British Veterinary Association

Policy statement

5 February 2007

The British Veterinary Association

Statement on the Use of Vaccination as a Control Option for Avian Influenza

The BVA supports the possible use of vaccination as part of a national control plan for avian influenza, but would like to stress that there are many issues that need to be taken into account when considering the use of vaccines for disease control. The BVA does not support the use of vaccination in domestic poultry in the UK under the current risk status.

Disease Status
Update 05/02/07

On Friday 2nd February H5N1 Avian Influenza was confirmed in a commercial turkey farm near Lowestoft in Suffolk.

Tests from the Veterinary Laboratories Agency (VLA) have confirmed that the avian flu virus has been identified as the highly pathogenic Asian strain, similar to that found in Hungary in January 2007.

A Protection Zone of a three kilometres radius and a Surveillance Zone of ten kilmetres have been established around the premises: movement restrictions have been imposed and poultry must be isolated from wild birds. A wider Registriction Zone has been imposed, covering East Suffolk and South East Norfolk bounded to the West and the North by the A140 and A47 respectively, an area of approximately 2090sqkm. Therefore it is required that all poultry are isolated from wild birds and all movements must be licensed.

All animal gatherings, including shows, market and fairs, and pigeon races have been banned nationwide (throughout England, Scotland and Wales) until further notice (this will be kept under review as the disease situation develops).

Statement

The BVA believes that under the current conditions, it is not yet appropriate to carry out preventative vaccination of the UK's domestic poultry flocks as it may severely compromise the ability to recognise and react quickly to any introduction of the virus to our domestic poultry.
The observed, limited transmission between wild birds and poultry within the EU countries to date is encouraging and the UK may be able to control this disease by limiting contact between wild birds and domestic poultry and through early detection and 'stamping out' (culling of infected or close contact birds).

It should be recognised however that these control measures may not remain the most appropriate option if either:

- **the level and duration of infection in the wild bird population increases significantly or**
- **the risk of transmission to domestic poultry increases significantly.**

British Veterinary Association
Patron: Her Majesty The Queen

7 Mansfield Street | London W1G 9NQ

T 020 7636 6541 F 020 7436 2970
E media@bva.co.uk W www.bva.co.uk

BVA POLICY STATEMENT
05.02.07

Thus constant surveillance of the disease is necessary and vaccination should always be considered as a control option for the future. The UK must be prepared to react immediately to any change in risk that will necessitate the use of a vaccine, and we must ensure that the UK has the necessary measures in place in order to allow us to respond effectively.

The BVA recognises that considerable surveillance has taken place in the UK since October 2005 but we strongly urge Defra to continue to step up surveillance in wild birds. This will ensure that highly pathogenic avian influenza is detected at the earliest opportunity to ensure that isolation and eradication is immediate. We must also ensure that efforts are made to determine the level of infection in wild birds across Europe as this will have an impact on the level of risk posed to the UK.

Defra should now, with urgency, be submitting all necessary vaccination plans to the European Commission so that, when it becomes necessary, EU approval for the use of vaccination can be sought and acquired quickly.

The statement below outlines the pros and cons of vaccination from a veterinary perspective and outlines the types of vaccination that are felt to be appropriate and under which circumstances. It also reinforces the need to continually monitor the spread of this continually changing disease.

Summary

- We do not support vaccination of domestic poultry under the current risk status
- Early detection, isolation and eradication is the best approach to controlling the spread of this disease
- Poultry owners should be making efforts to protect their flocks by preventing contact between poultry and wild birds and their droppings by:
    - Increasing biosecurity measures
    - Keeping domestic birds away from lakes and waterways
    - Feeding and watering domestic poultry indoors
    - Preparing to house free-range birds within 24 hours should Government demand it.
- Wild bird surveillance should be stepped up immediately across the EU to ensure rapid detection of the virus and to assess the real level of infection across Europe
- Vaccination should be considered as part of any future controls for avian influenza therefore:
    - Defra's contingency vaccination policy should be finalised immediately
    - The vaccination plans should be submitted to the EU Commission before seeking approval to actually start vaccinating
    - A vaccine order should be placed in line with the UK's contingency plan

- The contingency vaccination plans should be re-examined daily/weekly

- Vaccination can be an important additional measure but it does not prevent infection so vaccinated birds must be subject to continued monitoring for the virus. Biosecurity measures must be maintained in vaccinated birds.
- We support the vaccination of high risk birds, from zoos or private bird collections, which cannot be moved indoors for welfare reasons.

Supporting comments: The use of vaccination to control the spread of avian influenza

Vaccination is not a solution in itself and should be used in conjunction with other control measures, which include heightened biosecurity, movement controls and culling or 'stamping out' in control zones (3 km and 10 km) around any disease outbreak.

Biosecurity measures are essential to control an outbreak as avian influenza will still be able to spread with or without vaccination. The use of a vaccine would also have to be accompanied by increased surveillance and monitoring of the vaccinated birds, in order to pick up any superimposed infection within a flock.

It is necessary to be able to differentiate vaccinated and infected birds from those that are merely vaccinated. Current vaccines allow for such a 'DIVA' (differentiating infected from vaccinated individuals) strategy to be followed. However, their effectiveness, and the possibility of following a 'DIVA' strategy will depend on the type of vaccine and the current strain of the avian influenza virus circulating. Sentinel (unvaccinated) birds should also be used to test for any infection in a vaccinated flock.

Vaccination can be used in two ways as part of a control strategy:

- As a **preventative measure** prior to the detection of the virus
- Or as an emergency **control measure** for use once the virus has been detected.

