

Backyard or free-range poultry are not fuelling the current wave of bird flu outbreaks stalking large parts of the world. The deadly H5N1 strain of bird flu is essentially a problem of industrial poultry practices. Its epicentre is the factory farms of China and Southeast Asia and – while wild birds can carry the disease, at least for short distances – its main vector is the transnational poultry industry, which sends the products and waste of its farms around the world through a multitude of channels.

Yet small poultry farmers and the poultry biodiversity and local food security that they sustain are suffering badly from the fall-out. To make matters worse, governments and international agencies, following mistaken assumptions about how the disease spreads and amplifies, are pursuing measures to force poultry indoors and further industrialise the poultry sector. In practice, this means the end of the small-scale poultry farming that provides food and livelihoods to hundreds of millions of families across the world.

# Bird flu crisis

## Small farms

### are the solution

## not the problem



24

### GRAIN

1 - Reuters, *Egypt advises people to get rid of dead poultry*, 18 February 2006

2 - Personal communication from Karam Saber, Land Centre for Human Rights, Cairo, 23 March 2006

3 - Khattab A, *A fowl business*, *Egypt Today*, March 2006; <http://etflu.notlong.com>; Leila R, *Poultry industry collapses*, *Al-Ahram Weekly*, 23 February 2006, <http://ahramflu.notlong.com>; Leila R, *Here to stay?*, *Al-Ahram Weekly*, 6 April 2006, <http://ahramfl1.notlong.com>

**O**n 17 February 2006, the Egyptian government confirmed that bird flu had broken out in the nation's poultry. With the international spotlight beaming upon it, the government did not want to look unprepared or, worse, at fault. So it immediately reacted by blaming migratory birds and traditional poultry practices. "The world is moving towards big farms because they can be controlled under veterinarian supervision... The time has come to get rid of the idea of breeding chickens on the roofs of houses" said Egypt's Prime Minister Ahmed Nazif.<sup>1</sup>

Then the Egyptian government swung into action with a military-style cleansing operation. It ordered the culling of all backyard and rooftop poultry and banned live bird markets, where 80% of the nation's poultry is sold. Farmers were promised compensation and vendors were promised refrigerators, so they could switch to selling frozen chicken, but neither materialised.<sup>2</sup> Meanwhile, the government banned the transport of live poultry and ordered that all slaughtering must take place in official slaughterhouses, leaving farmers not located near the few official slaughterhouses with no way to slaughter their chickens.<sup>3</sup> In less than a month, the Egyptian government effectively



*Highly pathogenic outbreaks of avian influenza have occurred regularly on factory farms in recent decades. Furthermore, the proportion of factory farms infected is much higher than for backyard farms.*

destroyed its multi-billion dollar poultry industry, the livelihoods of millions of Egyptians and its ancient poultry practices and biodiversity.

The response from the Egyptian government was not only insensitive to the importance of poultry for its people: it was misinformed. Yes, some backyard and rooftop flocks have been infected, but far more birds are dying from bird flu in factory farms. Plus, extensive testing of live migratory birds since 2004 has not produced any cases of bird flu.<sup>4</sup> Although official veterinarian reports single out backyard flocks, the website of the Egyptian government lists initial outbreaks at three factory farms where nearly 70,000 birds were culled, followed by further outbreaks on large factory farms in the regions of Ashmoun, Al-Marg, Giza Badrashaan and Damietta, as well as the culling of 77,000 birds at two farms near the desert city of Belbeis and 30,000 birds in nearby New Salhia, where one of Egypt's largest poultry companies has its farms.<sup>5</sup> The industry estimates that 50% of the commercial farms in the country have been infected and that over 25 million chickens have been slaughtered.<sup>6</sup>

The situation in Egypt is not unique. In Turkey, for instance, despite general agreement that the poultry industry had spread bird flu within the country, Health Minister Recep Akdag assured his people that: "the definite and permanent solution would be to slaughter [Turkey's 10 million backyard poultry] and halt such type of breeding for good".<sup>7</sup>

The response to bird flu in Thailand has also focused on the small-scale sector, where surveillance data from January 2004 showed that over 1,000 backyard poultry flocks were infected – 83% of the total number of reported cases of infection. But the same study also identified outbreaks in over 200 broiler and layer farms and concluded that the proportion of infected commercial farms was five times higher than for backyard farms.<sup>8</sup>

