



Mission of the Community Veterinary Emergency Team to LITHUANIA

SCOPE of the mission: African swine fever in
domestic pigs and wild boar in Lithuania

(30 July - 1 August 2014)

Terms of Reference

1. **The expert should provide follow-up assistance** to the scientific, technical, managerial and practical on-the-spot assistance on the development of the most suitable control and eradication measures for African Swine Fever (ASF) under local conditions, especially as regards stamping-out and other disease control measures such as movement restrictions and biosecurity **within the framework of Council Directive 2002/60/EC.**
2. Taking into account the recommendation of the previous CVET missions, **the expert should provide targeted support to the Lithuanian authorities to review the existing plan on the surveillance and possible eradication of ASF.**

Terms of Reference

- 3. The expert should report exclusively to the Commission services and the Lithuanian authorities.** Daily reports should be produced and continuous contact should be guaranteed between the team, the Commission services and Lithuanian authorities.
- 4. The expert should report to the Commission and the Member States in the framework of the Standing Committee on the Food Chain and Animal Health.**
5. The expert shall operate under the provisions laid down in Commission Decision 2007/142/EC and in particular on the basis of the standard rules of procedure for groups of experts.

CVET members

- *Jorgen Westergaard (Team leader)*
- *Silvia Bellini*
- *Marisa Arias*



Lithuania: Place visited

- *State Food and Veterinary Service, Vilnius*
- *National Food and Veterinary Risk Assessment Institute, Vilnius – National Reference Laboratory for African swine fever*
- *UAB "Idavang" Rupinskai farm, Ignalina district, UTENA*

Background for CVET mission

- 23 July- at Idavang, a pig farm with **close to 20 000 pigs**, the keeper observed the disease symptoms mainly in sow population : anorexia, vomiting, diarrhea, eye discharges, abortions and death.
- 24 July- at Idavang, same symptoms and increased number of abortions and death.
- Laboratory tests confirmed: **African swine fever**

