

HPAI in France

02/03/2016

- Situation
- Strategy of eradication : different phases and measures
- Biosecurity
- Surveillance





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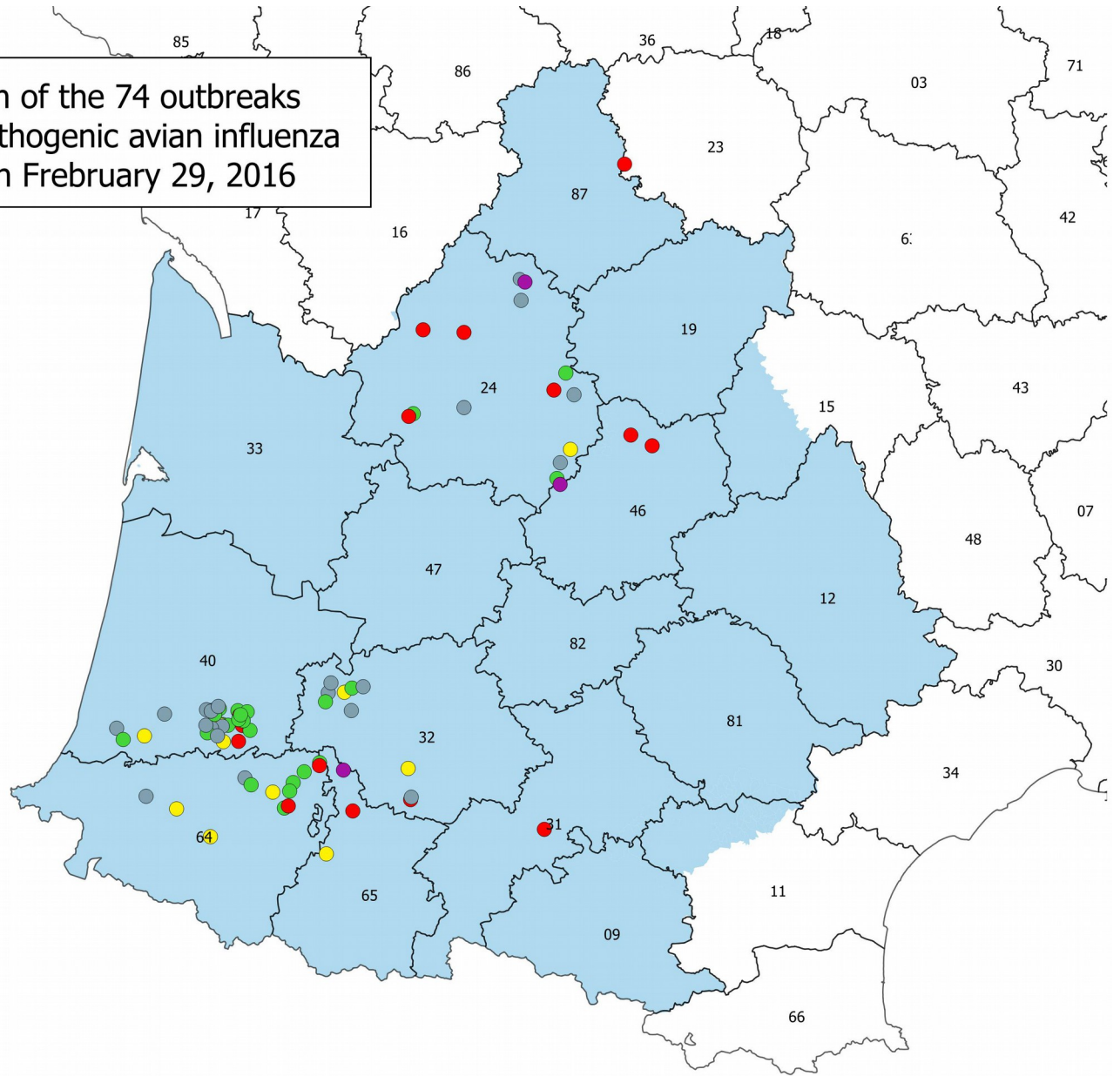
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Localisation of the 74 outbreaks of Highly pathogenic avian influenza in France on February 29, 2016

