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Session 27 "Early life of piglets"

European Food Safety Authority

EFSA Scientific Opinion on tail biting in pigs and possible means to reduce the need for tail docking

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Dr. Oriol Ribó
Deputy Head of Unit - Animal Health and Welfare (AHAW)
EFSA, Parma, Italy – oriol.ribo@efsa.europa.eu

EFSA's Mission

Provide **scientific advice and scientific and technical support** for the Community's legislation and policies in all fields which have a direct or indirect impact **on food and feed safety** including **animal health and welfare**

AHAW Panel mandate

*The **Animal Health and Welfare Panel** deals with questions on all aspects of animal health and animal welfare, **primarily** relating to **food producing animals**, including fish*

Terms of Reference

Directive 2001/88 requires the Commission to submit to the Council a report, based on EFSA Scientific Opinions concerning various aspects of housing and husbandry systems for pigs (sows, boars & fatteners).

EFSA was requested to give scientific advice concerning the risks associated with Pig Tail Biting and possible means to reduce the need for tail docking considering the different housing and husbandry systems.

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Main Conclusions

1. **Tail biting (TB) can cause very poor welfare**: evidence indicates that TB pigs are likely to be frustrated.
2. **TB is associated with a variety of pathological changes** ranging from spinal abscesses to pyaemia, which may be associated with reduced growth rate or total carcass condemnation.
3. **Tail docking (TD) is likely to be painful**, both in the short and long term (possible neuroma formation).
4. **TB is considered as an abnormal behaviour**. The need to perform exploration and foraging behaviour is considered to be a major underlying motivation.

Main Conclusions

5. **TB has a multi-factorial origin** and some causal factors have more weight, such as the absence of straw, the presence of slatted floors and a barren environment. The amount and form of straw are also important. There is little evidence that provision of toys can reduce the risk of TB.
6. **Heritability value of TB is high enough for selection.** Phenotypic correlation between TB and higher lean tissue growth rate has been reported.
7. **Potential TB hazards** are: competition for feed, inadequate feed intake, inadequate dietary sodium, deficiency of dietary essential amino acids, and a sudden change in diet composition.

Main Conclusions

8. **TB risk seems to be increased in autumn:** main hazards are heat and cold stress and high airspeed.
9. **Practical experience**, among others, strongly suggest **poor health status** to be a hazard for tail biting.
10. **The efficacy of TD** to reduce the frequency of TB is **very difficult to estimate** due to the level of TB in control undocked pigs. Under common intensive farming conditions, **TD reduces the frequency of TB**, but **does not completely eliminate the problem** when unfavourable conditions persist.

Main Recommendations

1. **To monitor pigs** when husbandry is changing to possibly prevent TB outbreaks. The importance of **good stockmanship** is emphasized.
2. **To address the major risk factors**: (i) provision of straw, preferably as bedding, and (ii) proportion of slatted floors. When **TB incidence increases, other factors affecting its likelihood** (e.g. air speed, health status, high temperature) should be considered.
3. **To implement measures other than TD**, since TB can cause very poor welfare and TD is likely to be painful.

Recommendations Future Research

Research is recommended in the following fields:

1. **TB Prevalence in docked and undocked populations.**
2. **Role of genetics, environment, husbandry practices, age and sex.**
3. **Understand the basic causes** of TB. Define **tools for early detection.**
4. **Address severity and duration, prevalence and extent of chronic pain** from TD.
5. **Effect of TD on TB** under different housing and management systems.

Risk Assessment in Animal Welfare

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Risk in AW: probability of a negative effect and the severity of that effect, consequential to the exposure to a hazard(s).

Hazards Identification

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Hazards Characterisation

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Exposure Assessment

↓

Risk Characterisation

↓

Identification of Major Risks for Animal Welfare

Hazard description	Hazard characterization						
	Adverse effect	Magnitude		Quantitative assessment of likelihood (%)			Qualitative assessment of the uncertainty
		Severity (0-4)	Duration (%)	min	ml	max	
Tail docking	Fear and Acute Pain	2	0.05	100	100	100	Low
Tail docking	Infection with inflammation	2	4	1	3	5	High
Tail docking	Chronic Pain	1	80	0	blank	100	High
Genetic selection for high lean tissue growth rate (low fatness)	Being tail bitten	3	20	0.1	1	2	High
Castration in males	Being tail bitten	3	20	0.5	1	3	Medium
Lack of farrowing house bedding / enrichment	Being tail bitten	3	20	0.1	0.2	0.4	High
Absence of bedding having previously had bedding since weaning	Being tail bitten	3	20	2	5	15	Medium