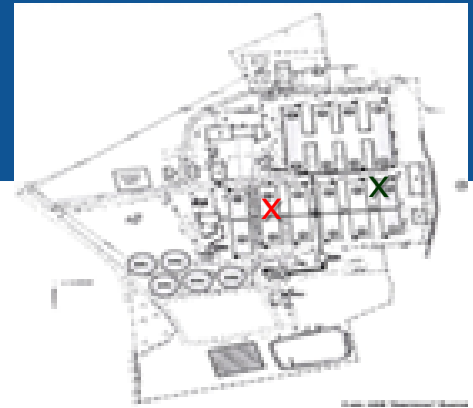


European
Commission

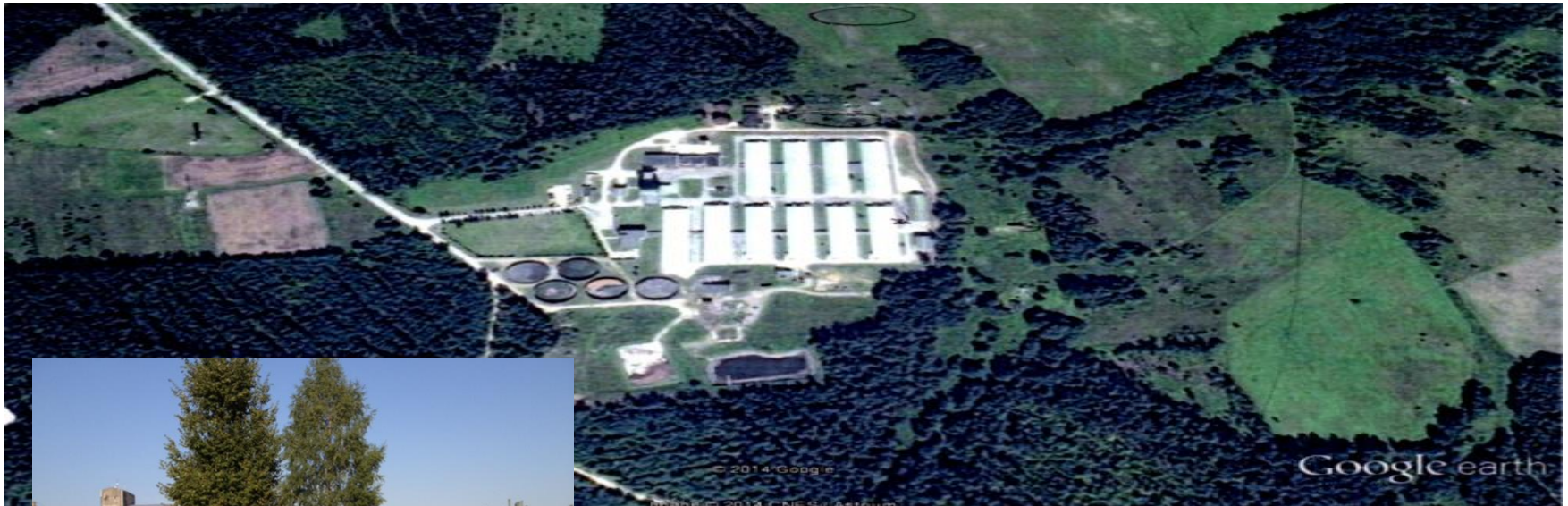
Surveillance area since 7/2013, after confirmation of ASF in June in Belarus

Idavang, Ignalina District (Utena)





Idavang pig farm, Rupinskai



Operating as a “close cycle” pig production

The entrance to Idavang

Initial Epidemiological background (previous event) Idavang farm, Ignalina district

- *23 June, routine serological testing for ASF; all samples tested found negative for ASF antibodies*
- *14th -20th July in the weaner unit 18 pigs died with lesions resembling poisoning*
- *23 July – ASF suspected, severe symptoms in sow population.*



it could represent
the first indication
of ASF presence.

Clinical observations and laboratory data, Idavang

- 24 July, NRL ASF confirmed by PCR. (EURL, ASFV genotype II)
- 23 -24 July; pigs having clinical disease with typical signs and symptoms of ASF. Many abortions and deaths in **sow unit**.
- Laboratory results on 24 July:
 - 36/38 out of 40 **samples positive by PCR** and Ag ELISA (x)
 - **One pig from the weaner unit positive to ASF antibodies** (x)



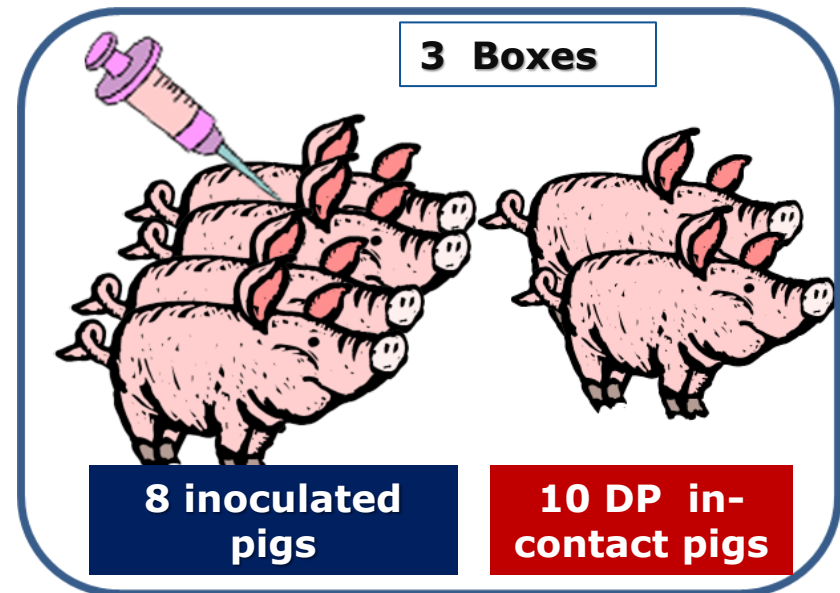
The Lithuanian ASFV isolate LT14/1490, Jan 2014

Similarities between clinical pictures observed at Idavang and in an experimental "in vivo" study with the LT isolate (Jan/2014) carried out at the EURL INIA-CISA were found.



