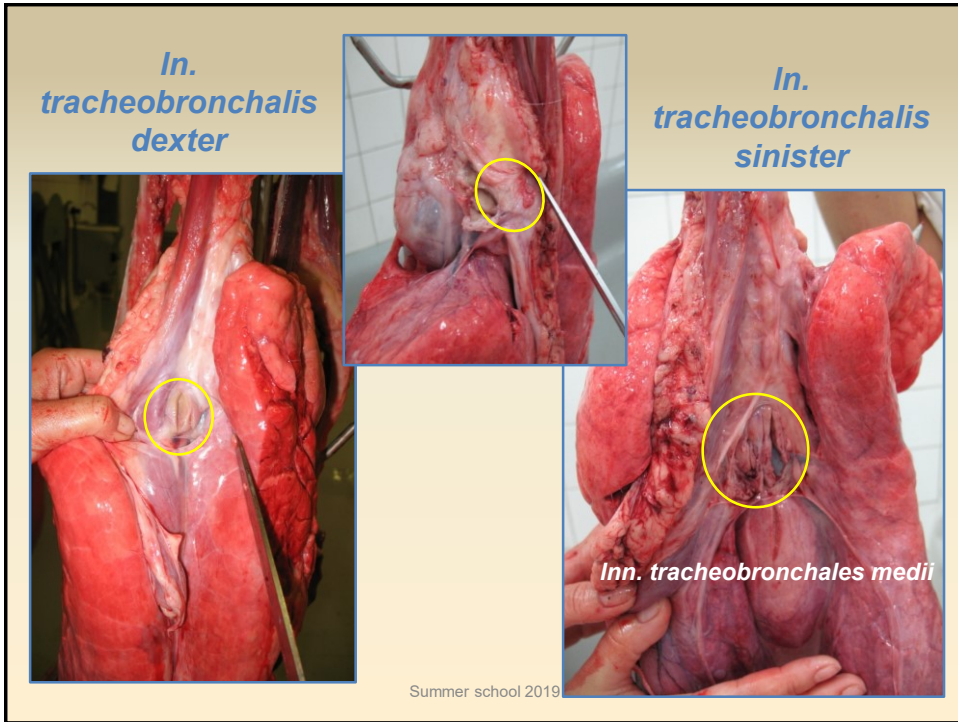
INSPECTION OF PLUCK



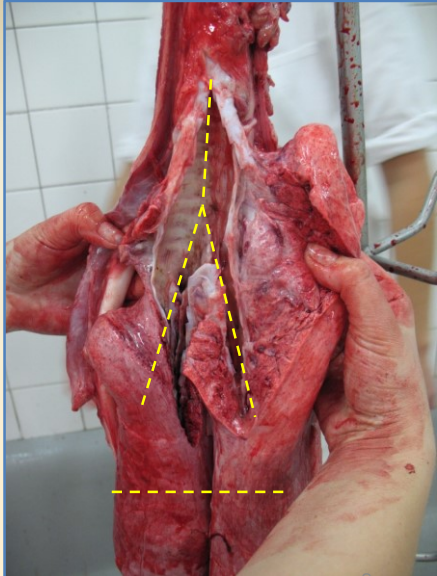
- ❑ visual inspection of the tongue, tonsils, oesophagus, trachea, lungs, heart and liver
- ❑ removal of tonsils
- ❑ inspection of lymph nodes:
 - ❑ ***Inn. bifurcationes***
 - ❑ *In. tracheobronchalis sinister*
 - ❑ *In. tracheobronchalis dexter*
 - ❑ *Inn. tracheobronchales medii*
 - ❑ ***In. eparterialis***
 - ❑ *In. tracheobronchalis cranialis*
 - ❑ ***Inn. mediastinales***
 - ❑ *Inn. mediastinales craniales*
 - ❑ *Inn. mediastinales medii*
 - ❑ *Inn. mediastinales caudales*



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INSPECTION OF LUNGS AND HEART