Hazard description	Exposure assessment						Risk Characterization	
	Duration (%)	Intensity	Quantitative assessment of P. of Exposure (%)			Qualitative assessment of the uncertainty	Risk estimate [CI95%]	Qualitative uncertainty of the risk estimate
			min	ml	max			
Tail docking	0.001	Full	100	100	100	Low	0,025 [0,025 - 0,025]	Low
Tail docking	0.001	Full	100	100	100	Low	0,060 [0,035 - 0,085]	High
Tail docking	0.001	Full	100	100	100	Low	9,998 [0,999 - 19,000]	High
Genetic selection for high lean tissue growth rate (low fatness)	100	*	70	90	95	High	0,133 [0,057 - 0,213]	High
Castration in males	96	Full	40	45	47	Low	0,080 [0,043 - 0,137]	Medium
Lack of farrowing house bedding / enrichment	100	Full	75	85	90	Low	0,027 [0,017 - 0,040]	High
Absence of bedding having previously had bedding since weaning	8	Full	2	5	10	Medium	0,045 [0,019 - 0,095]	Medium

Risk Assessment Outcomes

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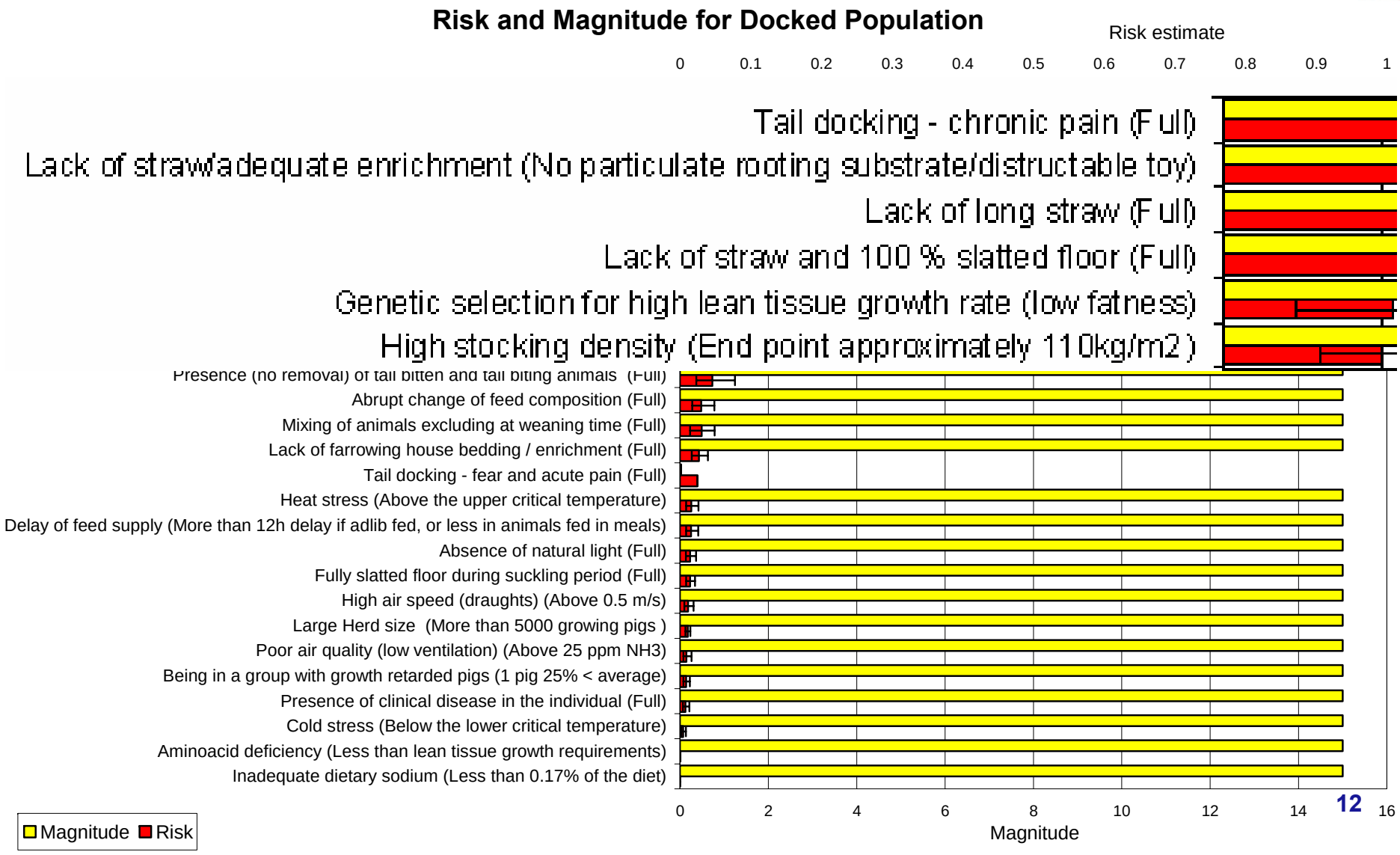
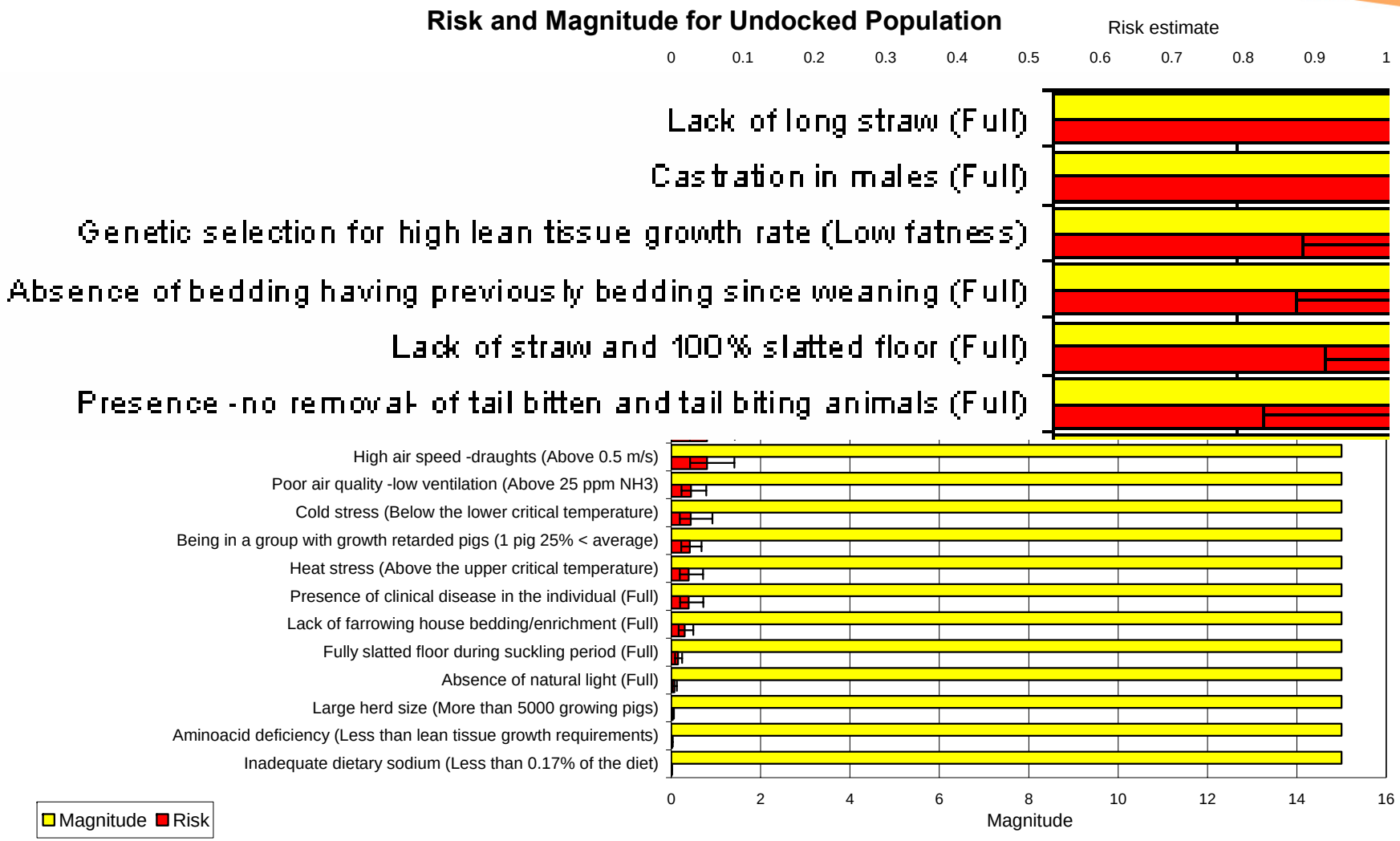


