Soil Association statement on outbreak and spread of Swine flu virus

28 April 2009

Given that the new strain of Swine flu virus (containing segments of bird, pig and human flu virus), has shown itself capable of passing from human to human and causing human fatalities – the immediate priority must be to protect human health, containing further spread if possible and building-up stocks of suitable anti-viral drugs. But this occurrence of yet another disease emanating from livestock and capable of infecting humans – raises serious questions as to the role of intensive livestock systems acting as ‘incubators’ for a wide range of human health-risks and specifically as breeding grounds for potential flu pandemics.

Campaigners and the media in the US and Mexico have pointed out the proximity of intensive pig units with ongoing concerns over human health risks to the initial outbreaks of the new strain of Swine flu: “Large-scale swine producers in Mexico deny that their industry is the source of the deadly new influenza strain, saying the animals are all healthy, and that it is scientifically “not possible” for hogs to infect people with the illness. But lawmakers in the eastern state of Veracruz are now charging that large-scale hog and poultry operations are "breeding grounds" of infection that are making people sick and fueling the pandemic.”[1]

It has long been scientifically accepted that confining very large numbers of animals – be they pigs or poultry – in close proximity to each other provides the perfect conditions for enabling viruses and other potential human pathogens to thrive, mutate and become more deadly. [2] Swine flu used to be a seasonal disease affecting pigs, but the conditions, scale and sheer numbers of animals closely confined in modern intensive pig units have caused it to become an all-year round problem.

ThePigSite.com, a ‘leading online news and technical resource to the global swine industry’ admits that, “It is virtually impossible to maintain a population of pigs that is influenza virus free. SI (swine influenza) in large herds may become endemic with intermittent bouts of disease and infertility and different strains may also sequentially infect the herd. Immunity to influenza viruses is often short lived (6 months) and the immunity profile in the breeding herd varies considerably with time.” [3]

The worst flu pandemic to affect the global human population in recorded history was the outbreak of 1918-19, estimated to have caused between 20 – 50 million deaths worldwide. At the time in the US, there were numerous instances recorded of farmers catching the flu from their pigs or passing the flu onto their pigs – leading to speculation as to whether pigs were the original source of the infection. Since that time human to pig and pig to human flu cases have been well-documented, with the increased scale and close-confinement of the animals recognised as a key factor.

Recent US studies show that people working on intensive pig farms may kick-start flu epidemics by adding to the variety of viral strains that can then be mixed and ‘reassorted’ through the pigs to create new, more virulent forms of influenza capable of infecting humans and pigs alike – so providing the perfect conditions for a pandemic. As the study notes, these farm workers, ‘may serve as a conduit for a novel virus to move from swine to man or from man to swine.’ [4]

Scientists have recognised that Swine flu and other respiratory infections in pigs could be prevented by reducing stocking density and other management factors. [5] With the exception of organic and some free-range systems, producers have not made such changes voluntarily because of the widespread availability of antibiotics which can be added to food, water or injected directly into the pigs. While these do not treat viral infections they do help pigs to recover from secondary effects which are caused by

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bacteria. Operating in a global market competing on low prices, it will not be easy to change the dominant industrial system, since producers who make changes that increase costs even slightly risk being driven out of business. Consumers could help drive meaningful change by making retailers aware that they are no longer willing to buy meat from livestock production systems which threaten their own health.

**Soil Association policy demand:**
Given the scientific evidence and acceptance of the role of intensive livestock units in exacerbating human-life threatening diseases, Government should urgently commission research to determine ideal conditions and systems for minimising risks to human-health from livestock production.

Similar links between intensive livestock production and the exacerbation of risk have been found in several other diseases including avian influenza (bird flu) and Newcastle’s disease. [6]

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**Notes to Editors:**


[2] Herd factors associated with the seroprevalences of four major respiratory pathogens in slaughter pigs from farrow-to-finish pig herds
Department of Reproduction, Obstetrics and Herd Health, Faculty of Veterinary Medicine, University of Ghent, Salisburyleaan 133, 9820 Merelbeke, Belgium.
Regional Veterinary Investigation Centre, Industrielaan 15, 8820 Torhout, Belgium.


[4] Are Swine Workers in the United States at Increased Risk of Infection with Zoonotic Influenza Virus?
Center for Emerging Infectious Diseases, Department of Epidemiology, University of Iowa College of Public Health, and Department of Occupational and Environmental Health, College of Public Health, University of Iowa, Iowa City, and Veterinary Medical Research Institute, Iowa State University, Ames; and Department of Pathobiological Sciences, School of Veterinary Medicine, University of Wisconsin, Madison. January 2006

[5] See Note 2 above.

Australian officials acknowledged that outbreak of more virulent form of disease stemmed from intensive units, not small-scale, extensive backyard poultry-keepers, which some commentators had sought to blame. When asked if backyard flocks were the cause, the officials responded: "No. A very mild form of Newcastle disease virus is present in all States. Providing that strain does not mutate into something virulent, it poses no threat to birds. The outbreaks we had on the mainland between 1998 and 2002 were caused by a mutation of the endemic mild strain (known as the V4 virus) into a virulent strain of the virus. All the available evidence indicates that, for such a mutation to occur, it needs a large number of birds in a small area to "generate" the virus mutation process. In simple terms, a small number of birds cannot generate enough virus for the mutation process to occur."

Mutation is far more likely to occur where large numbers of birds are kept together – ‘in effect a petri dish for diseases to circulate and infect other birds’


Generation and spread of H5N1 avian influenza linked to intensive poultry production and transport routes rather than wild-bird migration:

In the Southeast Asian countries where most of the initial bird flu outbreaks were concentrated - Thailand, Indonesia, and Vietnam, intensive poultry production jumped eight-fold in just 30 years, from around 300,000 metric tonnes (mt) of chicken meat in 1971 to 2,440,000 mt in 2001. China's production of chicken tripled during the 1990s to over 9 million mt per year. Practically all of this new poultry production occurred on factory farms concentrated outside of major cities and integrated into transnational production systems.

Fowl play - The poultry industry's central role in the bird flu crisis

http://www.grain.org