- HPAI outbreaks
- H5N1
 - H5N2
 - H5N9
 - H5N1 et H5N9
 - H5N2 et H5N9
 - H5HP



0 50 100 km



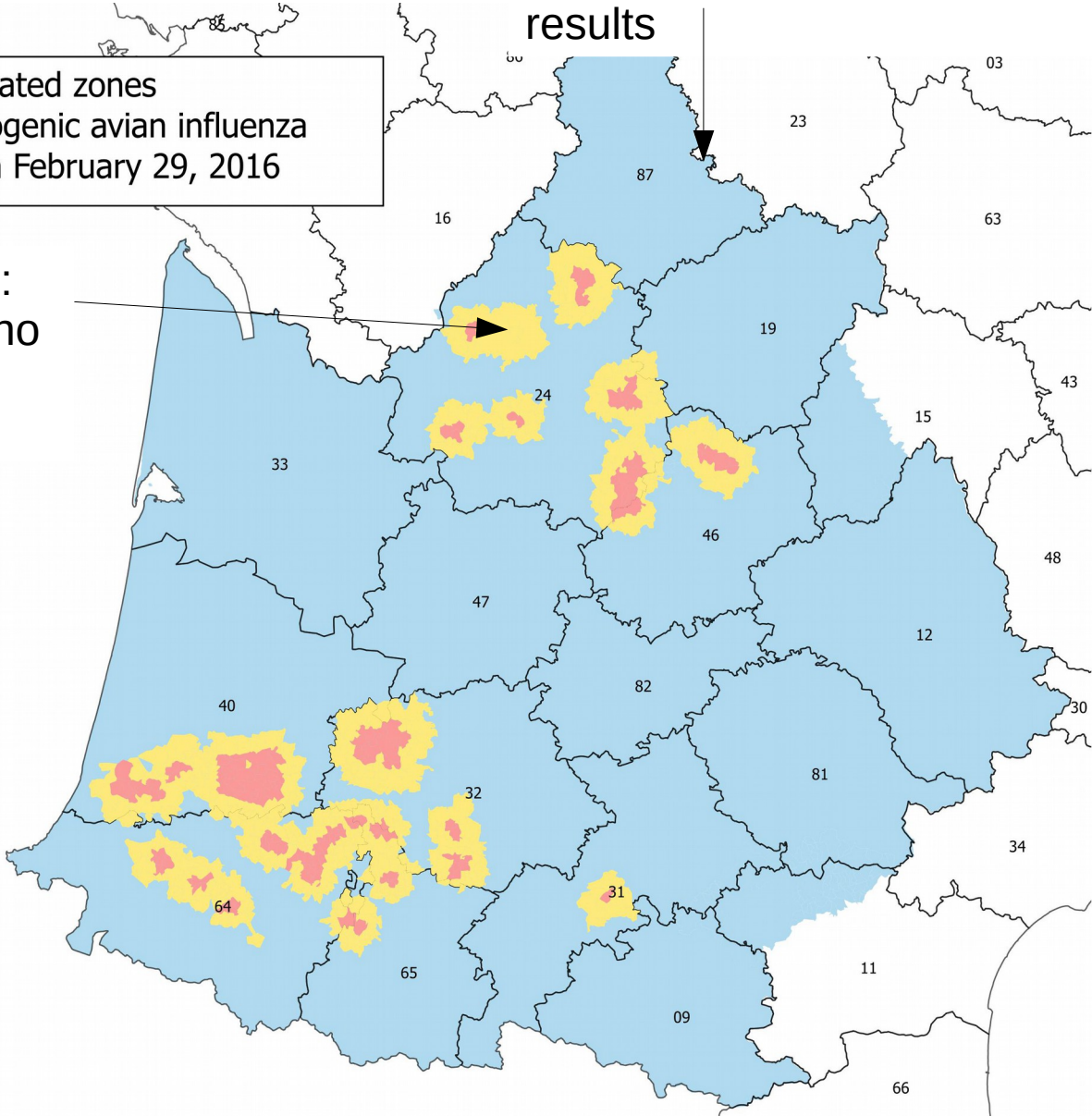
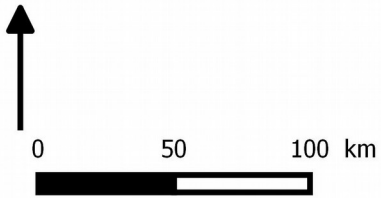
Measures lifted : farms inspected with no clinical suspicion / negative lab results

Regulated zones of Highly pathogenic avian influenza in France on February 29, 2016

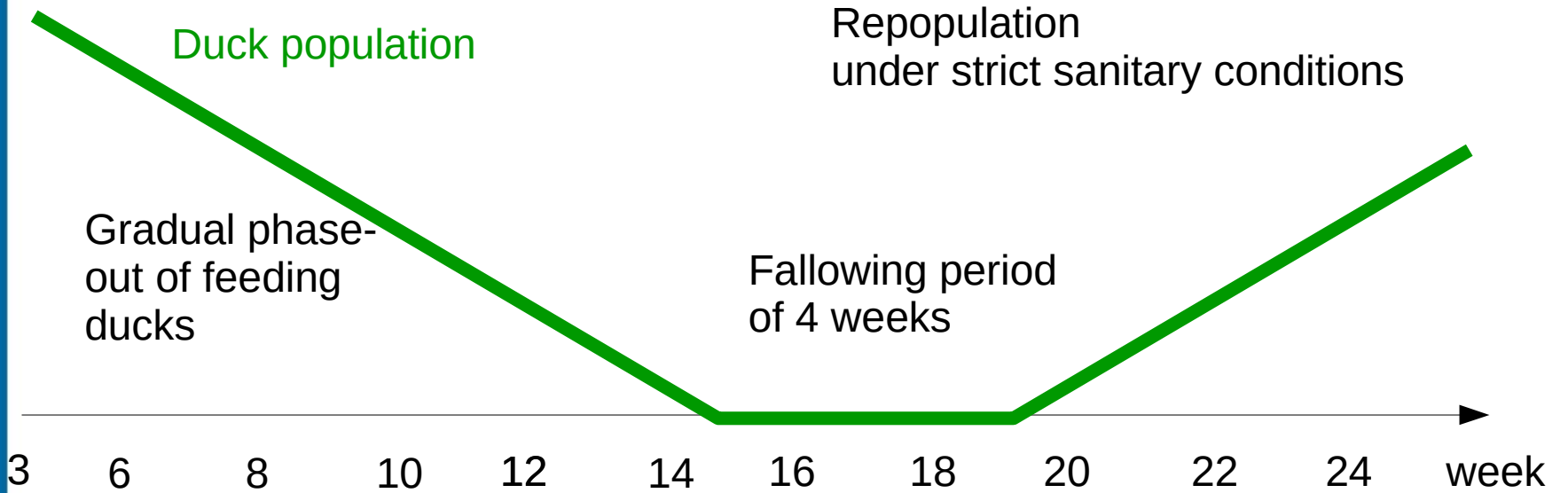
Protection zone lifted : farms inspected with no clinical suspicion / negative lab results

