



***** NEW STRAIN OF H5N6 VIRUS DETECTED – LIKELY WILD BIRD SPREAD *****

Overview

Situation: A reassortant strain of Influenza A (H5N6) virus

Areas: Japan, Republic of Korea and Taiwan Province of China.

New event information

- Japan, the Republic of Korea and Taiwan Province of China reported a **variant H5N6 highly pathogenic avian influenza (HPAI) strain** recently found in wild birds (mute swan – *Cygnus olor*; tufted duck – *Aythya fuligula*; black-headed gull - *Chroicocephalus ridibundus*; black-faced spoon bill - *Platalea minor*) and, in the Republic of Korea, in the environment and domestic ducks (see map).
- Virus introduction likely occurred via migratory birds.
- In Taiwan Province of China, the virus was detected in a dead black-faced spoon bill (*Platalea minor*): breeding takes place between March and September on small islands along the western coast of the Korean Peninsula to Liaoning Province, China; winter migration is southward to coastal areas, such as Taiwan Province, **Hong Kong SAR, Macau SAR of China, southern Japan, the Republic of Korea, the Philippines, Thailand and Viet Nam** [reference]. These countries should therefore be **prepared for an eventual introduction** through wild birds.
- This virus belongs to Clade 2.3.4.4 “B” and this particular “subclade” has so far not been associated with disease in humans or mammals, unlike other H5N6 viruses co-circulating in the region.
- According to laboratory studies, the strain is of **high pathogenicity for chickens**:
 - intravenous inoculation of chickens killed all 48 birds within 48 hours
 - nasal infection showed that chickens inoculated with 10⁶ virus died within 3 days, while chickens inoculated with 10⁴ virus survived.
- Full genome sequence analysis showed that the virus is a **reassortant**:
 - all seven gene segments (except for the NA) come from the H5N8 HPAI virus that caused multiple outbreaks in Europe in the winter of 2016-2017 (>99% similarity)
 - the NA gene comes from a HxN6 virus that has been circulating in wild waterfowl in Eurasia (>97% similarity) and is closely related to a H3N6 LPAI virus isolated in the Netherlands.

The sequence of the HA protein binding is specific to avian receptors.

- This virus is therefore **different from influenza A(H5N6) virus that has been associated with human disease in China** as well as the H5N6 HPAI viruses that caused severe disease in wild birds and poultry in Japan, the Republic of Korea and Taiwan Province of China in 2016-2017.
- In the Philippines, H5N6 HPAI outbreaks in poultry were reported in July, August and November 2017.
- In mainland China, avian influenza surveillance results for the first half of 2017 showed that 52 out of 57 avian influenza positive samples were H5N6 [reference p35].
- FAO calls for **attention to the evolution of this virus**, along with the management of **biosecurity at all levels** to prevent poultry from infection and the **sharing of isolates to OIE and FAO reference laboratories** [for assistance with sample shipment contact: EMPRES-Shipping-Service@fao.org].

FAO recommends:

- Report sick or dead birds to the local veterinary (or public health) authorities so that they can deal with them safely and quickly to help stop the virus spreading.
- Keep all birds separate from people and living areas.
- Keep wild birds away from poultry and keep different types of birds apart. Screens, fencing or nets can be used to separate species and help prevent transmission.
- Wash your hands often to kill and remove the virus. You should always do so before and after handling birds, cooking or preparing poultry products, and before eating.
- Eat well-cooked poultry products; do not eat sick or dead chickens and do not give or sell them to others. Keep chickens from infected flocks out of the food chain and do not feed them to other animals. See [WHO website on food safety issues](#). More information on public health is available at [WHO website](#).