EXPERIMENTAL DESIGN

- 8 Landrace x Large White pigs inoculated by the intramuscular route with **10 HAD50/ml** of LT14/1490
- 10 in-contact pigs.**



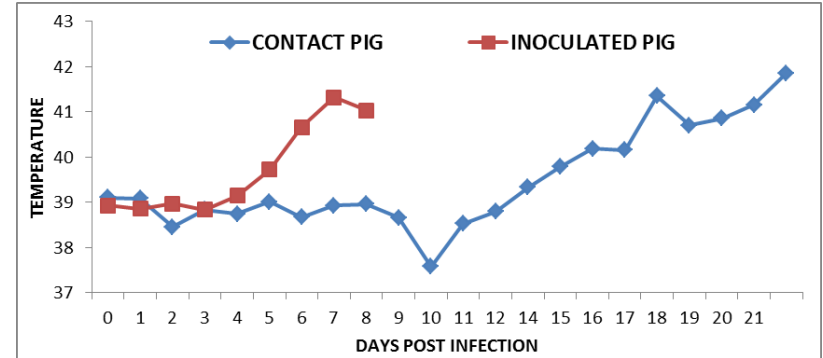
CLINICAL SIGNS



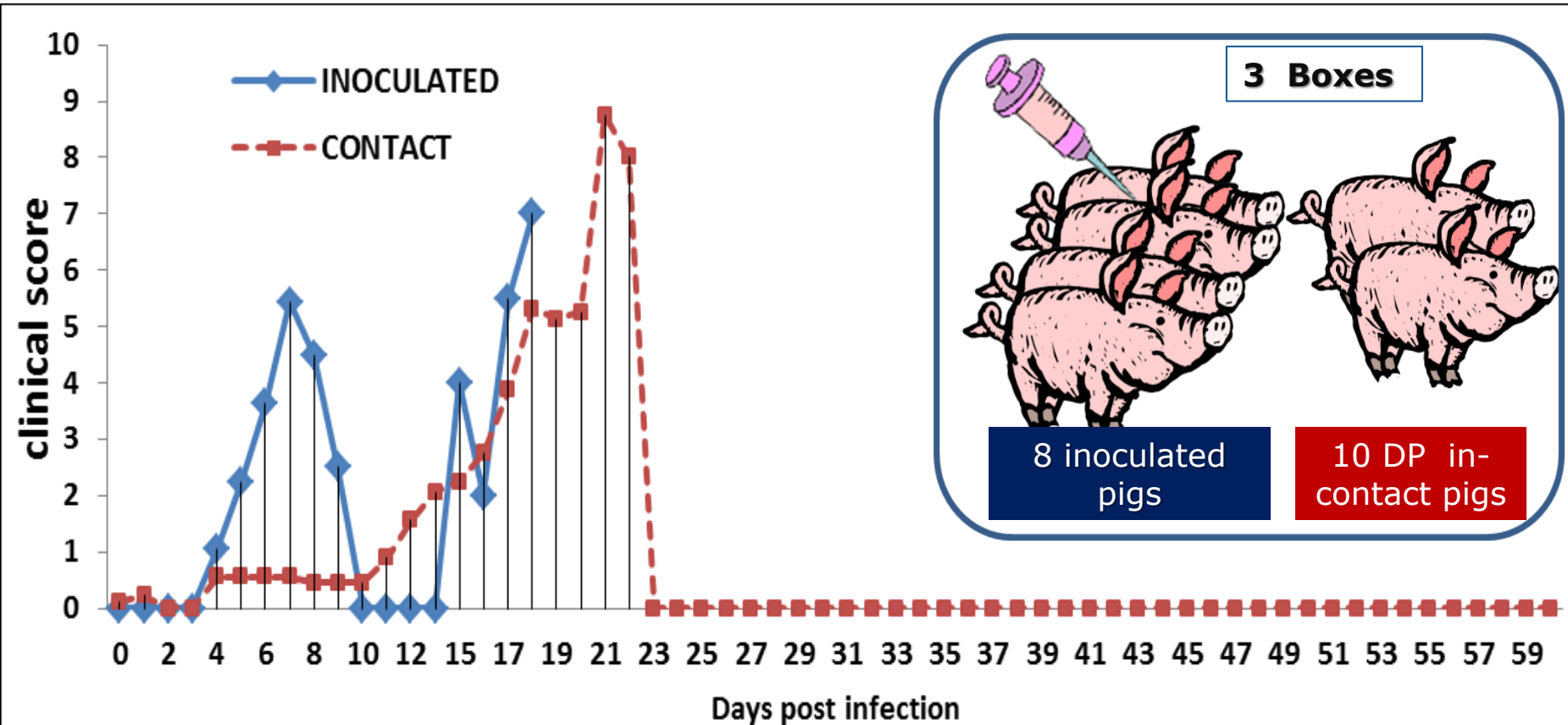
**Daily measurement
scoring : 0 ,1 (mild),2 (Moderate),3
(severe)**