Regulated zones

- Protection zone
- Surveillance zone
- Restriction zone



Global eradication strategy



No entry of ducks
< 4 weeks old

Virus transmission stopped

biosecurity

Contaminated equipment



Measures implemented

- Stamping out of first outbreaks, national situation brought to EU level
- Expanded restriction zone, forbidden introduction of ducks in farms
- Enhanced surveillance
- Ministerial order of 8/2/16 on biosecurity measures
- Ministerial order of 9/2/16 : provisional timetable > depopulation/ fallowing period/ repopulation/ lifting of measures

To come

- Supervising animal transport conditions
- Qualification of breeding stocks ?
- Reinforced traceability





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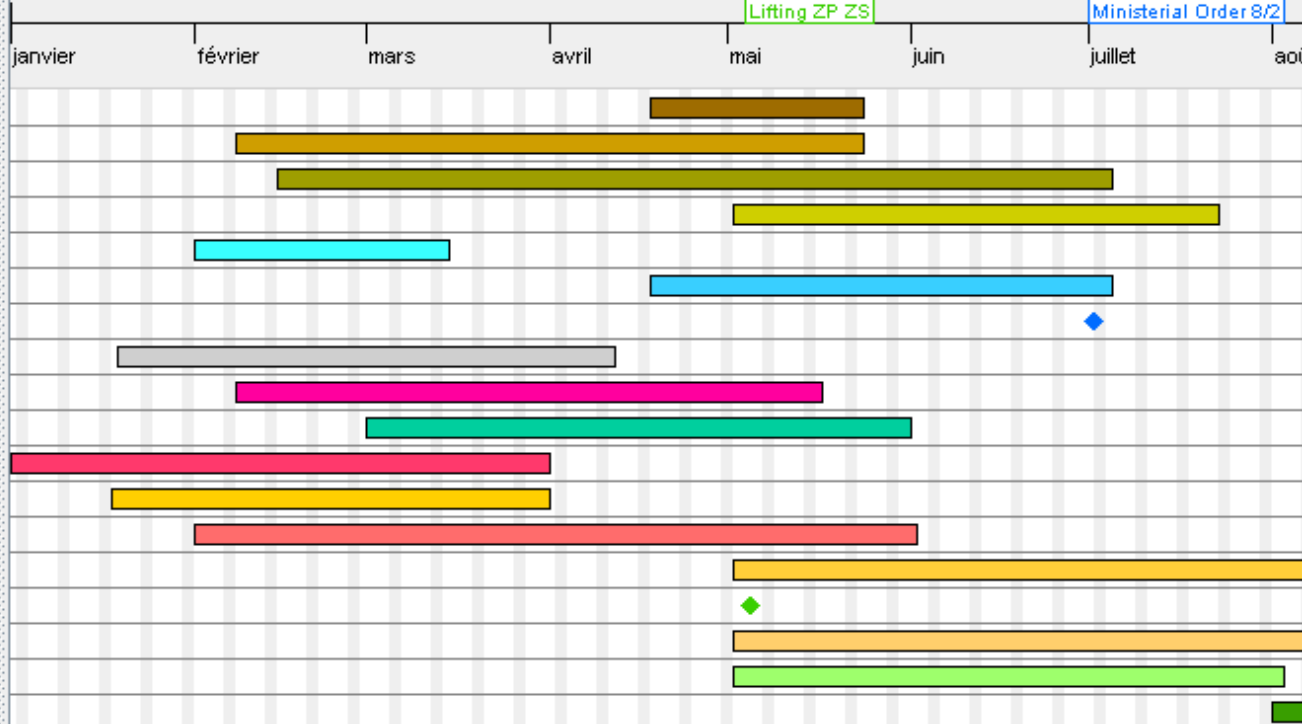
Measures implemented

GANTT
project

Nom

- Following period of outdoor runs
- Cleaning up and disinfection measures
- Get rid of liquid manure
- Decontamination of manure in 60 days
- GPG on biosecurity
- Training sessions on biosecurity
- Ministerial Order 8/2
- Census
- Control for derogation, compliance of following period and C/D
- Wildlife enhanced surveillance
- Testing / Survey ZR
- Testing of breeding flocks
- Veterinary control measures
- Formal qualification of breeding ducks ?
- Lifting ZP ZS
- National AI survey
- Epidemiological survey in ZR
- Lifting ZR

2016



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Eradication measures

- From March to May : cleaning and disinfection (premises and equipment), following period with prohibited access of animals to outdoor runs
- If necessary second disinfection
- Empty and drain liquid manure from pits (full in early may)
- Awareness campaign and training of different stakeholders to identify and change at-risk practices





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Ministerial order on biosecurity

- Entering into force on July 1, 2016
- Global eradication programme : Good Practice Guide, training, surveillance
- Farming management system on production unit scale, with both physical and spatial separation (lock, clothes, transport, single batch, fallowing period)
- Testing could be added if necessary





