



Avian influenza in Asia

Highly Pathogenic AI has become a major transboundary epidemic with wide-ranging economic, trade and social repercussions...

Recent human deaths from avian influenza (AI) in Viet Nam have heightened international alarm over the continuing AI epidemic in Asia. The Highly Pathogenic Avian Influenza (HPAI) virus has plagued the region since late 2003 and has led to the deaths or culling of more than 120 million poultry. By late January 2005, WHO says, 54 people had also contracted the disease and 41 of them had died. Reports of 10 human cases, including nine deaths, in Viet Nam since mid-December 2004 have raised fears that the virus may now be transmissible among humans.

While WHO evaluates the threat to human health, FAO's newly-created Emergency Center for the control of Transboundary Animal Diseases (ECTAD) is working with OIE, regional organizations, national authorities and donors to contain and control the disease in domestic poultry in six Asian countries. In its latest situation report, FAO says that the particularly virulent H5N1 strain of the AI virus has been discovered in 25 provinces and cities of Viet Nam and in 13 districts of Thailand.

In Viet Nam alone, more than half a million domestic birds were culled in January and the government suspended imports of poultry and poultry products from neighbouring countries. The report also warns that the Asian lunar New Year, to be celebrated on 9 February, will lead to increased movement of people and poultry throughout the region, increasing the risk of new AI outbreaks.

Emergency projects. "HPAI is a major transboundary epidemic with wide-ranging economic, trade and social repercussions," says FAO's Chief Veterinary Officer and ECTAD manager Joseph Domenech. "More than half of the affected countries are experiencing the disease for the first time. At risk are not only animal health but human health, food security, economies and society in general." In response, FAO has launched a series of emergency projects covering an area from Pakistan to eastern China and sent teams of animal disease experts to advise national authorities on measures to halt the epidemic.



The AI emergency officially began in December 2003, when a highly contagious type of avian influenza struck chickens on a farm near Seoul, Republic of Korea, and spread rapidly across the country. Within weeks, simultaneous outbreaks of H5N1 infection in Cambodia, China, Indonesia, Japan, Lao PDR, Thailand and Viet Nam had devastated domestic fowl. After massive culling and targeted vaccination campaigns, this "first wave" of the disease was thought to have been contained by March 2004. But in June, a second, smaller wave of H5N1 caused new outbreaks in Thailand and Viet Nam.

In guidelines released in September 2004 for preventing, controlling and eradicating HPAI in Asia, FAO recognized that the epidemic is unprecedented in its geographical scope and rate of spread. "The impact has been distributed within the entire poultry market chain, affecting producers, consumers and retailers," Domenech says. "In some areas, farmers have lost more than 50 per cent of their poultry."

Variety of strategies. HPAI viruses are believed to be endemic in parts of Asia and the existence of reservoirs of infection — particularly ducks — makes eradication a complex challenge. FAO says the first priority in combating HPAI is to reduce the amount of virus circulating in poultry and on farms through a variety of

strategies, including wholesale “stamping out” of infected birds, vaccination, and enhancement of biosecurity in the production chain.

“When outbreaks occur,” the FAO guidelines on AI advise, “immediate stamping out is the most appropriate response of veterinary authorities.” Stamping out usually involves the destruction of all poultry in a defined radius around infected areas — recommendations vary from 1 km to more than 10 km — and of poultry on “at risk” farms. Pigs diagnosed with disease due to H5N1 infection should also be destroyed.

To be effective, however, stamping out campaigns must be accompanied by control of poultry movement, proper disposal of carcasses and other potentially infective material, and cleaning of affected farms structures. In areas hit by AI, FAO also recommends the temporary closure of live bird markets, which act as reservoirs of infection from which HPAI viruses can escape to farms.

“Biosecurity and basic hygiene practices are important measures to halt disease spread and prevent entry of infection into production units and the food chain,” FAO says. “But to be successful, biosecurity must be practised by everyone in the production chain, from farmers and cooperatives to abattoirs and processing plants.” In areas where domestic waterfowl or wild birds are reservoirs of HPAI viruses, control measures should focus on preventing the viruses from entering the domestic chicken population. FAO counsels against the destruction of wild birds or their habitat — again, farm biosecurity must be enhanced.

Backyard systems. While tightening biosecurity is feasible on commercial poultry farms, it is more difficult in the case of back-yard production systems, particularly where flocks are free ranging. When active HPAI infection is found in backyard poultry, veterinary authorities should consider establishing “poultry-free zones” around commercial operations.

As an alternative to stamping out — in situations where massive culling is either not feasible or not desirable — targeted vaccination may be the most appropriate means of “dampening down” HPAI. In an outbreak situation, vaccination may be used around infected farms (but all infected chickens must be culled). It can also be used pre-emptively, in response to a defined “trigger” (e.g. unexpected mortalities in wild birds) or when the risk of infection is high. “Vaccination should not be considered as a permanent measure,” FAO cautions. The need for vaccination should be reviewed regularly and an exit strategy developed, even if vaccination is not likely to be halted for several years.

“The current HPAI epidemic in Asia is a crisis of global importance and will demand close attention for some time to come,” says Joseph Domenech. “FAO will continue to collaborate with international and regional organizations, countries, the private sector, the veterinary profession and the research community to improve capacities for prevention, control and eradication of HPAI and to support recovery in the region.”