



Overview of ongoing EFSA work on the meat inspection mandate

**EFSA Stakeholder Consultative Platform
18th Meeting**

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- Background for meat inspection mandate
- Progress in the development of Scientific Opinions
- Progress in the development of Technical Reports
- Stakeholder involvement
- Timeline for future opinions and reports

- Mandate from the European Commission (EC)
 - Annex 1 – Provision of Scientific Opinions
 - Annex 2 – Provision of Technical Reports
- Considering: domestic swine, poultry, bovine, domestic sheep and goats, farmed game and domestic solipeds
- Scientific Opinions and Technical Reports on meat inspection for the different six species will be delivered in a staggered manner from September 2011 to June 2013

- Annex 1:
 - Addressing biological and chemical hazards, as well as the potential impact on animal health and welfare of any changes to meat inspection
 - EFSA asked the BIOHAZ, CONTAM and AHAW Panels to deliver these Opinions
 - Each Panel set up a working group to assist developing the draft Opinions
- Annex 2:
 - EFSA asked the BIOMO Unit to deliver the Technical Reports defining harmonised epidemiological criteria



Meat inspection

SCIENTIFIC OPINIONS

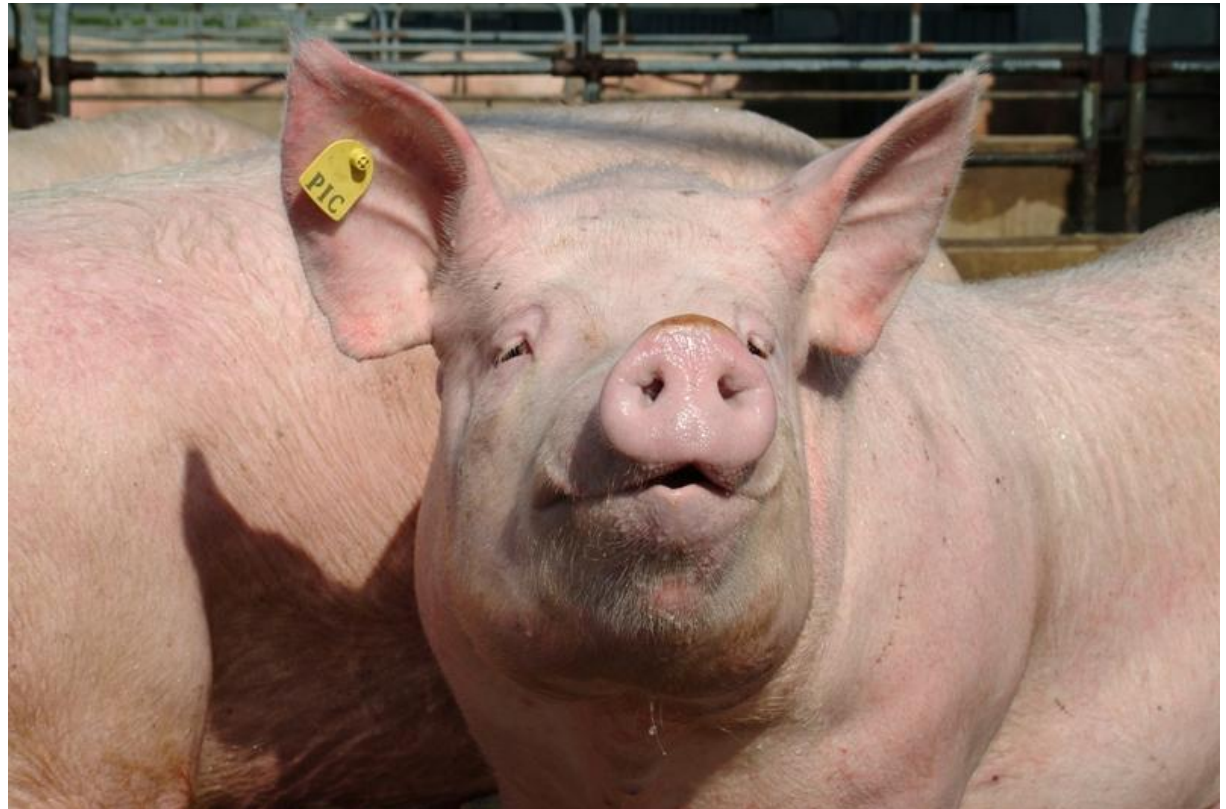
1. Identify and rank the main risks for public health (PH) that should be addressed by meat inspection at EU level.
2. Assess the strengths and weaknesses of the current meat inspection methodology and recommend possible alternative methods, taking into account implications for animal health and welfare.
3. Recommend additional inspection methods in case other previously not considered hazards have been identified above (e.g. salmonellosis, campylobacteriosis).
4. Recommend possible alternative methods and adaptations of inspection methods and/or frequencies of inspections that provide an equivalent level of protection within the scope of meat inspection or elsewhere in the production chain that may be used by risk managers in case they consider the current methods disproportionate to the risk.
 - e.g. based on the risks or on data obtained using harmonised epidemiological criteria. When appropriate, food chain information should be taken into account.