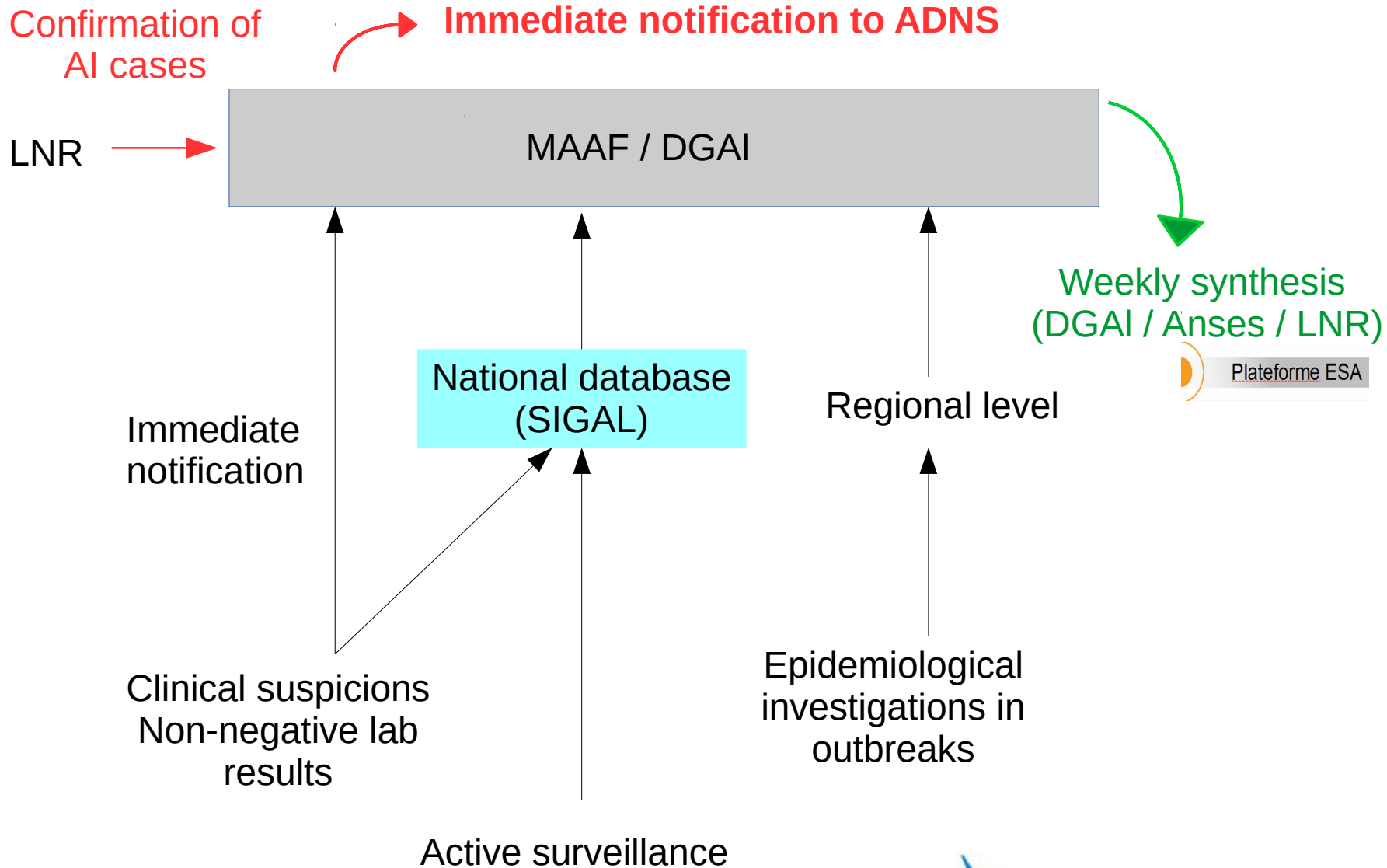
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Surveillance measures implemented

- Clinical surveillance
- Active surveillance
 - Sampling before movements out of restricted zones
 - Breeding flocks
 - Resettlements of farms previously infected (until 18th of April in finishing units) :
sampling before introduction in the farm and before exit from the farm
- Epidemiological investigation in outbreaks



Surveillance and data analysis



Information sources

- ADNS and OIE
- MAAF website (<http://agriculture.gouv.fr/influenza-aviaire-la-situation-actuelle-en-france>)
- Bi-monthly synthesis to UE and Member States
- Plateforme ESA website (<http://plateforme-esa.fr/>)