- **High body temperature $>42^{\circ}\text{C}$ (17/18)**
- **Turn bluish-purple and hemorrhages on the ears (13/18)**
- **Ocular discharges (11/18),**
- **Turn bluish-purple and hemorrhages on the abdomen (6/18),**
- **Joint swelling (6/18)**
- **Reddening of the skin (3/18)**
- **Bloody diarrhea (3/18).**
- **Mild anorexia, lethargy, weakness and recumbence associated with the high fever.**

Mortality rate: 94,5%



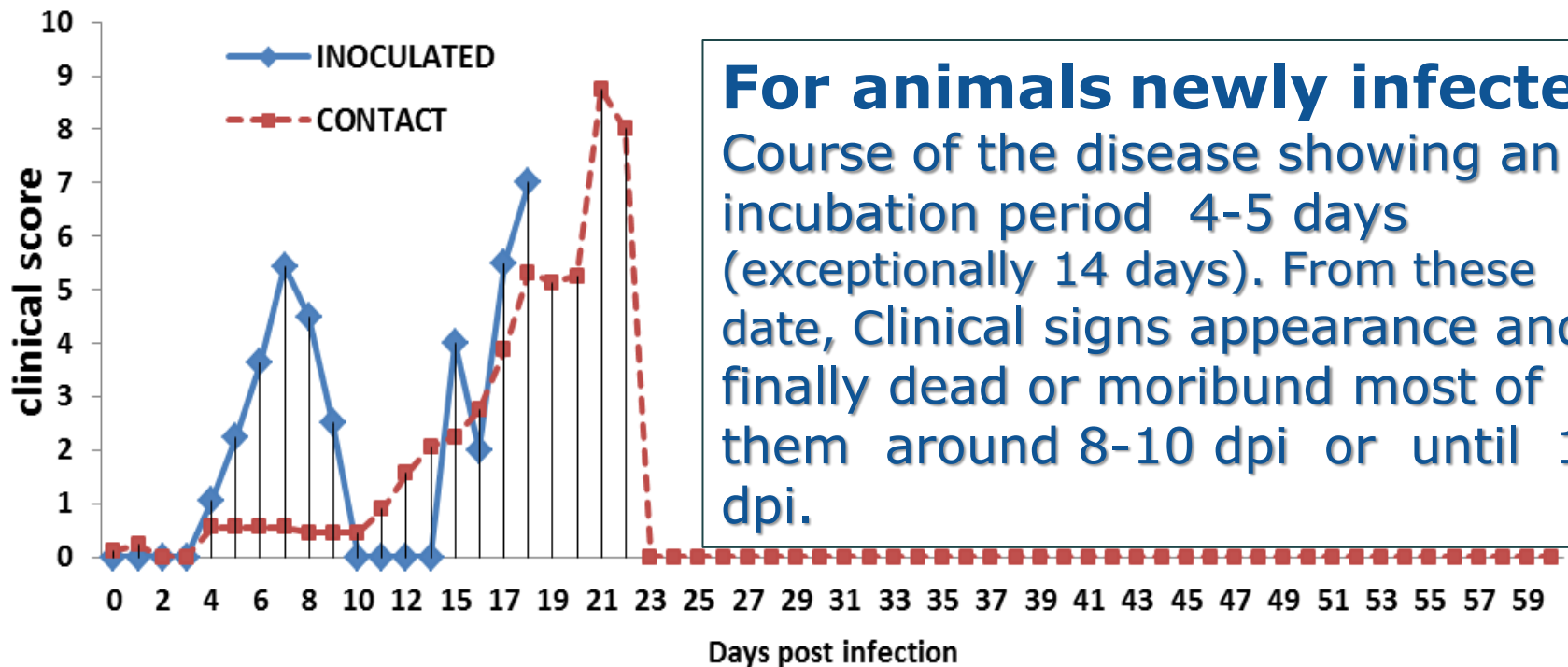
Experimental “in vivo” study LT14/1490



Antibody response in sera and tissue exudates in the **33% (6 out of 18)** of the infected animals in the **second week after the infection.**

