

## Avian influenza in poultry

### Highly variable symptoms

The virus penetrates a bird's respiratory and intestinal membranes to infect the cells which will insure its replication. The incubation period is short: 3 to 5 days in general, although it may be up to 3 weeks. This upper limit was retained in international regulation for the exchanges of birds and bird products.

With highly pathogenic H.N. viruses, the acute forms are common: in 90% of the cases, the birds suffer a septicemic attack and die within one or two days. With extreme forms, symptoms may be observed in isolation or in various associations, including general (loss of appetite, prostration...), cutaneous (oedema, congestion, hemorrhage in the combs and wattles), respiratory (respiratory difficulties, rattle, cough), digestive (diarrhea with occasional white droppings, possibly hemorrhagic), and neurological (poor motor coordination, wing paralysis, stiff neck...) signs.

In subacute forms, birds suffer from respiratory symptoms (swelling of orbital sinuses, respiratory difficulty, cough) and cease to lay eggs. Mortality rates still may be high, differing from what is observed in mild cases: slight respiratory symptoms and a reduction in egg laying. Finally, forms showing no visible symptoms are frequent among wild birds.



*Veterinary and conservation agents discussing a sampling frame to detect avian influenza viruses in migrating birds in Mali, 2006 - Alexandre Caron, © Cirad*

## Vulnerable domestic species

Chickens and turkeys are the most vulnerable domestic species. Pheasants, quail, guinea fowl, and ostriches are susceptible, as are geese and ducks. In enzootic zones, numerous domestic and wild species (chickens, geese, ducks...) might be reservoirs for the H5N1 virus, a small proportion of birds (0.1% to 2%) seeming capable of harboring the virus without showing symptoms. These birds might thus contaminate other birds. Pigs, horses, cats, and people may become infected by H5N1 and other avian flu viruses. In Asian zoos, carnivores accidentally fed chickens infected with H5N1 developed severe pneumonia and died.



*From beak to snout: mixed farming of pigs and chickens in Vietnam, 2005 – Vincent Porphyre, © Cirad*

In addition to their own specific influenza viruses, pigs also may harbor viruses of both human and avian origin (a situation seen in China in 2004 and in Indonesia in 2005). Consequently, it is important to avoid contact between pigs and poultry to reduce the risk of the emergence of a hybrid virus potentially dangerous to man.