Issues outside the scope of the mandate:

- Transmissible Spongiform Encephalopathies (TSEs)
- Issues other than those of PH significance that compromise fitness of meat for human consumption (e.g. sexual odour)
- Impact of changes to meat inspection procedures on occupational health of abattoir workers, inspectors, etc
- The definition of the responsibilities of the different actors (official veterinarians, official auxiliaries, staff of food business operators)

Meat inspection

SWINE



TOR1: Identify/rank the main risks for public health

- Methodology: qualitative risk assessment based on:
 - prevalence on carcasses,
 - incidence and severity of disease in humans,
 - source attribution of hazards to pork.

Salmonella HIGH relevance

Yersinia enterocolitica MEDIUM relevance

Toxoplasma gondii MEDIUM relevance

Trichinella MEDIUM relevance

TOR2: Assess the strengths and weaknesses of the current meat inspection system

Ante-mortem inspection enables:

Using food chain information (FCI)

Detection of clinically observable zoonoses

Animal identification and traceability, and evaluation of cleanliness of pigs.

Post-mortem inspection enables:

Detection of visible faecal contamination, macroscopic lesions caused by some zoonotic agents

To detect *Trichinella* spp. by laboratory examination.

Strengths

Current *ante-* or *post-mortem* inspection cannot

macroscopically detect the food-borne hazards of most relevance

The use of palpation/incision techniques during *post-mortem* inspection mediates cross-contamination

Weaknesses

TOR3: Recommend inspection methods fit for new hazards currently not covered by the meat inspection system