H5HP cases

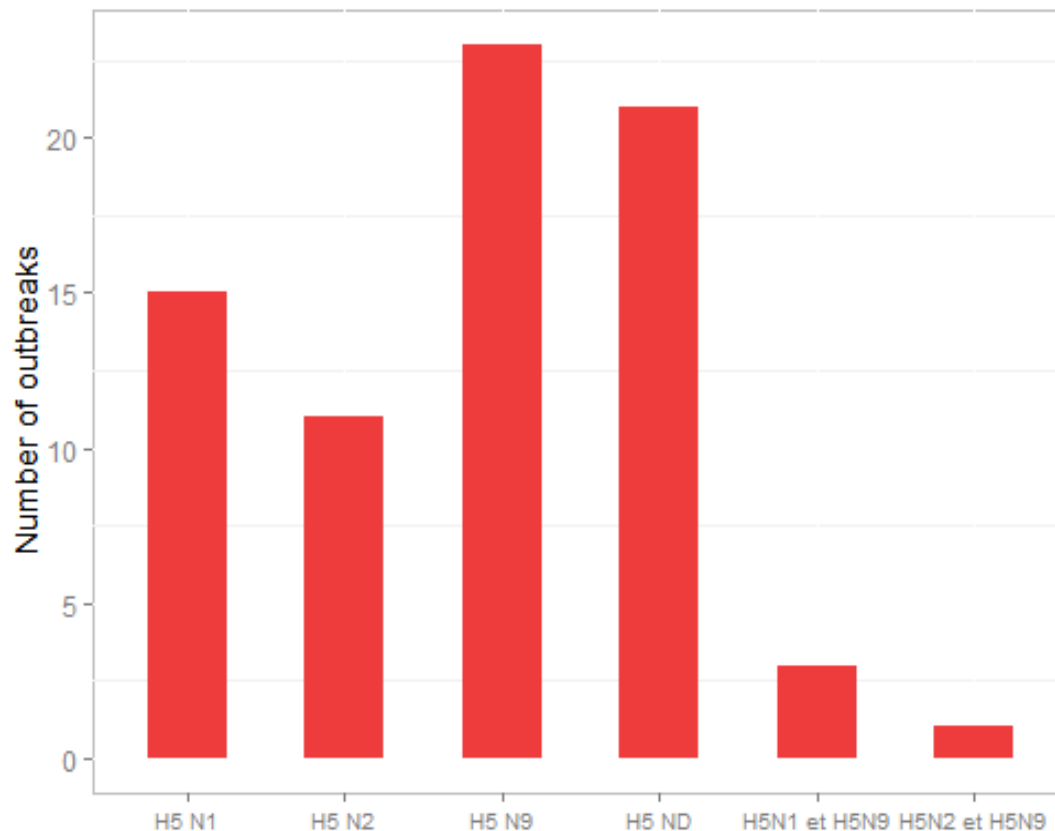
Context		Nb
Clinical surveillance		28
Active surveillance	Annual serological survey	3
	Investigation in farms epidemiologically linked to an outbreak	4
	Sampling before moving	36
	Breeding flocks	1
	Sampling before resettlement in farms previously infected (after cleaning – disinfection)	2
Total		74

1. Saint Paul de la Roche (former outbreak, finishing unit) : on going investigation in the fattening unit.
2. Beauregard et Bassac : sampling before sending ducks to a former outbreak



H5HP cases

- 74 outbreaks



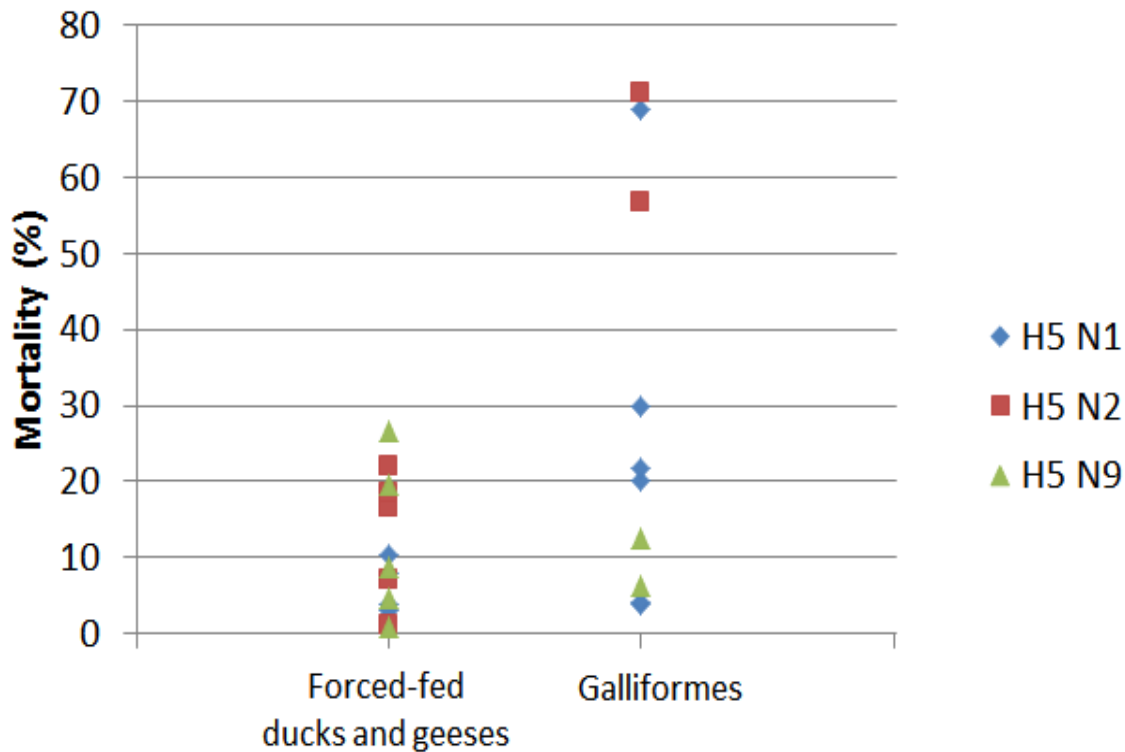
H5ND (n=21) : lack of virological material, will be analyzed with other methods (ovoculture)

