

Follow-up report No.: 2

Report reference: , OIE Ref: 5169, Report Date: 27/10/2005, Country: Croatia

Report Summary

Disease	Highly pathogenic avian influenza	Animal type	Terrestrial
Causal Agent	Highly pathogenic avian influenza virus	Serotype(s)	H5N1
Clinical Signs	Yes	Reason	First occurrence of a listed disease
Date of confirmation of Event	21/10/2005	Date of Start of Event	19/10/2005
Date of report	27/10/2005	Diagnosis	Laboratory (advanced)
Number of reported outbreaks	Submitted= 9, Draft= 0	Name of Sender of the report	Mr Mate Brstilo
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Outbreak (other report - submitted)

county	municipality	village	Unit Type	Location	Latitude	Longitude	Start	End
SPLITSKO-DALMATINSKA	Ciovo		Village	Slatina	43,49	16,32	15/02/2006	27/10/2006
Species	Measuring units	Susceptible	Cases	Deaths	Destroyed	Slaughtered		
Wild species	Animals	...	1	1	0	0		
Affected Population								
Avian influenza virus type H5N1 was isolated from organs of a dead swan found at Slatina on the island of Ciovo. Nucleotide sequencing at the cleavage site of the haemagglutinin (HA) of the H5N1 avian influenza virus isolate revealed the multiple basic amino acid sequence 'PQGERRRKRGLF', which is consistent with highly pathogenic avian influenza.								

Outbreak (other report - submitted)

county	municipality	village	Unit Type	Location	Latitude	Longitude	Start	End
OSIJECKO-BARANJSKA	Nasice		Village	Ribnjak 1905	45,572222	18,380833	03/01/2006	27/10/2006
Species	Measuring units	Susceptible	Cases	Deaths	Destroyed	Slaughtered		
Wild species	Animals	265	...	0	4	0		
Affected Population								
During regular monitoring activities conducted at 'Ribnjak 1905' fish pond, four swans in a flock of around 265 swans were shot for diagnostic purposes; samples were taken and sent to the Poultry Centre of the Croatian Veterinary Institute in Zagreb. Laboratory testing revealed that two samples were positive for avian influenza virus. All samples were found to be negative on virus isolation in chicken embryos.								
In the same location, 26 other birds (wild ducks) were shot for diagnostic purposes. Samples from these 26 birds were tested at the Poultry Centre of the Croatian Veterinary Institute in Zagreb and were all found to be negative for avian influenza.								

Outbreak (other report - submitted)

county	municipality	village	Unit Type	Location	Latitude	Longitude	Start	End
VIROVITICKO-PODRAVSKA	Zdenci		Village	Grudnjak	45,646388	18,183888	19/11/2005	27/10/2006
Species	Measuring units	Susceptible	Cases	Deaths	Destroyed	Slaughtered		
Wild species	Animals	300	1	0	...	0		

Affected Population

During regular monitoring activities conducted at 'Grudnjak' fish pond, one swan in a flock of around 280 swans showed clinical signs of avian influenza. The sick swan and two apparently healthy swans from the flock were shot for diagnostic purposes; samples were taken and sent to the Poultry Centre of the Croatian Veterinary Institute in Zagreb. Laboratory testing revealed that the samples taken from the swan that had shown clinical signs were positive for avian influenza virus subtype H5N1 (PQGERRRKKRGLF). The samples taken from the other two swans were found to be negative for avian influenza. The corpses of all three swans were destroyed.

In the same location, 13 other birds (coots, grebes and wild ducks) were shot for diagnostic purposes. Samples from these 13 birds were tested at the Poultry Centre of the Croatian Veterinary Institute in Zagreb and were all found to be negative for avian influenza.

Outbreak (other report - submitted)

county	municipality	village	Unit Type	Location	Latitude	Longitude	Start	End
GRAD ZAGREB	Novi Zagreb		Not applicable	Novi Zagreb	45,81	15,97	28/03/2006	27/10/2006
Species	Measuring units	Susceptible	Cases	Deaths	Destroyed	Slaughtered		
Wild species	Animals	...	1	1	0	0		

Affected Population

Samples were taken from a dead swan found at the construction site of the new University Hospital, near the river Sava, and sent to the Poultry Centre of the Croatian Veterinary Institute in Zagreb for analysis. Laboratory testing revealed that samples were positive for HPAI virus subtype H5N1.

Outbreak (other report - submitted)

county	municipality	village	Unit Type	Location	Latitude	Longitude	Start	End
OSIJECKO-BARANJSKA	Draz		Not applicable	Draz	45,83	18,79	03/03/2006	27/10/2006
Species	Measuring units	Susceptible	Cases	Deaths	Destroyed	Slaughtered		
Wild species	Animals	...	1	1		

Affected Population

Cloacal and tracheal swabs were taken from a dead swan found at Draz (a tributary of the river Danube) and tested positive for HPAI virus subtype H5N1.