Risk Assessment Outcomes



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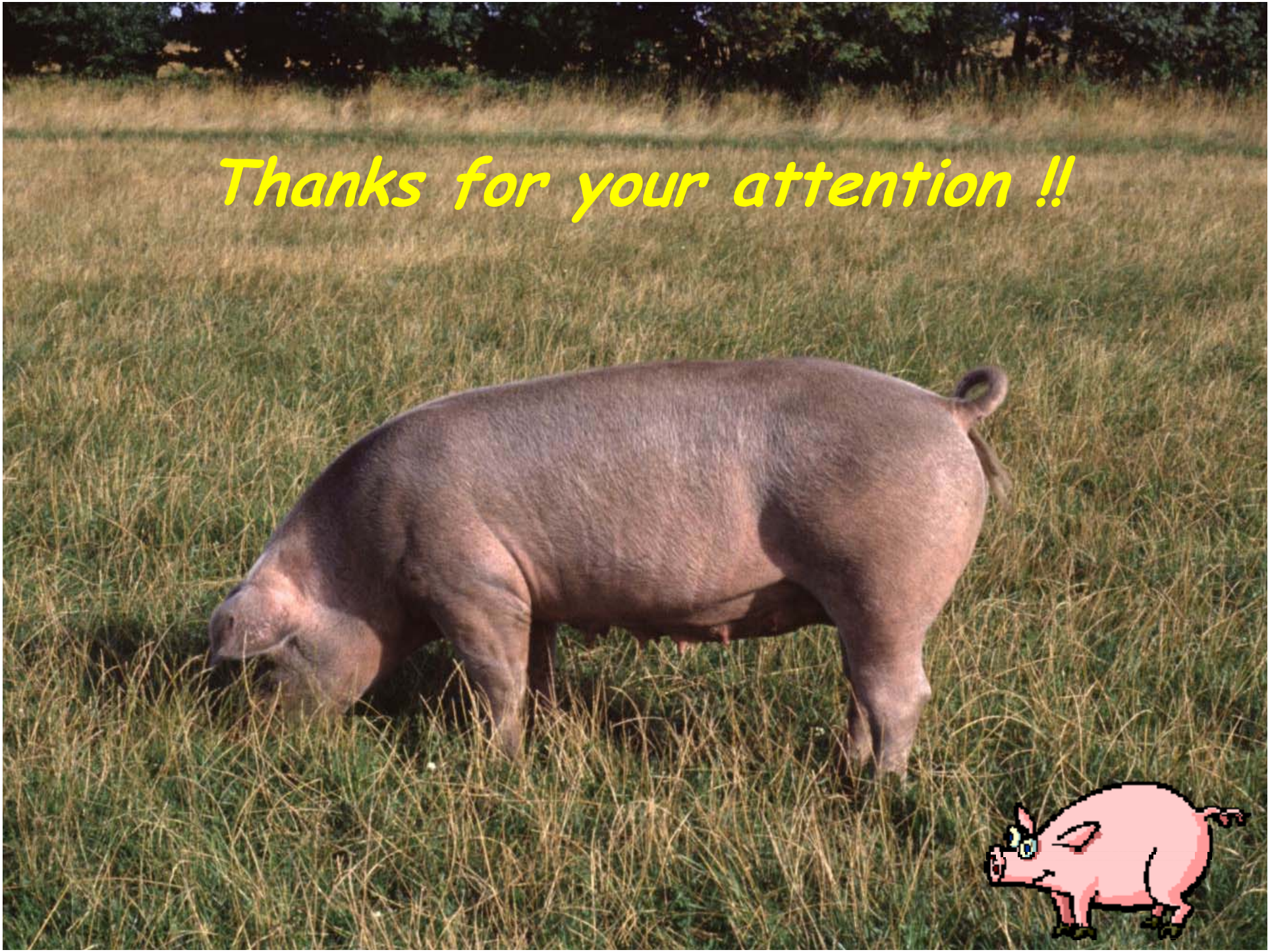
For any additional info


Thanks for your attention !!