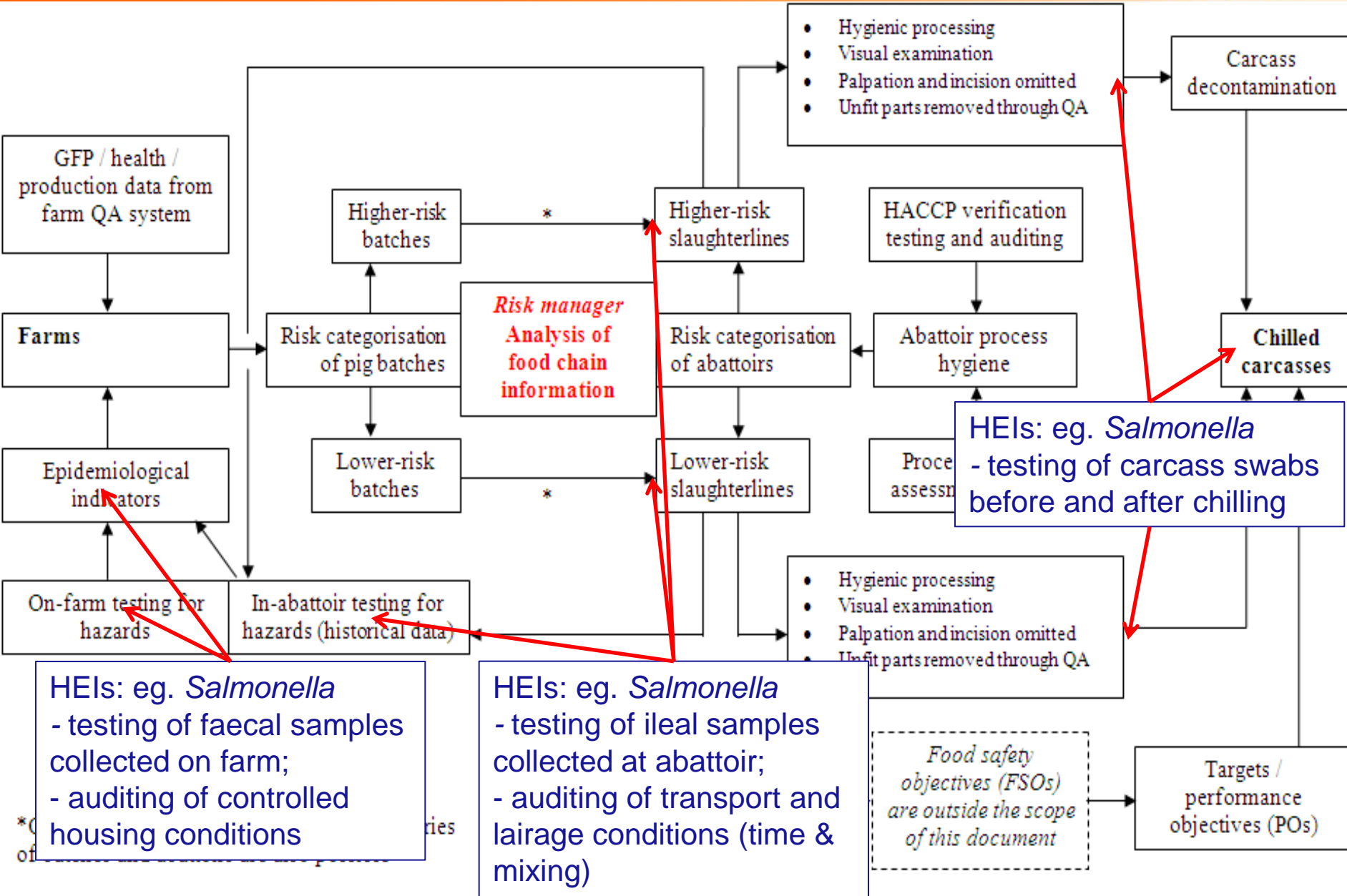
- The only way to ensure effective control of the hazards of relevance identified is to establish:

A comprehensive pork carcass safety assurance, combining measures applied on-farm and at-abattoir

- A prerequisite for this system is setting targets for these hazards to be achieved on carcasses.
 - These targets would also inform what has to be achieved earlier in the food chain.

- Appropriate targets for each of the main pork-borne hazards at abattoirs would:
 - provide a measurable and transparent focus for their meat safety assurance system;
 - enable differentiating between “acceptably” and “unacceptably” performing abattoirs;
 - represent a basis for “backward”- generating of appropriate targets for supplier pig farms and/or indicators for risk categorisation of incoming pigs; and
 - enable related, pre-determined, Food Safety Objectives to be satisfied, hence providing an Appropriate Level of Protection as well.