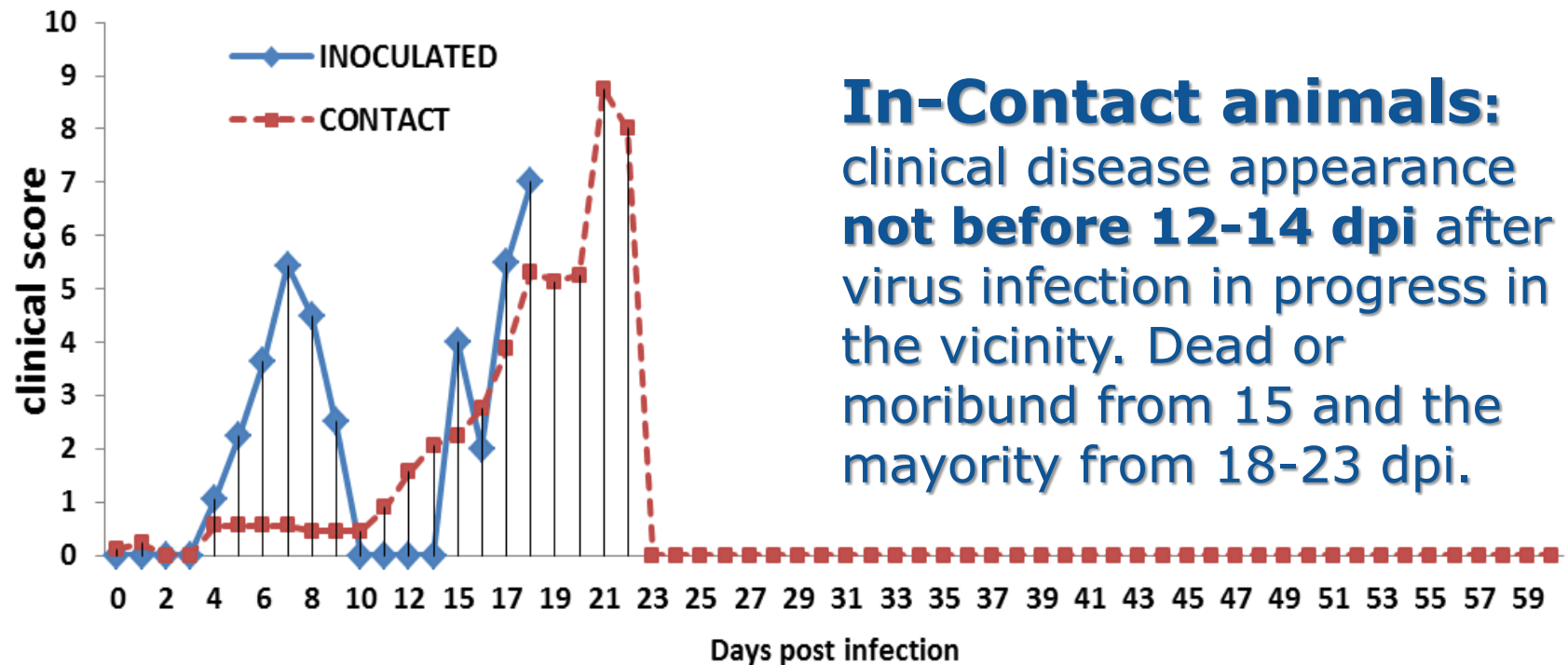
Experimental “in vivo” study LT14/1490

From the experimental results, it could be expected an ASF infection in progress **for most of the newly infected animals** :



Experimental “in vivo” study LT14/1490

From the experimental results, it could be expected an ASF infection in progress **for most of the contact animals in vicinity:**



In-Contact animals:
clinical disease appearance
not before 12-14 dpi after
virus infection in progress in
the vicinity. Dead or
moribund from 15 and the
majority from 18-23 dpi.

Clinical observations and laboratory data, Idavang

- Laboratory results on 24 July:
 - Samples positive by PCR and AgELISA.
 - Sows infected, no antibodies.
 - One pig from the weaner unit positive to ASF antibodies.



Possible date of infection of the seropositive animal could be around 5th July in the weaner unit

BIOSECURITY –Idavang farm

Measures at Idavang include:

- A double fence
- One entrance road with C&D facilities
- No live pigs enter the farm
- Special loading facilities for pigs leaving
- All employees have contracts ; no pigs at home, on entering all take a bath and change clothes
- Records of all visitors
- Video Surveillance cameras at the farm.

Potential source of infection

The epidemiological review dealt in particular with the following working hypotheses:

- a) Live animal*
- b) Vehicles*
- c) Animal feed*
- d) Wild boar*
- e) Rodents and insects*