It was much more difficult to construct an argument against backyard farms in India and Nigeria where bird flu outbreaks are known to have begun on a few large-scale commercial farms and to have spread from there. India's largest poultry company was slapped with a notice under the Bombay Police Act for "causing public nuisance and threat to health" for its role in the outbreak.<sup>9</sup> Meanwhile, in Indonesia, the 11 biggest poultry farms have used certain laws to block inspections of their operations. "As long as they followed **our** procedures, we always welcome them" retorted Sudirto Lim, spokesperson for Charoen Pokphand (emphasis added).<sup>10</sup>

Bird flu outbreaks on factory farms are nothing new. Highly pathogenic outbreaks of avian influenza have occurred regularly on factory farms in recent decades, in Australia (1976, 1985, 1992, 1994, 1997) USA (1983, 2002, 2004), Great Britain (1991), Mexico (1993–1995), Hong Kong (1997), Italy (1999), Chile (2002), Netherlands (2003) and Canada (2004) – just to cite some examples apart

4 - Nassar G, Flu and Mismanagement, *Al-Ahram Weekly*, 13-19 April 2006, No. 790, <http://ahramflu2.notlong.com>

5 - Government of Egypt, *Bird Flu Statistics*, <http://statsBF.notlong.com>

6 - Personal communication from the El-Banna Company, 26 March 2005.

7 - AFP, *Turks see flu secrecy*, 21 January 2006, <http://reykurat.notlong.com>; J Lubroth, Senior Officer, FAO, *Audio interview: Control campaign in Turkey [Press conference]*, Rome, January 2006: <http://faobflu.notlong.com>; Rosenthal E, UN Aide urges flu transit checks, *International Herald Tribune*, Paris, 17 January 2006, <http://iht-flu.notlong.com>

8 - Tiensin T et al, Highly pathogenic avian influenza H5N1, Thailand, 2004, *Emerging Infectious Diseases*, November 2005, <http://cdc-flu.notlong.com>

9 - *The Statesman*, *Hatcheries put on notice*, Mumbai, 21 February 2006, <http://glogygid.notlong.com>

10 - CPAS, *Indonesia to revise laws barring access to poultry farms*, *AgroIndonesia*, 25 October 2005, <http://pountudo.notlong.com>



**Table: Measures to control bird flu targeting backyard poultry in a selection of countries**

Country	Measure
Austria	Ban on outdoor poultry from October to December. Ordinance extended indefinitely around area where H5N1-infected swans were found
Canada	Ban on outdoor poultry in the Province of Quebec
China	Anhui provincial government decrees all backyard poultry must be kept in cages. Complete ban on backyard birds in Hong Kong
Croatia	Ban on outdoor poultry during migration season
Egypt	Ban on rooftop poultry and ban on live markets
France	Ban on outdoor poultry, with exceptions
Germany	Ban on outdoor poultry
Italy	Free range birds have to be under wire screens
Netherlands	Ban on outdoor poultry, with exceptions
Nigeria	Backyard poultry and birds banned within the Federal Capital Territory, Abuja
Norway	Ban on outdoor poultry in eight southern counties
Slovenia	Ban on outdoor poultry
Sweden	Ban on outdoor poultry
Switzerland	Poultry must be kept within roofed enclosures
Thailand	Ban on free-range ducks. Ban on live poultry markets in Bangkok and slaughterhouses moved to outskirts. Forced collectivisation of small poultry flocks in central provinces
Ukraine	Sale of live poultry and poultry products produced by private village households prohibited in the Autonomous Region of Crimea
Vietnam	Ban on poultry farming in towns and cities

11 - Harder T and Werner O, Avian Influenza, in *Influenza Report*, eds. B.S. Kamps et al, Flying Publisher, Paris, 2006; Suarez DL, et al, Recombination resulting in virulence shift in avian influenza outbreak, Chile, *Emerging Infectious Diseases*, April 2004, <http://posigles.notlong.com>; Suarez D, Evolution of avian influenza viruses, *Veterinary Microbiology*, 22 May 2000, 74(1-2):15-27; Ito T et al, Generation of a Highly Pathogenic Avian Influenza A Virus from an A-virulent Field Isolate by Passaging in Chickens, *Journal of Virology*, May 2001, 75(9): 4439-4443.