Main elements of generic pork safety assurance with respect to *Salmonella* spp. and *Y. enterocolitica*



At abattoir level, the risk reduction for these hazards can be achieved through programs based on GMP/GHP and HACCP, including:

- hygienic and technology-based measures aimed at avoiding cross-contamination; with additional interventions such as surface decontamination of carcasses if necessary;
- heat- or freezing-based treatments of carcass meat to inactivate parasites if necessary and as alternative to laboratory testing of carcasses;
- FCI should be used to differentiate incoming pigs in respect to hazard risks based on herd status *via* sampling at farms or abattoirs, and to differentiate risk-reduction capacity of abattoirs (process hygiene).

At farm level, the risk reduction for the main hazards can be achieved through measures such as:

- herd health programs, closed breeding pyramids, GHP and GFP
- categorisation of animals based on the carrier state of these agents

TOR4: Recommend adaptations of current methods

- Palpation/incisions used in current *post-mortem* inspection should be omitted **in pigs subjected to routine slaughter**, because the risk of microbial cross-contamination is higher than the risk associated with potentially reduced detection of conditions targeted by these techniques.
- The use of these manual techniques during *post-mortem* examination should be limited to **suspect pigs identified** through FCI/*ante-mortem* inspection or *post-mortem* visual detection of relevant abnormalities where it would lead to risk reduction.
- *Post-mortem* examination involving palpation and incision, where necessary, should be **performed separately from the slaughter line** operation and accompanied with laboratory testing as required.
- Elimination of abnormalities on aesthetic/meat quality grounds can be ensured through **meat quality assurance systems**.

Chemical hazards – TOR1: Ranking of potential concerns for chemical compounds

<div style="text-align: right;">Group</div> <div style="text-align: left;">Category</div>	Prohibited substances	Veterinary Medical Products	Contaminants
Negligible potential concern	<ul style="list-style-type: none"> •Chloroform •Colchicine 	<ul style="list-style-type: none"> •VMPs below MRLs 	<ul style="list-style-type: none"> •Dyes
Low potential concern	<ul style="list-style-type: none"> •<i>Aristolochia</i> spp. •Thyreostats •Stilbenes •Steroids •Resorcylic acid lactones •Beta-agonists •Chlorpromazine •Dapsone 	<ul style="list-style-type: none"> •VMPs exceeding MRLs 	<ul style="list-style-type: none"> •Organochlorines (OCs) •Organophosphates (OPs) •Perfluorinated compounds (PFCs) •Toxic secondary plant metabolites •Mycotoxins (except ochratoxin A)
Medium potential concern	<ul style="list-style-type: none"> •Nitroimidazoles •Nitrofurans 		<ul style="list-style-type: none"> •Non-dioxin-like polychlorinated biphenyls (NDL-PCBs) •Chemical elements (cadmium, mercury and lead) •Ochratoxin A
High potential concern	<ul style="list-style-type: none"> •Chloramphenicol 		<ul style="list-style-type: none"> •Dioxins and dioxin-like polychlorinated biphenyls (DL-PCBs)

Main conclusions – TOR2:

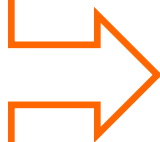
Chemical hazards

- Chemical substances in pork are unlikely to pose an immediate or short-term health risk for consumers. Aggregated results from the NRCP (2005-2009) show a low number of non-compliant samples.
- However, certain bioaccumulating compounds are of potential concern as they will contribute to the overall exposure.
- Dioxins and DL-PCB which are known to bioaccumulate in the food chain and therefore were ranked as being of high potential concern. As these substances are not yet included in the Council Directive 96/23/EC, they have been considered as new hazards.
- Ranking of chemical compounds should be updated regularly when new data become available.
- The current prescriptive system of sampling for residues and contaminants is well established. However it has a limited flexibility and there is apparently insufficient integration between results of the quality controls of official feed and food national controls.