- f) Human factor*

Potential source of infection

Based on observations made and information received it was considered that:

- *Introduction of virus via live animals and vehicles is highly unlikely*
- *The risk of introduction via animal feed, wild boar, rodents and insects has been considered negligible.*
 - PCR analysis at NRL of feed bunkers, and flies gave negative result to ASFV.
 - Video Surveillance cameras at the farm never shown wild boars between the inner and outer fence , except for one hare.

Potential source of infection

- *The human factor plays an important role in all movements to and from Idavang.*
- *With regard to the six hypotheses listed it is in particular important that the on-going epidemiological work pay a great attention to the human factors as potential source of infection.*
- *The human factor is considered the most likely source.*

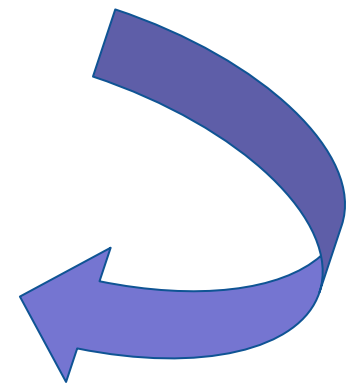
RESULTS OF ASF SURVEILLANCE FROM 01 APRIL TO 30 JULY, 2014

As of 2014-April, 1 to 30 July

	Tested by PCR and/or Antibodies				
	Wild boars		Domestic pigs		Total animals tested
	blood	tissue	blood	tissue	
Lithuania (whole country)	3388	1035	4858	540	8990 (5279 PCR+Abs)
Infected area (South of country)	745	289	895	258	1957 (1239 PCR+Abs)
Ignalina district	70	19	449	215	752 (585 PCR+Abs) ➡ 86WB

At the time of the Mission : Not dead wild boar were found.
Results of the analysis of the WILD BOAR and BACKYARD at
NRL were negative.