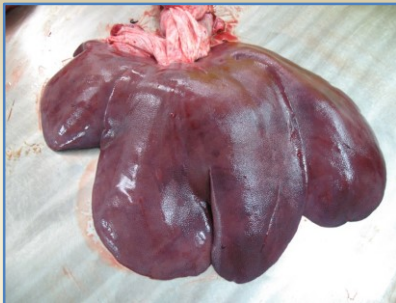
- *incision* to open trachea and lower airways

Heart

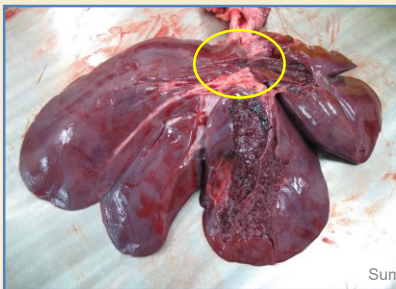
- visual inspection of pericardium, opening of pericardial sac
- *incision* to open all chambers and through interventricular septum to examine myocardium
- incision is made only in apparently changed organs

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INSPECTION OF LIVER, SPLEEN AND KIDNEYS



- visual inspection, palpation of liver, spleen and kidneys
- visual inspection of
 - *Inn. portales*
 - *Inn. pancreatici*
 - *Inn. retrohepatici*



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INSPECTION OF ALIMENTARY TRACT

- ❑ visual inspection of stomach and intestines
- ❑ visual inspection of lymph nodes
 - ❑ *Inn.gastrici*
 - ❑ *Inn.mesenterici craniales et caudales*



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CARCASS INSPECTION

Visual inspection of:

- ❑ head and throat
 - ❑ mucosa of oral and nasal cavity
- ❑ skin
- ❑ muscles, fat, bones and joints
- ❑ pleura and peritoneum
- ❑ mammary gland
- ❑ testis
- ❑ umbilicus – young animals

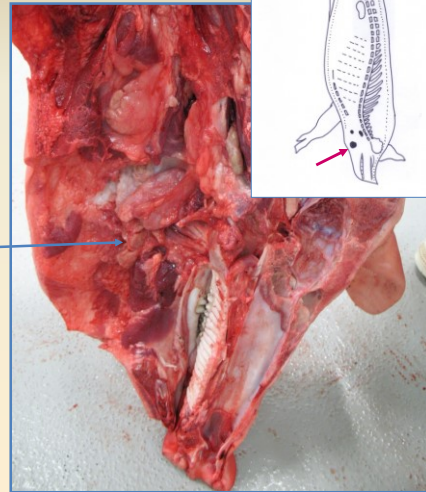


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CARCASS INSPECTION

- visual inspection, *palpation and incision* of lymph nodes

- *Inn. mandibulares*
- *Inn. supramammarii* (only sows)



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INSPECTION OF POULTRY AND RABBITS

adspection
palpation

- carcass condition
 - skin surface
 - bleeding
- muscles
- bones
- joints



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INSPECTION OF POULTRY AND RABBITS

inspection
palpation



- organs
- heart
- liver
- proventriculus and gizzard
- urogenital system
- air sacs

judgement of the shape, colour and consistency

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EXTENDED POSTMORTEM INSPECTION

Indication

- ❑ suspected systemic or generalised infection
- ❑ emergency slaughter
- ❑ pathological findings



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EXTENDED POSTMORTEM INSPECTION

1. Incision of suspected parts of carcass and their lymph nodes
2. Incision of main carcass lymph nodes
3. Release of shoulder
4. Release of deep muscles of the thigh from its medial side
5. Palpation and incision of joints
6. Visual inspection of bone marrow