Main recommendations – TOR3: Chemical hazards

- Risk-based sampling strategies taking into account FCI:

Pigs raised for fattening on farms
-with operational **HACCP-based**
protocols and
-with **full and reliable FCI data**



Tailored sampling plan
directly primarily to the emerging
contaminants and/or other
substances not covered by FCI

Pigs raised on farms
-**without operational HACCP-based**
protocols and
-with **incomplete and unreliable**
FCI data



Prescriptive sampling
remains recommended with the
inclusion of emerging
contaminants in the food chain

- To include competent *ante-* and *post-mortem* inspection criteria for the identification of illicit use of substances and to encourage analyses at the farm level.
- Any measures taken to improve the efficacy of meat inspection protocols need to address the compliance of imports from Third Countries into the EU with these strategies.

Main conclusions – Animal health and welfare

- Meat inspection is a key component of the overall surveillance system for pig health and welfare but information is currently underutilised.
- Proposed changes to the pig meat inspection, as visual only, will lead to some reduction in the detection probability of diseases and welfare conditions.
 - minimal difference for diseases/conditions that affect several organs and
 - substantial for early cases of a range of diseases
- To mitigate the reduced detection probability, palpation and/or incision should be conducted as a follow-up to visual inspection whenever relevant abnormalities are seen.
- Risk categorisation, based on increased usage of FCI on pig health and welfare, may provide opportunities for improved surveillance and monitoring.
 - it may result in surveillance being conducted on biased samples that are not representative of the entire population with respect to AHAW.
- Categorisation based on food-borne human health risks will likely have medium positive impact on pig health and welfare surveillance.
 - This would be less beneficial if journey times from the farm to the abattoir were increased.

Main recommendations – Animal health and welfare

- There should be an assessment of the relative contribution of meat inspection to the overall system of surveillance and monitoring of pig health and welfare.
- There should be a critical evaluation of the efficiency and utility of risk-based approaches to meat inspection of pigs, using risk categorisation from the perspective of pig health and welfare.
- There should be development and application of standards (including indicators of welfare outcomes and major endemic diseases) to enable ongoing evaluation of the quality of pig health and welfare surveillance during meat inspection.
- Options should be examined to better utilise existing abattoir data and records on pig health and welfare.



Meat inspection

TECHNICAL ASSISTANCE

Terms of reference for technical assistance

- Define **harmonised epidemiological criteria** (e.g. prevalence, status of infection, production systems) for **specific hazards already covered by current meat inspection** (trichinellosis, tuberculosis, cysticercosis, ...) and for possible additional **hazards identified in a scientific opinion** on the hazards to be covered by inspection of meat (see Annex 1), which can be used **to consider adaptations of meat inspection methodology**.
- Provide **a summary of comparable data** from Member States based on the above defined harmonised epidemiological criteria, if existing, e.g. from ongoing monitoring in humans, food or animals.
- Recommend **methodologies and minimum monitoring/inspection requirements** to provide comparable data on such harmonised epidemiological indicators, in particular if comparable data are missing.

- **Harmonised epidemiological indicator (HEI) =** prevalence or incidence of the (biological) hazard at a certain stage of food chain or an indirect measure of the hazards (such as audits of farms) that correlates to a human health risk caused by the hazard.
- **HEIs** to be used by the EC and Member States in order to
 - Consider if adaptations in meat inspection methods may be applied (e.g. use in risk analyses)
 - Help to classify farms/slaughter batches/ slaughterhouses according to risks and for setting targets in the proposed new pork carcass safety assurance framework
- Hazards covered by the HEI: *Salmonella*, *Yersinia*, *Toxoplasma*, *Trichinella*, *Cysticercus*, *Mycobacteria*

- HEIs proposed include
 - Prevalence of the hazard in animal populations or on carcasses
 - Auditing of farms (controlled housing conditions) or animal transfer or slaughterhouse conditions
- A set of HEI suggested for each hazard, which can be used by risk managers for different purposes, alone or in combinations, at national, regional or at herd/ farm level
- HEI selected through harmonised approach, including:
 - Listing the most important risk factors related to the hazard throughout the entire meat chain (farm to fork)
 - Identifying the possible indicators for public health and changes in meat inspection
 - Evaluating the possible HEI based on their quality, appropriateness, data availability and feasibility, using a scoring system