12 - See for example, Stegemen A et al, Avian influenza A virus (H7N7) epidemic in the Netherlands in 2003: Course of the epidemic and effectiveness of control measures, *Journal of Infectious Diseases*, 2004, 190:2088-2095; Thomas M E et al, Risk factors for the introduction of high pathogenicity Avian Influenza virus into poultry farms during the epidemic in the Netherlands in 2003, *Preventative Veterinary Medicine*, 2005, 69:1-11

13 - Communication from Dr. Les Sims to Martin Williams, 26 February 2006.

14 - FAO and OIE, in collaboration with WHO, *A Global Strategy for the Progressive Control of Highly Pathogenic Avian Influenza (HPAI)*, November 2005, p 17 and p 22, <http://posigPDF.notlong.com>

15 - *ibid*

16 - Songserm T et al, Domestic ducks and H5N1 influenza epidemic, Thailand, *Emerging Infectious Diseases*, April 2006, <http://tolpabob.notlong.com>

from the recent bird flu crisis. Studies indicate that highly pathogenic strains of bird flu evolve when low pathogenic strains of the virus, which circulate harmlessly among wild bird populations, are introduced into high-density poultry flocks.<sup>11</sup> Once bird flu takes hold in a factory farm, the virus amplifies and spreads beyond the farm through a multitude of channels: trade in birds and eggs, people coming in and out, the elimination of waste, the use of litter in feed, etc.<sup>12</sup>

Backyard poultry operations, on the other hand, are characterised by low density. The experience with H5N1 outbreaks to date suggests that the strain causes only low mortality in backyard poultry flocks and has a difficult time spreading within these flocks, let alone beyond the farm. According to one FAO veterinarian, the mortality rate among infected backyard flocks in Malaysia in 2004 was only 5%.<sup>13</sup> Moreover, the Food and Agriculture Organisation (FAO) of the United Nations and the World Organisation for Animal Health (OIE) claim that there is “growing evidence that the survival of the virus in smallholder and backyard poultry is dependent on replenishment from outside sources.”<sup>14</sup>

Poultry diversity may be another factor protecting backyard flocks. While broiler chickens are highly susceptible to bird flu, the FAO and OIE report that there is evidence that H5N1 is adapting to village chicken in the same way that it has adapted to domestic ducks.<sup>15</sup> A recent study of free-ranging ducks in Thailand found that less than 1% of birds in infected flocks were clinically affected.<sup>16</sup> Unfortunately a lack of interest among authorities and the indiscriminate culls triggered by the detection of the virus, even among healthy birds, make it difficult to increase understanding of such dynamics between the virus and native poultry.

The emerging picture appears to be a context of endemic circulation of bird flu, causing occasional low mortality in small flocks and large outbreaks in factory farms when biosecurity measures are breached, as is inevitable under endemic conditions. Yet nearly all farm-level measures and policies for bird flu target small-scale producers of free-range poultry. They focus on locking poultry indoors, separated from infected wild birds, which are assumed to be the main vector of transmission to poultry, as seen in the Table. By and large, such laws and policies are not only ignorant of disease



dynamics within backyard flocks, they are totally impractical for small farmers. In Southeast Asia, governments, with the support of the FAO, are encouraging farmers to set up mesh screens or bamboo enclosures for their poultry. But the costs, estimated at US\$50–70, are out of reach for Asia's small-holders, who typically make less than US\$1 a day, and, in places like Thailand, where such measures have been enacted, it has immediately forced small farmers to abandon poultry.<sup>17</sup>

Moreover, the evidence of wild birds transmitting bird flu to poultry remains inconclusive.<sup>18</sup> After testing hundreds of thousands of wild birds for the disease, scientists have only rarely identified live birds carrying bird flu in a highly pathogenic form.<sup>19</sup> Nearly all wild birds that have tested positive for the disease were dead and, in most cases, found near to outbreaks in domestic poultry. Plus, the geographical spread of the disease does not match migratory routes and seasons.<sup>20</sup> Even with the current cases of H5N1 in wild birds in Europe, experts agree that these birds probably contracted the virus in the Black Sea region, where H5N1 is well-established in poultry, and died while heading westward to escape the unusually cold conditions in the area.