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INCISION OF SUSPECTED PARTS

Indication

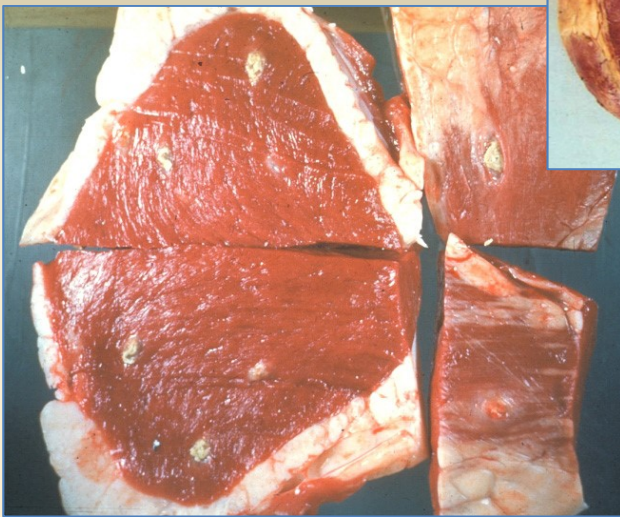
- ❑ signs of decubitus and bruises
- ❑ bleedings and hematomas (trauma during the transport)
- ❑ fluctuations by touch (abscess)
- ❑ diagnostic cuts
 - ❑ swine and bovine cysticercosis – musculature of the neck, scapula, back, loin and hip

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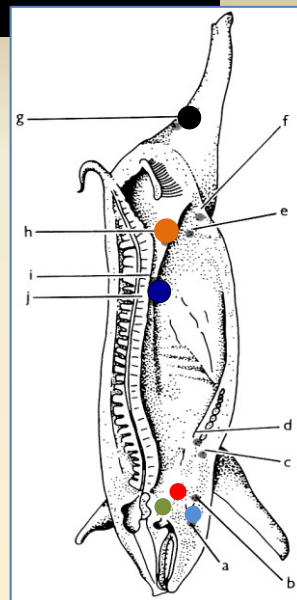


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INCISION OF MAIN CARCASS LYMPH NODES - SWINE

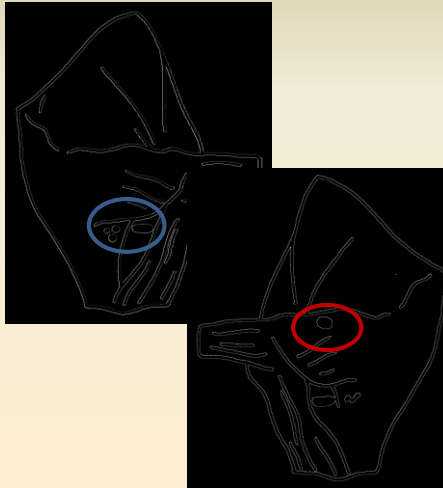
- ❑ *Inn. retropharyngei mediales*
- ❑ *Inn. mandibulares accessorii*
- ❑ *Inn. cervicales superficiales dorsales*
- ❑ *Inn. poplitei*
- ❑ *Inn. iliaci medii*
- ❑ *Inn. renales*



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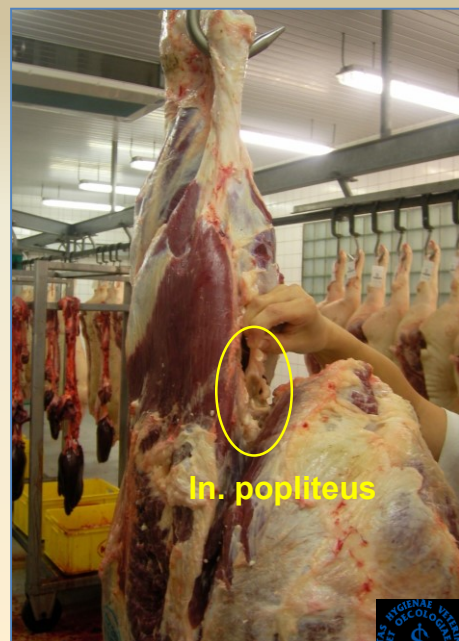


INCISION OF MAIN CARCASS LYMPH NODES - CATTLE



- ❑ *In. cervicales superficiales dorsales (praescapulares)*
- ❑ *In. axillares propii*
- ❑ *In. poplitei*
- ❑ *In. iliofemorales*
- ❑ *In. subiliaci*
- ❑ *In. renales*

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SHOULDER RELEASE

Indication

- insufficient bleeding
- deep muscle souring
- dystrophy
- hydraemia of meat
- late evisceration
- abnormal odour
- tympany
- fractures



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RELEASE OF DEEP MUSCLES OF THE THIGH