No relation between species / subtype of virus



H5HP cases

- Observed mortality rate in H5HP outbreaks with clinical symptoms (n=27)



No relation
between
mortality / subtype
of virus





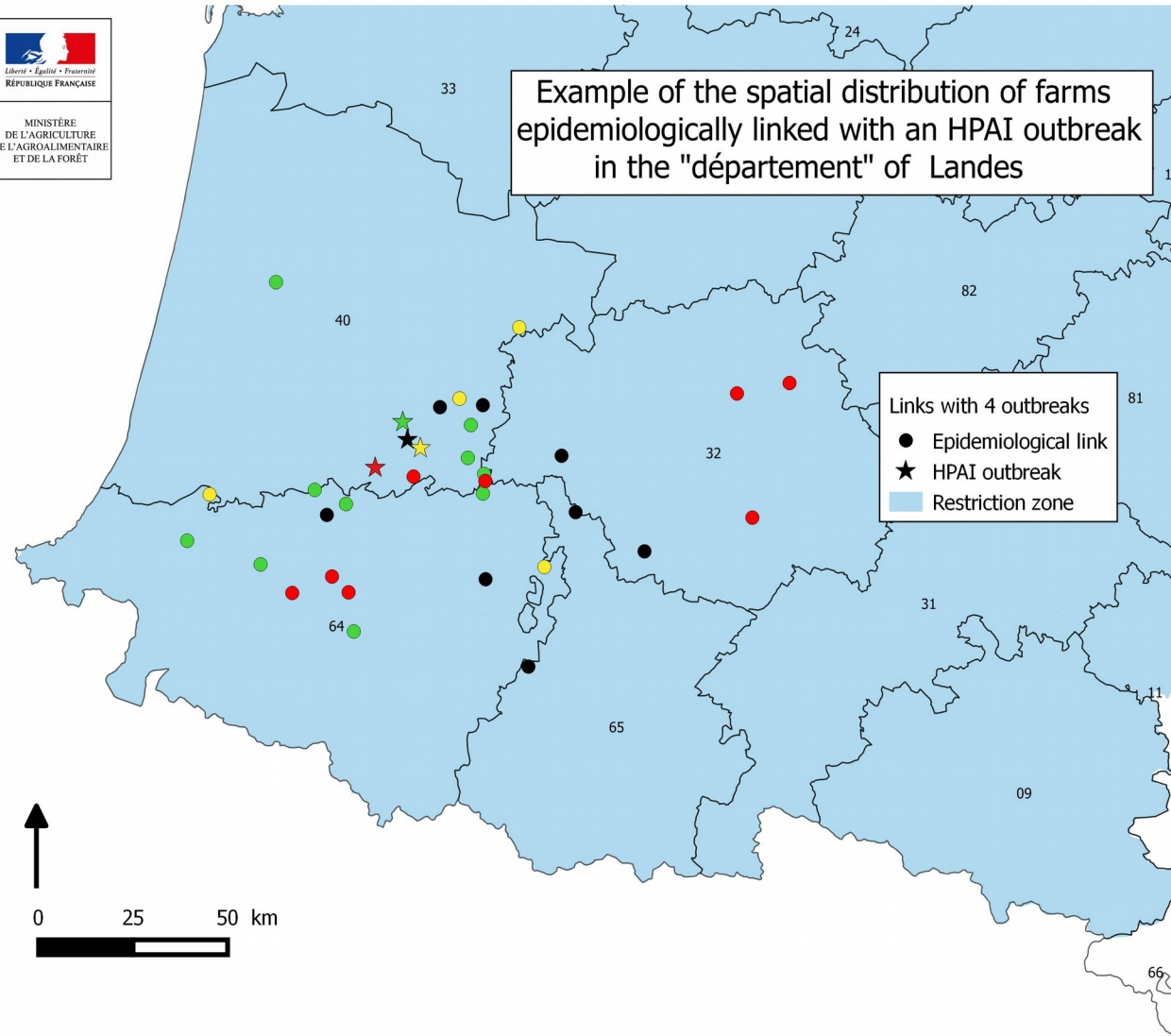
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Epidemiological investigations

- 45 (61%) of H5HP cases with complete investigation, 42 with Palmipedes
- 291 movements from / to outbreaks
- 197 farms epidemiologically linked to one of these cases, all in the restriction zone
 - 78 farms visited, 33 sampled
 - 21 outbreaks



