

Survival of Avian Influenza Virus in Poultry Carcasses

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This morning, you told me to find out how long avian influenza virus survives in poultry carcasses. I found that this is highly dependent on environmental conditions of heat and humidity. The virus lasts longer in cool, moist conditions than in hot, dry conditions. Acid conditions shorten virus survival. The virus is inactivated in 3 hours at 56°C (133°F), or 30 minutes at 60°C (140°F).¹ In manure, the virus survives 35 days at 4°C (39°F), 7 days at 20°C (68°F),² and 6 days at 37°C (99°F).³ In frozen meat, the virus persists for a long but unspecified period.³

One of the few specific references to virus survival in poultry carcasses I was able to find said it could survive “several days at [Australian] ambient temperatures” and as long as “23 days if refrigerated.”⁴ There is universal agreement that it is necessary to properly dispose of carcasses following an outbreak. This has traditionally meant burying or burning carcasses, or more recently, proper composting.^{5, 6} After carcass removal, the premises must be thoroughly cleaned and disinfected, and then held vacant for a period of at least three weeks before restocking.

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¹ World Organization for Animal Health, http://www.oie.int/eng/avian_influenza/disease.htm

² Easterday, BC, and VS Hinshaw, Influenza, in Diseases of Poultry, 9th ed, edited by BW Calnek, Iowa State University Press, Ames, Iowa, 1991, p539.

³ World Health Organization, www.who.int/foodsafety/fs_management/No_02_Avianinfluenza_Dec04_en.pdf

⁴ Department of Primary Industries and Fisheries, Queensland, Australia, <http://www2.dpi.qld.gov.au/avian-influenza/18091.html>

⁵ Kansas State University, <http://fss.k-state.edu/research/books/carcassdisp.html>

⁶ Canadian Food Inspection Agency, <http://www.inspection.gc.ca/english/anima/heasan/disemala/avflu/situatione.shtml>