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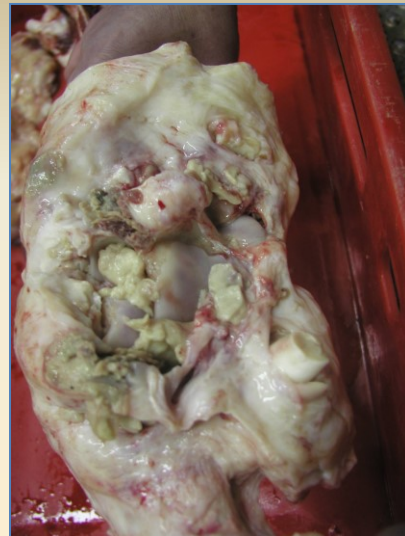
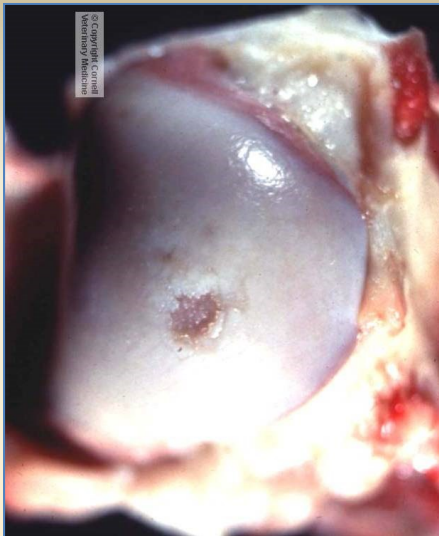


PALPATION AND INCISION OF JOINTS

Indication

- ❑ one or more swollen joints - fluctuation of joints
- ❑ amount and character of synovial fluid
- ❑ small amount of synovial fluid
- ❑ predisposed sepsis - synovial fluid taken for microbiological testing

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BONE MARROW INSPECTION

Indication

- ❑ cachectic and hydremic animals
- ❑ generalized neoplastic changes
- ❑ anemia
- ❑ incision of long bones
- ❑ whitish, blunt or fatty degraded, gelatinous, liquified



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POST – MORTEM JUDGEMENT

- ❑ decision undertaken by an official veterinarian
- ❑ determining whether meat is **fit** for human consumption without any restriction, or **unfit** for human consumption

Decision is based on all available evidence:

- ❑ FCHI, horse and cattle passports
- ❑ findings from *ante-* and *postmortem* inspection
- ❑ findings from laboratory tests

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CATEGORIES OF JUDGEMENT AND CRITERIA



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APPROVED = FIT

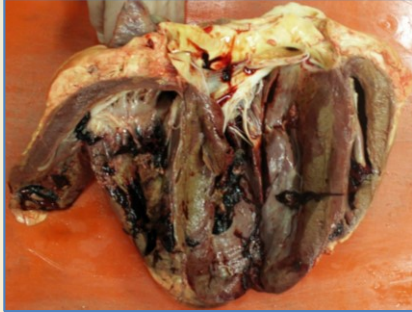
The carcass and edible offals shall be approved for human consumption when the *post-mortem* examination has revealed **no evidence** of any significant abnormal condition or disease and if the slaughter operation has been implemented in accordance with hygienic requirements



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CONDEMNED = UNFIT



- Unfit meat and offals are divided into three categories and are called **animal by-products**, including specified risk material. Marking and handling of animal by-products leads Regulation No 1069/2009 and Regulation No 142/2011



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DECISIONS CONCERNING MEAT

Meat is to be declared unfit for human consumption if it:

- derives from animals that have not undergone *ante-mortem* inspection, except for hunted wild game
- derives from animals the offal of which has not undergone *post-mortem* inspection
- derives from animals which are dead before slaughter, stillborn, unborn or slaughtered under the age of 7 days
- results from the trimming of sticking points

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DECISIONS CONCERNING MEAT

Meat is to be declared unfit for human consumption if it:

- ❑ derives from animals affected by an OIE List A or, where appropriate, OIE List B disease
- ❑ derives from animals affected by a generalised disease, such as generalised septicaemia, pyaemia, toxemia or viraemia
- ❑ is not in conformity with microbiological criteria
- ❑ exhibits parasitic infestation
- ❑ contains residues or contaminants in excess of the levels laid down in Community legislation