Outbreak (other report - submitted)

county	municipality	village	Unit Type	Location	Latitude	Longitude	Start	End
SPLITSKO-DALMATINSKA	Trogir		Not applicable	Pantana	43,51	16,24	03/03/2006	27/10/2006
Species	Measuring units	Susceptible	Cases	Deaths	Destroyed	Slaughtered		
Wild species	Animals	74	30	0		

Affected Population

During the regular surveillance from 28 February 2006 to 3 March 2006 at the same location, 74 wild birds of different species (e.g. gulls, shorebirds) were caught and cloacal swabs were taken; 30 black-headed gulls (*Larus ridibundus*) tested positive on HPAI virus subtype H5N1.

Outbreak (other report - submitted)

county	municipality	village	Unit Type	Location	Latitude	Longitude	Start	End
SPLITSKO-DALMATINSKA	Trogir		Not applicable	Pantana	43,51	16,24	21/02/2006	27/10/2006
Species	Measuring units	Susceptible	Cases	Deaths	Destroyed	Slaughtered		
Wild species	Animals	...	1	1		

Affected Population	Avian influenza virus type H5N1 was isolated from organs of a dead swan found at Pantana.
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Outbreak (other report - submitted)

county	municipality	village	Unit Type	Location	Latitude	Longitude	Start	End
OSIJECKO-BARANJSKA	Nasice		Village	Ribnjak 1905	45,49	18,08	21/10/2005	27/10/2006
Species	Measuring units	Susceptible	Cases	Deaths	Destroyed	Slaughtered		
Wild species	Animals	244	...	15	...	0		

Affected Population

Fifteen swans were found dead between 22 and 24 October 2005 on the fish farm 'Ribnjak 1905', in Nasice municipality. On 22 October, two dead swans were sent to the Poultry Centre of the Croatian Veterinary Institute. On 24 October they were found to be positive for avian influenza virus subtype H5.

On 23 October, in the same location, cloacal swabs were taken from 7 additional dead swans and from 4 hunted wild birds (3 shorebirds and 1 cormorant). Laboratory testing of these samples is on-going.

Outbreak (other report - submitted)

county	municipality	village	Unit Type	Location	Latitude	Longitude	Start	End
VIROVITICKO-PODRAVSKA	Zdenci		Village	Grudnjak	45,57	17,94	19/10/2005	27/10/2006
Species	Measuring units	Susceptible	Cases	Deaths	Destroyed	Slaughtered		
Wild species	Animals	1500	15	15	0	0		

Affected Population

About 1,500 swans arrived on 19 October 2005 at the location of the fresh water fish farm 'Grudnjak' in Zdenci municipality. Fifteen swans died but only 6 of them were available for laboratory testing.

The bird deaths were notified by a farm worker to the veterinary inspector of the county. Organ samples were taken and submitted on 19 October to the Poultry Centre of the Croatian Veterinary Institute. Laboratory procedures started as soon as the samples arrived at the laboratory. On the afternoon of 21 October, avian influenza virus subtype H5 was isolated from the samples.

Outbreak summary: Total outbreaks = 9 (Submitted)

Species	Susceptible	Cases	Deaths	Destroyed	Slaughtered
Wild species	2383	50	34	4	0

Epidemiology

Epidemiological comments

Updated information about the examination of samples taken from dead swans on the territory of Zdenci municipality

Extract from the preliminary results report from VLA Weybridge (26 October 2005): "Conventional amino acid sequencing at the cleavage site of the haemagglutinin (HA) has revealed multi basic amino acid sequences of 'PQGERRRKRGLF' which is consistent with highly pathogenic avian influenza. Molecular phylogeny based on a short fragment (300 base pairs) of HA1 indicates that the HA gene of all the four samples has a 99.7% identity with A/Great Black Headed Gull/Qinqhai/2/05, 99.3% identity with the Turkish virus and 99.1% identity with the Romanian virus".

Source of Infection	• Seasonal migration of wild birds - swans
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Control Measures

Applied	<ul style="list-style-type: none"> • Movement control inside the country • Screening 	To be applied	<ul style="list-style-type: none"> • Stamping out • Control of wildlife reservoirs
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	<ul style="list-style-type: none"> • Disinfection of infected premises/establishment(s) • Quarantine • Zoning 	Vaccination Prohibited	Yes
Animals treated	No		

Country / Zone

Country or zone	the whole country
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Diagnostic test results

Laboratory Type	Name of Laboratory	Species	Test Type	Date Results Provided	Result
OIE's Reference Laboratory	VLA Weybridge (United Kingdom)	Wild species	reverse transcription – polymerase chain reaction (RT-PCR)	26/10/2005	Positive
National laboratory	Poultry Centre of the Croatian Veterinary Institute (national reference laboratory for diseases of poultry)	Wild species	haemagglutination inhibition test (HIT)	21/10/2005	Positive
National laboratory	Poultry Centre of the Croatian Veterinary Institute (national reference laboratory for diseases of poultry)	Wild species	virus isolation	21/10/2005	Positive

Future Reporting

What further reports will be submitted in relation to this event? The event is resolved. No more reports will be submitted.
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Outbreak map