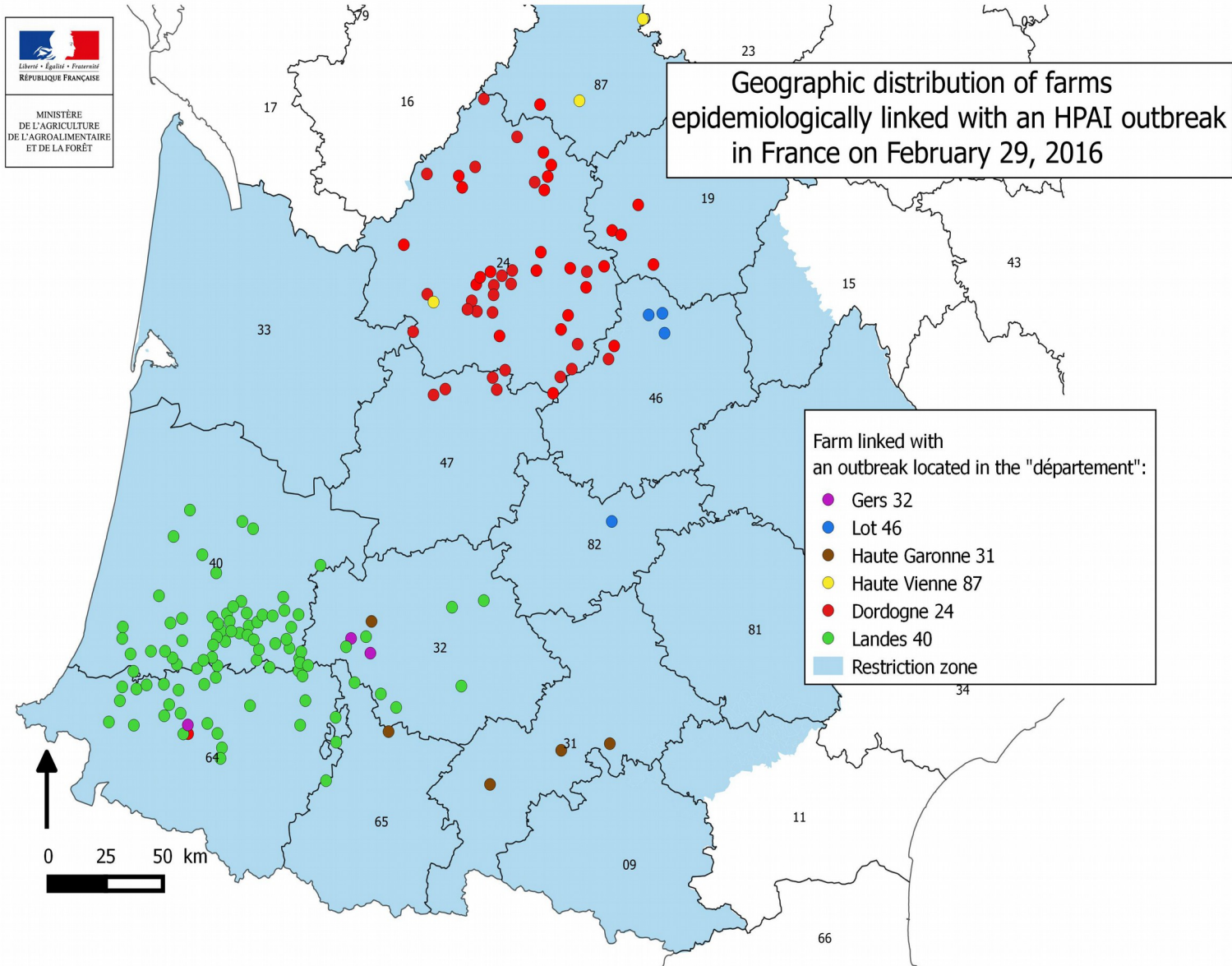
Epidemiological investigations





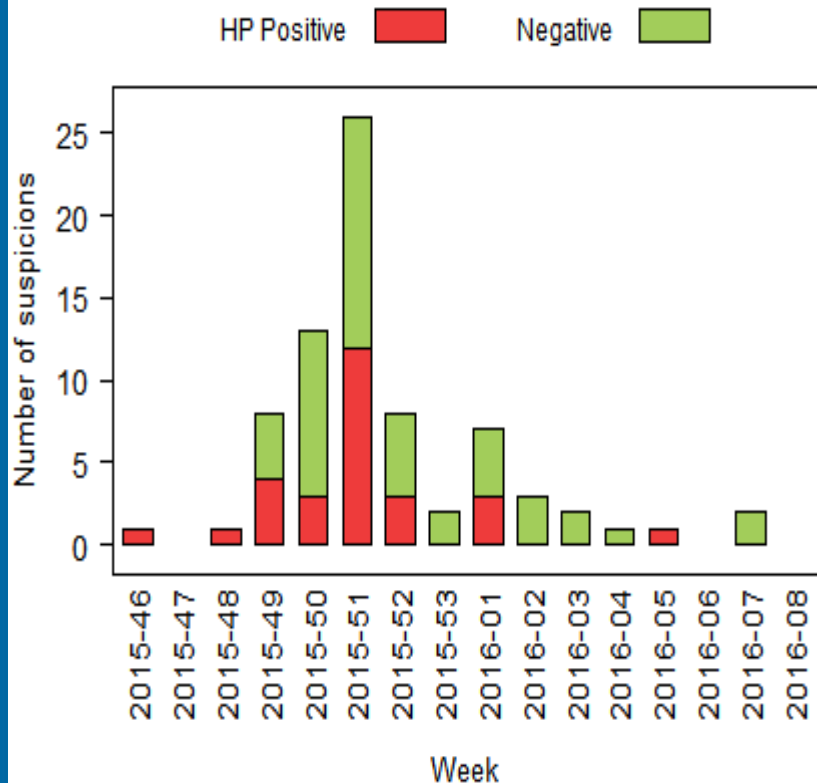
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Epidemiological investigations



