

**VACCINATION PROGRAMME FOR VACCINATION OF BIRDS KEPT IN
ZOOS AGAINST AVIAN INFLUENZA SUBMITTED BY DENMARK FOR
APPROVAL BY THE COMMISSION**

20 February 2006

DANISH VACCINATION PROGRAMME FOR VACCINATION OF BIRDS KEPT IN ZOOS IN AGAINST AVIAN INFLUENZA

Introduction

In accordance with Commission Decision 2005/744/EC of 21 October 2005, a vaccination programme for the vaccination of birds kept in approved zoos against avian influenza will be initiated in the coming weeks.

The recent spread of the avian influenza virus subtype H5N1 to the European Union suggests that all Member States are at risk for detecting the disease in wild birds.

The migratory flyways of wild birds, which are probably one of the ways of spreading the virus, constitute a risk of detecting avian influenza virus within the EU territory during the spring migration season, which starts within a few weeks.

Hence, all means required should be implemented in order to reduce the risks of an introduction of avian influenza in bird populations in the EU.

Many of the Danish zoos are situated along the major migratory flyways and most zoos have outdoors facilities with open pond areas. The way that the H5N1 situation has evolved in recent weeks the Danish zoos are considered at being in risk from avian influenza.

However, some bird species in zoos cannot be held indoors of practical and animal welfare reasons and other species are endangered and included in breeding programmes. It will therefore be appropriate to use vaccination of birds in zoos as a tool to prevent infection and for preservative reasons. It has to be stressed that vaccination does not replace the introduction of all other kinds of biosecurity measures.

The efficiency of the existing vaccines on other species than poultry has not been demonstrated so far, but as the planned vaccination only involve species of which there are limited trade, the vaccination of these birds should not endanger the animal health status of the country. Furthermore, the Dutch experience with vaccination of zoo animals during the 2003 AI epizootic seemed promising. The vaccines seemed to be safe for zoo-birds and able to introduce a proper antibody response.

Zoos participating in the vaccination programme

In Annex I, the zoos that want to take part in the vaccination programme so far are listed. The zoos have been contacted in order to draw up a list of birds, which they want to be vaccinated. Preliminary list is drawn up in Annex II. Birds kept under adequate biosecurity conditions do not need to be vaccinated.

As this programme is set up on voluntary basis, other zoos might join the program in the coming days. In this case, an update of the list will be submitted to the Commission.

Vaccines to be used

Two vaccines have been selected for vaccination in the zoos:

Gallimune Flu H5N9, Merial and

Poulvac AI H5N9, Fort Dodge.

Both vaccines are inactivated and effective against the virus type in circulation. The vaccines support the DIVA principle as the N-antigen differs from N1.

The vaccines will be distributed via the Danish Institute for Food and Veterinary Research.

The vaccines will be used in accordance with the instructions from the manufacturer. The application will be intramuscular or subcutaneous injection with revaccination after 6 weeks.

Execution of the vaccination campaign

- The vaccination in the zoos will be conducted as fast as possible within 96 hours.
- Revaccination will take place after 6 weeks.
- The vaccination will be carried out under the supervision of an official veterinarian.
- Vaccinated birds will be individually identifiable (with rings or chips) and an identity record of these birds will be elaborated and kept for 10 years.
- Any residuals of vaccine will be returned to the Danish Institute for Food and Veterinary Research with a written record of the number of birds vaccinated and the number of doses used.
- Prior to the first vaccination blood samples will be taken of at least 10% of the birds and the sampling is repeated at least 30 days after the revaccination for testing the serum titres against avian influenza. The record of the tests will be kept for at least 10 years. The serological tests will be conducted at the Danish Institute for Food and Veterinary Research.
- The vaccinated birds in question will not be traded or moved between zoos in Denmark unless written permission are granted from the Danish Veterinary and Food Administration. Trade or movement within the Community will only be permitted after specific authorization from the Member State of destination.
- Products of vaccinated birds will not enter the food chain.

Information to be compiled in zoos

Zoos planning to vaccinate their birds have to submit a plan to the regional office of the Danish Veterinary and Food Administration (DVFA) that contains the following information:

- Data and location of vaccination
- Name and address of the veterinarian who will conduct the vaccination and blood sampling
- List of birds (Species (Danish and Latin name), identification (ring no.) to be vaccinated

- Map of locations where the vaccinated birds are kept
- Estimated amount of vaccine needed

Supervision by the Danish Veterinary and Food Administration

Based on a review of the submitted plan the DVFA will give a written permission to conduct the vaccination.

The DVFA will grant a written permission to the Danish Institute for Food and Veterinary Research to deliver the vaccine doses needed.

A representative of the DVFA will be present during the vaccination procedure in all zoos.

After the vaccination the zoos have to report to the DVFA.

The report shall contain information on numbers and identification of the birds that have been vaccinated and blood sampled and the results of the serological tests.

