PATENT OFFICERS CRACK UNDER PRESSURE

European workers strike against system to boost efficiency.

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and has suffered persistent outbreaks. The well-developed animal health services in the United States and Canada have implemented similar measures to those in France, and are widely expected to quickly contain any outbreak of H5N1.

Unlike regions of southeast Asia and Africa, where poultry live outdoors and mingle freely with each other and with wild birds, US flocks are highly concentrated in industrial farms, where birds are raised indoors, isolated from external contaminants. One potential weakness is the popular live markets in California and the northeastern states. In the northeast, these markets have sustained an avian flu virus of low pathogenicity, H7N2, since 1994. In the past, as many as 60% of birds sampled have carried flu viruses, although control measures have reduced the levels.

Such live markets "continue to be a major source of avian influenza viruses and a risk for introduction to commercial poultry operations". This is what David Swayne and David Suarez of the US agriculture department's main poultry research laboratory in Athens, Georgia, told an influential 2004 workshop on pandemic planning that was organized by the US National Academies.

South America is also preparing well, experts say, as it has decades of experience of handling other highly contagious diseases, such as foot-and-mouth disease. Lubroth gives the continent good marks for "high awareness favouring quick detection and response".

Brazil's poultry industry is both larger and more complex than that in the United States. Backyard farms are common in the poor northeastern part of the country, and small-holdings are scattered throughout urban areas and along the Amazon. But its core production remains in large commercial farms, which are well aware of the economic risks of H5N1, says Lubroth. "If H5N1 entered," he predicts, "they would stamp it out quickly to preserve the main industry."

That view is overly optimistic, argues Cackler, who sits on the avian-flu taskforce for the World Bank. Many South American countries, he says, have only recently woken up to H5N1 as something they might need to worry about. He recalls speaking to the agriculture minister of "one to-be-unnamed country" last November, who "just didn't get it; H5N1 was nothing to worry about". Cackler met him again in January, after H5N1 had ripped across Europe. "This time, the guy got it." ■

State's flu response raises concern

Just hours earlier, crowds had thronged past rows of squawking chickens, ducks and geese at a live-bird market in Camden County, New Jersey. But late last month, inspectors shut down the bustling market, ordering its complete disinfection after discovering an H5 avian influenza virus.

In the end, the virus turned out to be a strain that was not very harmful, but the event sheds light on what might happen if H5N1 is detected in the United States.

The country has weathered three major outbreaks of highly pathogenic bird flu before (see 'Past US outbreaks'). 'Low-pathogenic' bird flu, which kills few infected birds, occurs far more regularly. In the latest case, New Jersey's agriculture department made a public announcement about the discovery of an avian-flu strain — but it left out salient details.

The announcement on 28 April did not mention when or specifically where the infection was detected, saying only that preliminary tests had marked it as negative for the neuraminidase protein N1. The statement did not mention the haemagglutinin protein; *Nature* learned later that the state had a faint positive for H5, which can occur in both high- and low-pathogenic strains. The first samples were tested on 21 April.

Later confirmatory tests by the US Department of Agriculture (USDA) laboratory

Discovery of avian flu led to the closure of a New Jersey live-poultry market.

AP PHOTO/J. SZYMASZEK

in Ames, Iowa, failed because technicians there could not grow the virus. In the meantime, other birds in the market had been killed and disposed of. The market was later reopened.

If a low-pathogenic strain of bird flu is discovered, then individual states, not the federal government, are responsible for alerting the public — and officials say this all went as planned. "The timeline was exactly as it should be," claims Andrea Morgan, veterinary administrator for the USDA Animal and Plant Health Inspection Service. "The response that New Jersey launched was appropriate."

But it was misleading, critics

argue. Jody Lanard, a risk-communication specialist based in Princeton, New Jersey, has worked as a special adviser on pandemic communication to the director-general of the World Health Organization. She notes that the state's two press releases omitted the fact that the strain was H5, focusing instead on the fact that it was not N1.

"They are afraid the public will hear H5 and go nuts — a case of official panic about panic," she says. "If they really think the public is that fragile, they might be tempted to hold back lots of preliminary information, and delay issuing material when it really matters."

Karen Eggert, a spokeswoman for the USDA, says the department is still working out how and when it would alert the public to outbreaks of highly pathogenic strains such as H5N1. In the interests of openness, officials are considering announcing it immediately after the first confirmatory molecular tests. ■
Jacqueline Ruttimann

Past US outbreaks

Three highly pathogenic strains of avian influenza have already swept through the US poultry industry.

1924: An H7 strain of bird flu, known as the fowl plague, raced through live-bird markets in the northeastern United States.

1983: Another outbreak in the northeast — this time of H5N2 — culminated in the destruction of 17 million chickens, turkeys and guinea fowl.

2004: H5N2 struck again but was rapidly contained at a single poultry farm in Texas. Only 6,600 birds had to be killed.