The UK Government has outlined plans for both applications in their draft vaccination plan, which is part of the UK's transposition of the AI Directive into UK law. The BVA is fully supportive of keeping every available disease control option open for the future and endorse the consideration of both applications for disease control.

Vaccine Limitations

There are limitations with the current vaccines available. They are inactivated and need to be injected into each individual bird, and vaccination will probably have to be administered on two occasions. This makes vaccination a very expensive exercise in terms of manpower and time. It normally takes from 2-5 weeks for the birds to build up the necessary level of immunity. Vaccination can also have an effect on the welfare of layers; handling depresses egg production and can result in peritonitis (an inflammation of the peritoneum, the membrane that lines the wall of the abdomen and covers the abdominal organs) which can be fatal.

The current vaccines also do not protect birds from becoming infected with AI, nor do they prevent such vaccinated birds from excreting the virulent virus. However, trials indicate that the quantity and duration of such excretion are considerably reduced. Confirmation of the presence of virus (with or without overt signs of disease) will trigger the slaughter of infected flocks and the

establishment of a 3km protection zone and 10 km surveillance zone. It must also be stressed that vaccination against one strain of the virus will not protect the UK flocks from the introduction of another strain of the virus, which for a rapidly mutating virus is a significant factor to consider.

The advantages of vaccination
The advantages of vaccination in terms of disease control are that it significantly reduces the clinical severity of the disease and the transmission of the virus between birds. Therefore vaccination has the ability to reduce the spread of infection in birds. It would also provide some protection for free range flocks that cannot be held indoors for a protracted period.

Vaccination in other EU Member States:
From the latest information available, France and the Netherlands have recently been given permission to begin vaccination programmes.

Defra update 23/02/06 on the SCoFCAH meeting on vaccination (21 - 22 February)

At the meeting the Netherlands and France submitted detailed plans which were agreed. This is a summary of them.

The Netherlands proposed to immediately vaccinate all backyard flocks and free range laying hens over seven weeks old (up to 8 million birds). This was due to their view of the high level of risk across their territory with a very concentrated poultry population, extensive aquatic area and being a cross roads for several main migratory routes for wild birds and the impracticality of housing;

France proposed to vaccinate from March just geese and ducks over 3-4 weeks old (around 900,000 birds) in three Departments on the Atlantic coast (that is not including the area where there has been an outbreak) which they assessed as high risk for similar reasons around migratory routes, high density and aquatic areas.

France and Denmark also circulated plans to vaccinate zoo birds (following plans already submitted by the Netherlands, Belgium and Portugal) and Sweden also announced its intention to do so.

BVA supports the use of vaccination under the following circumstances:

- **Vaccinating high risk birds, from zoos or private bird collections**, which cannot be moved indoors for welfare reasons.
- Where there is a **high risk of spread** of the highly pathogenic avian influenza virus to the UK.
- **Preventative vaccination in high risk areas** where it is felt impossible to maintain adequate separation of domestic flocks from a high density of wild birds suspected of carrying AI, (based on a risk assessment).
- Emergency vaccination as **a disease control option** where other control methods have failed to contain the further spread of infection, or for **high risk groups** in the near vicinity as detailed above if preventative vaccination has not already been considered
- If the **level of culling** as a control method reaches such a level as to be **unjustifiable on ethical or welfare grounds**, as has now been declared in the Asian context by the WHO, OIE and FAO.

- **If the disease becomes endemic** in the UK and persists at high levels in the wild bird population.
- Where the **welfare of birds is considered to be severely compromised**; for example, free range flocks that are required to be housed indoors for long periods. Vaccination would allow the birds to be returned outdoors and they should be constantly monitored (use of sentinel birds).

Vaccination of zoo birds:
The collective term 'zoo birds' is used to include rare and endangered species housed in zoological and private collections. The justification for the vaccination of zoo birds and private collections is a separate issue to the vaccination of domestic flocks and BVA, BVZS (British Veterinary Zoological Association) and BIAZA (The British and Irish Association of Zoos and Aquariums) believe that in order to preserve biodiversity such collections should be vaccinated. Many species cannot be held indoors or adequately separated from wild birds without severe consequences to their welfare.

Any use of vaccine in this scenario would not be to control a disease outbreak but as a conservation measure for rare and endangered species. Contingency planning of this sort is consistent with both UK and EU policy. Given that current information indicates that some larger zoo birds may require a second vaccination three weeks after the first and that the maximum protective effect may take up to 5 weeks, this means it could take up to 8 weeks to protect a zoo bird using vaccination. Consequently, the BVA, BVZS and BIAZA believe that Defra should now be seeking EU agreement to our vaccinating high risk birds from zoos and private collections.

Decision-making on the birds to vaccinate and methods of monitoring should be made on a case by case basis taking into account welfare and physical practicalities as well as previous data available about the use of such vaccines in zoo birds; consultations between zoo veterinary professionals and Defra should inform decision-making in this area. Vaccination of individual zoo birds should take into account the following areas:

- The concept of epidemiological units
- Bird eligibility
- Vaccine logistics
- Implementation of vaccination
- Surveillance and testing – along with the use of a 'DIVA' strategy

Vaccination of non-domesticated species is not without risk to the birds as they are not used to being handled and to be done safely it will take time. The birds will have to be caught at least twice for the first and second injection which is considered to be a very stressful experience for many species.

Vaccination has been known to produce lethal effects in some zoo birds and we do not know how many of the species could react to the vaccine. Therefore veterinary zoological experts should be consulted on the use of vaccine for the different species kept.