Dissemination of information on Danish vaccination programme in zoos

A report on the execution of the Danish vaccination programme in zoos including the test results will be provided for the Commission and the Member States in the framework of the Standing Commission on the Food Chain and Animal Health.

Annex I.

List of zoos that so far want to vaccinate birds in Denmark.

Odense Zoo

Sdr. Boulevard 603
DK-5000 Odense C

Givskud Zoo

Løveparkvej 3
DK-7323 Give

Københavns Zoologiske Have

Sdr. Fasanvej 79
DK-2000 Frederiksberg

Ebeltoft Zoo

Stubbe Søvej
Gravlev
8400 Ebeltoft

Knuthenborg Safari Park

Birketvej 1
4941 Bandholm

AQUA Ferskvands Akvarium

Vejlsøvej 55
8600 Silkeborg

Ålborg Zoo

Mølleparkvej 63
9000 Ålborg

Jesperhus

Legindvej
7900 Nykøbing Mors

Jyllands Park Zoo

Haustrupvej 13
6920 Videbæk

Christianshede Zoo

Christianhedevej 44
7441 Bording

Dyrenes Gård
Munkholmvej 5
8444 Balle

Annex II

Preliminary list of birds to be vaccinated in different Danish zoos

Odense Zoo:

Ostriches (Struthioniformes + Rheiformes + Casuariiformes):	9
Chicks hatched within the next weeks	8
Pelicans (Pelecaniformes):	25
Storks (Ciconiiformes):	145
Ducks: (Anseriformes):	17
Falcons (Falconiformes):	1
Gallinaceous birds (Galliformes):	10
Cranes (Gruiformes):	11
Waders, gulls and terns (Charadriiformes):	32
Chicks	8
Parrots (Psittaciformes):	113
Youngs	30
Toucans (Piciformes):	1
Total	410

Givskud Zoo:

Storks (Ciconiiformes):	48
Hérons (Ciconiiformes):	8
Ostriches (Struthioniformes + Rheiformes + Casuariiformes):	17
Parrots (Psittaciformes):	110
Ducks: (Anseriformes):	35
Total	218

København Zoologiske Have:

Cranes (Gruiformes):	4
Storks (Ciconiiformes):	65
Ostriches (Struthioniformes + Rheiformes + Casuariiformes):	5
Skrigefugle (Oraciiiformes):	10
Parrots (Psittaciformes):	18
Gallinaceous birds (Galliformes):	100
Pinguins (Sphenisciformes):	25
Falcons, eagles and owls (Falconiformes):	11
Cuckoos (Cuculiformes)	4
Cormorants (Steganopodes):	6
Ducks: (Anseriformes):	20
Total	268

Ebeltoft Zoo:

Falcons (Falconiformes):	40
Ostriches (Struthioniformes + Rheiformes + Casuariiformes):	15
Parrots (Psittaciformes):	50
Cormorants (Steganopodes):	5
Storks (Ciconiiformes):	15
Hornbills (Coraciiformes):	2
Pigeons (Columbiformes):	15
Total	142

Knuthenborg Safari Park:

Parrots (Psittaciformes):	54
Softbills	12
Ostriches (Struthioniformes + Rheiformes + Casuariiformes):	12
Gallinaceous birds (Galliformes):	60
Total	138

AQUA Ferskvands Akvarium:

Ducks: (Anseriformes):	21
Cormorants (Steganopodes):	5
Storks (Ciconiiformes):	8
Total	34

Ålborg Zoo:

Ostriches (Struthioniformes + Rheiformes + Casuariiformes):	7
Penguins (Sphenisciformes):	25
Storks (Ciconiiformes):	33
Parrots (Psittaciformes):	19
Toucans (Piciformes):	3
Gallinaceous birds (Galliformes):	8
Total	95

Jesperhus:

Storks (Ciconiiformes):	18
Hérons (Ciconiiformes):	5
Hornbills (Coraciiformes):	2
Parrots (Psittaciformes):	14
Gallinaceous birds (Galliformes):	10
Ducks: (Anseriformes):	4
Total	53

Jyllands Park Zoo	
Ostriches (Struthioniformes + Rheiformes + Casuariiformes):	11
Storks (Ciconiiformes):	30
Parrots (Psittaciformes):	25
Gallinaceous birds (Galliformes):	25
Falcons (Falconiformes):	6
Penguins (Sphenisciformes):	5
Ducks: (Anseriformes):	30
Flamingos (Ciconiiformes):	9
Pelicans (Pelecaniformes):	6
Total	147
Christianshede Zoo	
Ostriches (Struthioniformes + Rheiformes + Casuariiformes):	12
Ducks: (Anseriformes):	16
Gallinaceous birds (Galliformes):	10
Parrots (Psittaciformes):	1
Total	48
Dyrenes Gård	
Ostriches (Struthioniformes + Rheiformes + Casuariiformes):	4
Ducks: (Anseriformes):	6
Gallinaceous birds (Galliformes):	32
Parrots (Psittaciformes):	8
Total	50
Total all zoos	1603