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DECISIONS CONCERNING MEAT

Meat is to be declared unfit for human consumption if it:

- ❑ without prejudice to more specific Community legislation, derives from animals or carcasses containing residues of forbidden substances or from animals that have been treated with forbidden substances
- ❑ has been treated illegally with decontaminating substances
- ❑ has been treated illegally with ionising or UV-rays
- ❑ contains foreign bodies (except, in the case of wild game, material used to hunt the animal)

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DECISIONS CONCERNING MEAT

Meat is to be declared unfit for human consumption if it:

- ❑ exceeds the maximum permitted radioactivity levels laid down under Community legislation
- ❑ indicates patho-physiological changes, anomalies in consistency, insufficient bleeding (except for wild game) or organoleptic anomalies, in particular a pronounced sexual odour
- ❑ derives from emaciated animals
- ❑ contains specified risk material

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DECISIONS CONCERNING MEAT

Meat is to be declared unfit for human consumption if it:

- ❑ shows soiling, faecal or other contamination
- ❑ consists of blood that may constitute a risk to public or animal health owing to the health status of any animal from which it derives or contamination arising during the slaughter process
- ❑ in the opinion of the official veterinarian, after examination of all the relevant information, it may constitute a risk to public or animal health or is for any other reason not suitable for human consumption

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ACTION FOLLOWING CONTROLS - COMMUNICATION OF INSPECTION RESULTS

- ❑ the official veterinarian records and evaluates the results of inspection activities
- ❑ the results of inspections and tests are included in relevant databases
- ❑ if inspections reveal the presence of any disease (notifiable disease) or pathological condition, the official veterinarian informs the food business operator and competent authority

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HEALTH AND IDENTIFICATION MARKING

- ❑ Food business operators shall not place on the market a product of animal origin unless it has either:
 - ❑ a health mark or
 - ❑ an identification mark
- ❑ Food business operators may not remove a health mark from meat unless they **cut** or **process** it or **work** upon it in another manner
- ❑ Form of the identification mark leads Regulation (EC) No. 853/2004 and No. 854/2004

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HEALTH AND IDENTIFICATION MARKING

- ❑ the identification mark must be applied **before** the product leaves the establishment
- ❑ the health mark is applied only to animals (domestic ungulates, farmed game mammals other than lagomorphs, and large wild game) **having undergone *antemortem* and *postmortem* inspection** there are no grounds for declaring the meat unfit for human consumption

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HEALTH AND IDENTIFICATION MARKING

- ❑ the health mark may be applied **before the results of any examination for trichinosis** is available, if the official veterinarian is satisfied that meat from the animal concerned will be placed on the market only if the results are satisfactory



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HEALTH AND IDENTIFICATION MARKING

The mark must indicate:

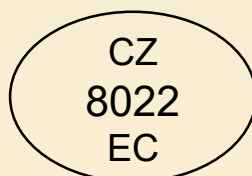
- ❑ the name of the country in which the establishment is located, which may be written out in full or shown as a two-letter code (In the case of the Czech Republic – CZ)
- ❑ approval number of the slaughterhouse
- ❑ when applied in an establishment located within the Community, the mark must be oval in shape and include the abbreviation CE, EC, EF, EG, EK,EO, EY, ES, EÜ, EK, EB or WE)

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HEALTH AND IDENTIFICATION MARKING

- ❑ the health mark may also include an indication of the official veterinarian who carried out the health inspection of the meat
- ❑ oval mark at least 6,5 cm wide by 4,5 cm high
- ❑ letters must be at least 0,8 cm high and figures at least 1 cm high.



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HEALTH AND IDENTIFICATION MARKING

- ❑ health-marking takes place on the external surface of the carcass, by **stamping the mark in ink or hot branding**, and in such a manner that, if carcasses are cut into half carcasses or quarters, or half carcasses are cut into **three pieces, each piece bears a health mark**
- ❑ the colours used for health marking must be authorised

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THANK YOU FOR YOUR ATTENTION!

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