Suggested indicators for *Salmonella* – an example

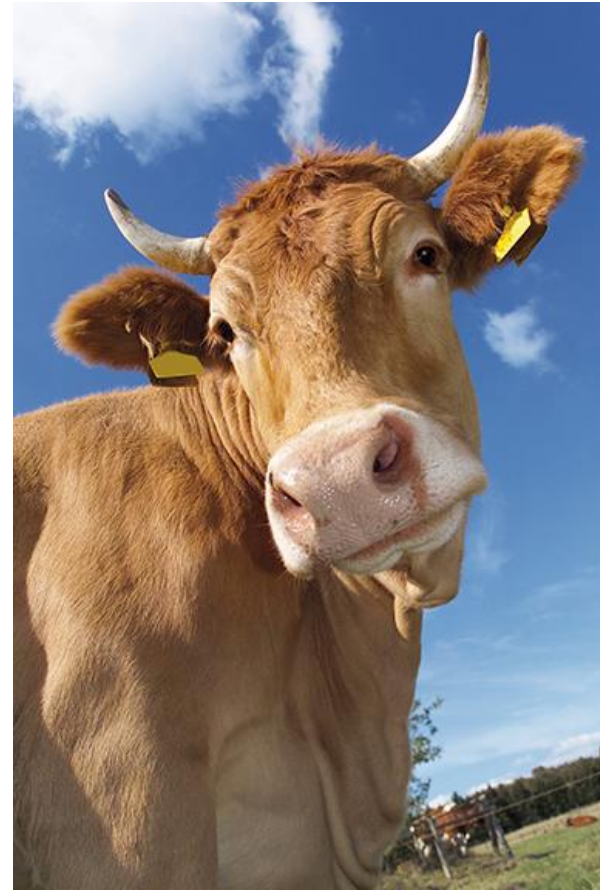
Hazard: ***Salmonella***

Indicators (animal/ food category/other)	Food chain stage	Analytical method	Specimen
HEI 1 Breeding pigs	farm	Microbiology - serotyping	Pooled faeces
HEI 2 Fattening pigs prior to slaughter	farm	Microbiology - serotyping	Pooled faeces
HEI 3 Controlled housing conditions at farms	farm	auditing	
HEI 4 Transport and lairage	Transport- Slaughterhouse	Auditing	Time, mixing
HEI 5 Fattening pigs – in coming to slaughter process	Slaughterhouse	Microbiology - serotyping	ileal contents
HEI 6 Fattening pigs –carcass after slaughter process prior to chilling	Slaughterhouse	Microbiology - serotyping	Carcass swab
HEI 7 Fattening pigs –carcass after slaughter process after chilling	Slaughterhouse	Microbiology - serotyping	Carcass swab

- Swine meat inspection: EFSA commissioned the report “Overview of current practices of meat inspection in the European Union”
 - Published concurrently with ‘Swine meat inspection Opinion’
- Poultry meat inspection: EFSA commissioned the report “Overview on current practices of poultry slaughtering and poultry meat inspection”
 - To be published by July 2012, together with Scientific Opinion
- Remaining species: Four technical hearings are planned for April/May 2012 where species-specific technical input from stakeholders is sought

Meat inspection

OTHER SPECIES



Progress overview: delivering the Opinions

Species	Adoption
Swine	September 2011
Poultry	June 2012
Bovine/ Small Ruminants	June 2013
Domestic solipeds and farmed-game	June 2013

- We are grateful to:
 - the BIOHAZ, CONTAM and AHAW Panels,
 - its working groups on meat inspection,
 - the BIOMO working group on meat inspection

for the effort put into developing these Opinions
and Technical Reports

ANY QUESTIONS?



THANKS FOR YOUR ATTENTION!
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