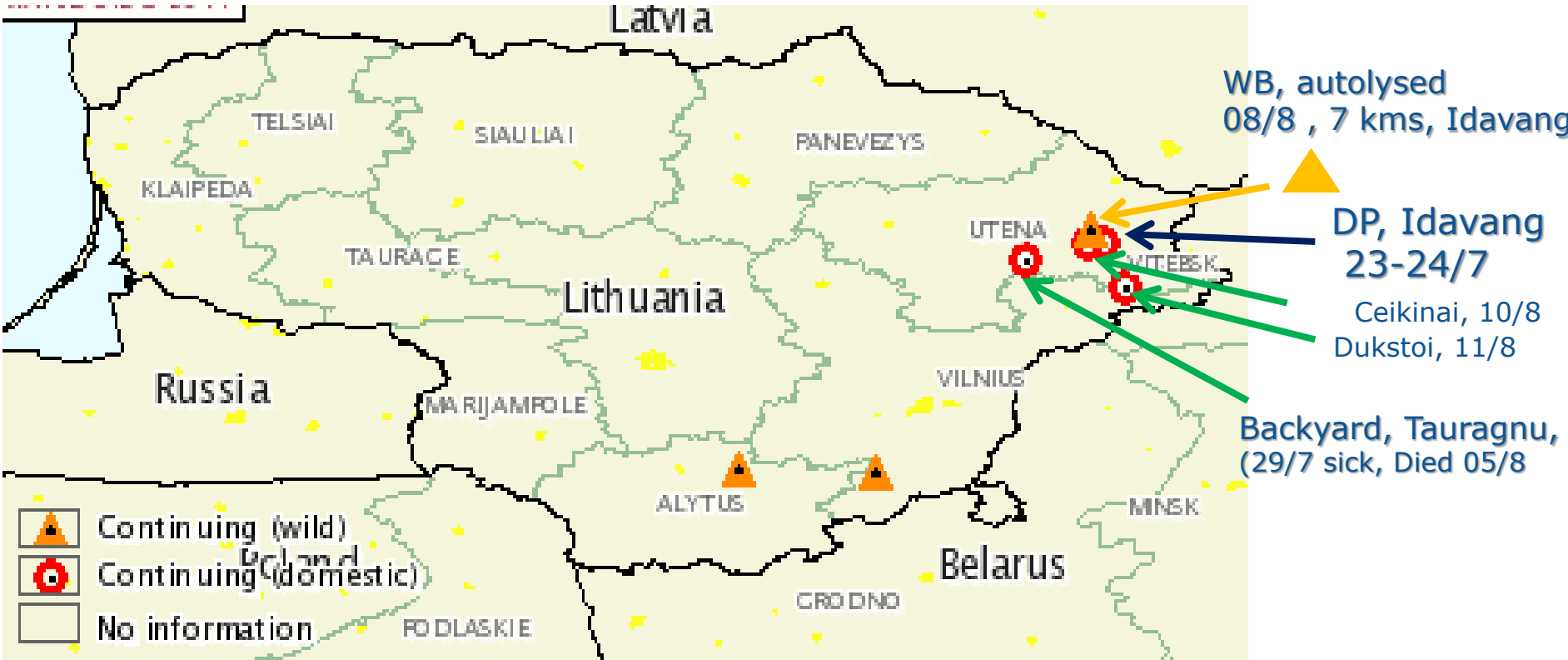
HOWEVER, after the Mission, **new outbreaks of ASF have occurred** in the Ignalina district, at few kms of the Idavang holding, **nearly at the time of the Idavang outbreak**, indicates further epidemiological investigation is needed to dilucidate/clarify the relationship between them, potential source of infection, sequence of events (primary and secondary infections) in the Ignalina district and in the Utena region.