Clinical surveillance

- 77 suspicions, 28 (36%) H5HP



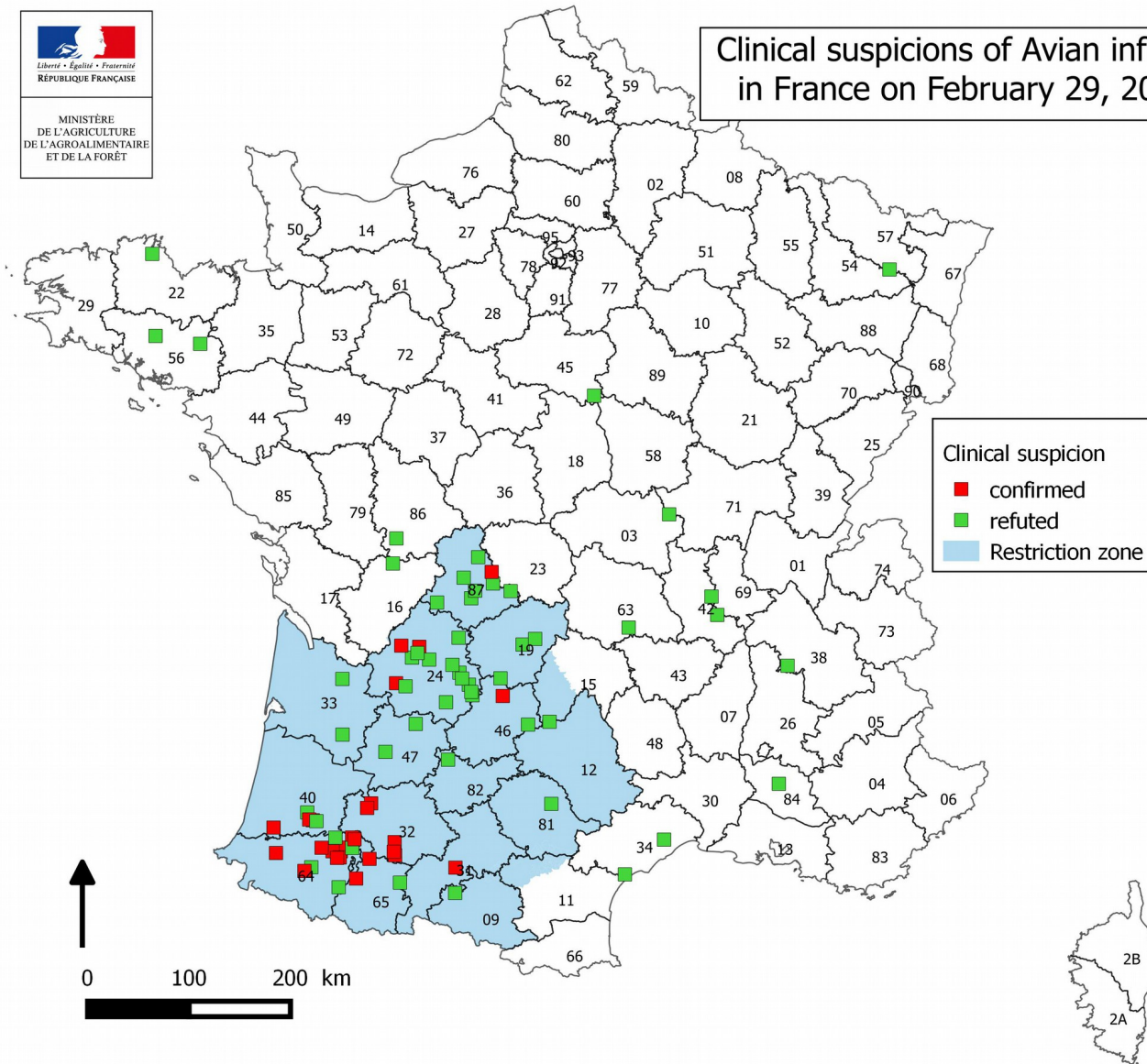
Production	Total
Galliformes	17
Palmipèdes	20
Galliformes et Palmipèdes	7
Basse-cour	33
Total	77

Farmers sensibilisation & Vet training
on going



Clinical surveillance

Clinical suspicions of Avian influenza
in France on February 29, 2016



Active surveillance

- Surveillance of breeding flocks

	Galliformes	Palmipedes
Nb of flocks to be inspected	773	762
Nb of flocks inspected	148 (20%)	144 (19%)
Nb of cloacal swabs collected	149	2297
Nb of tracheal swabs collected	150	2259
Nb of blood samples collected	1959	2237

1 outbreak H5HP in Hinx :

- 2 flocks stamping out
- survey of other flocks (n=8) by RT-PCR 15 days apart



Laboratory updates – French NRL

- Isolated H5HP viruses corresponding to the 3 characterized NA subtypes:

H5N1 A/chicken/France/150169a/2015

H5N2 A/duck/France/150233b/2015

H5N9 A/duck/France/150236b/2015

- Full genome H5N1 sequence deposited in GenBank

- H5N2 and H5N9 NGS sequencing pending

- From obtained full and partial (H5/NA) sequences:

recent French H5HP viruses are most closely related to European avian-origin LP influenzaviruses (and not directly related to Eurasian H5HP Gs/Gd-like lineages)

Laboratory updates – French NRL

COMMUNICATION & COLLABORATION WITH EURL

- All 3 previously isolated H5HP viruses submitted to EURL (APHA Weybridge)

+ phylogenetic analyses of partial N1 and N2 sequences published on FluLabNet

- Collaborative in vivo studies:

Clinical expression (+pathology) / Kinetics of excretion /
Transmission / Virus tropism

experimental infections:

APHA => Pekin ducks / H5N1 virus ongoing;

Anses => Muscovy ducks / H5N9 virus scheduled 15/03.



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