OIE, date, 19, August, 2014



New outbreaks of ASF in backyard and WB in Ignalina district and Utena region, confirmed 1-13 August, 2014.



OIE, date, 19, August, 2014

- Domestic pigs Holding
- backyard
- WB

CONCLUSIONS (Idavang farm outbreak)

- Group of animals first exposed to the infection was in the **weaner unit**
- **Possible date of infection: around 5th July.**
- Window of infection -**high risk period**- first and second week in July- (first wave)
- The human factor is considered the most likely source.
- "level of risk" for the people in contact with the holding/animals in this period is considered high (data collection on going).

CONCLUSION AND RECOMMENDATIONS

Biosecurity

The **biosecurity system** adopted and implemented at Idavang is, based on information obtained, **well developed**.

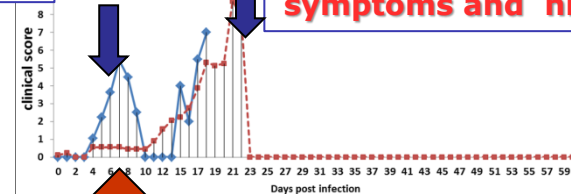
- ***It is recommended*** that the epidemiological investigation continues with great emphasis on elucidating transmission aspects related to the human factor



○ **14th -20th July, weaner unit: 18 pigs died**

○ **23-24 July, sows unit: symptoms and high mortality**

CONCLUSIONS AND RECOMMENDATIONS



Early detection of clinical signs (holdings)

Clinical examination & laboratory tests

At Idavang the animal keepers and veterinarians observed the typical symptoms and signs of the acute form of ASF. The findings highlights that thorough **CLINICAL EXAMINATIONS OF PIGS IS A VERY IMPORTANT MEASURE IN THE DETECTION OF ASF.**

- ***It is recommended that any suspicion of ASF should result in immediately submission of samples for laboratory testing.***

CONCLUSIONS AND RECOMMENDATIONS

Disease Evolution

Since ASF in 2007 entered Georgia and spread to neighbouring countries the epidemiological reports have emphasised the peracute and acute form of ASF. **Currently, the epidemiological investigation at Idavang clearly revealed the presence of antibodies to ASF virus in a percentage of infected animals.**

- ***It is recommended serological investigation should be performed at the NRLs, together with ASF virus detection techniques, in order to get a complete epidemiological information of any case/outbreak, and to dilucidate the time of the ASF infection.***

CONFIRMATORY ANTIBODY DETECTION TESTS (IIF and/or IPT) for ASF is being introduced at NRL of LT. A short term training on these techniques has been planned at the EURL in Sept. 2014.

CONCLUSIONS AND RECOMMENDATIONS

Contact farms to Idavang

The epidemiological investigation carried out has identified contact farms to Idavang; the farms have been subjected to surveillance and movement restrictions.

- ***It is recommended*** that specific plans are being developed and implemented with regard to contact farms.

CONCLUSIONS AND RECOMMENDATIONS

Protection and surveillance zone

- *All domestic pigs in the protection zone has been slaughtered.*
- *A surveillance program for ASF in domestic pigs and in wild boar is in place and ongoing.*
- ***It is recommended*** *that pigs slaughtered for home consumption are subjected to a post-mortem examination and laboratory tests*

CONCLUSIONS AND RECOMMENDATIONS

ASF EXPERT Group

An expert group shall be established (Art. 15 of 2002/60/EC) including veterinarians, hunters, wild life biologists and epidemiologist.

- *Steps have been taken to establish an operational expert group.*
- ***It is recommended*** that an expert group with clear objectives is being established to assist the competent authority

Thanks

- *The CEVT would like to express their thanks to our colleagues in Lithuania for great cooperation and assistance during the mission.*
- *Thanks to all delegates of the Member States at the SCOFCAH meeting for the attention.*