If backyard poultry and migratory birds are indeed fuelling the spread of bird flu then the disease should be raging in Laos. Not only is it surrounded by bird-flu infested neighbours, Laos is full of free-ranging chickens mixing with ducks, quail, turkeys and wild birds. These are predominantly native chickens, which account for over 90% of Laos' total poultry production. According to the US Department of Agriculture:

“The poultry industry in Laos is predominantly one of smallholders, raising free-range, local chicken breeds nearby their dwellings for meat and eggs, mostly consumed by the household or sold locally for income. An average village has around 350 chickens, ducks, turkeys and quail being raised in small flocks interspersed among village homes by about 78 families, with women primarily responsible for the flocks. Ducks, turkey, and quail are also raised, with negligible amounts of geese found scattered around the country. The few commercial operations (less than 100 total, with 89 of these located near Vientiane) in the country supply nearby metropolitan areas.”<sup>21</sup>

But the country's backyard farms have barely been touched. According to the same USDA report:

“A total of 45 outbreaks were confirmed, with 42 of

these occurring on commercial enterprises (broiler and layer farms), 38 of these in Vientiane, the capital and primary city of Laos ... Smallholders who found avian influenza in their flocks were located nearby commercial operations suffering the disease.”

The principal reason why Laos has not suffered widespread bird flu outbreaks like its neighbours is that there is almost no contact between its small-scale poultry farms, which produce nearly all of the domestic poultry supply, and its commercial operations, which are integrated with foreign poultry companies. Laos effectively stamped out the disease by closing the border to poultry from Thailand and culling chickens at the commercial operations. They were less concerned about the disease spreading out from the affected farms because, unlike in Thailand and Vietnam, small-scale farmers in Laos are not supplied by big companies with day-old chicks or feed and, outside of the capital, poultry is produced and consumed locally. Poultry production is also more spread out in Laos. It is less dense, less integrated and less homogeneous – all of which keeps bird flu from spreading and evolving into more pathogenic forms.

The Laos experience suggests that the key to protecting backyard poultry and people from bird flu is to protect them from industrial poultry and poultry products. It also calls into question the green revolution approach to poultry development, which encourages farmers to sell to more distant markets and to use off-farm inputs, such as feed and day-old chicks supplied by large operations. Traditional farmer knowledge and biodiversity combined with simple biosecurity measures appropriate to small farms may be all that is required to manage the disease effectively in most rural communities.

Yet the agencies that preside over the global response to bird flu, namely the World Health Organisation and the FAO, are not interested in such possibilities. Overall, there's hardly been any effort to understand the dynamics of the disease in local contexts or to work with local communities in defining strategies. So what inevitably emerge are big solutions and “global strategies” for wiping out the disease that wipe out the foundations for long term, pro-poor solutions in the process. There's no nuance, no sensitivity to people's needs and, worst of all, no appreciation of the capacity and knowledge that farmers have for managing this virus.

17 - McLeod A, Morgan N, Prakash A and Hinrichs J, Economic and Social Impacts of Avian Influenza, FAO, Rome, November 2005, <http://ulceruid.notlong.com>; Chanyapate C and Delforge I, *The politics of bird flu in Thailand*, Focus on the Global South, Bangkok, 20 April 2004, <http://fwflu.notlong.com>

18 - Melville D S and Shortridge K F, Spread of H5N1 avian influenza virus: an ecological conundrum, *Letters in Applied Microbiology*, 42 (2006) 435–437

19 - After testing more than 13,000 wild birds in marshes within bird flu infested provinces in China, scientists identified only six highly pathogenic bird flu viruses in six ducks. The overall conclusion of the study: “Transmission within poultry is the major mechanism for sustaining H5N1 virus endemicity in this region.” Chen H et al, Establishment of multiple sublineages of H5N1 influenza virus in Asia: Implications for pandemic control, PNAS early edition, *Proceedings of the National Academy of Sciences of the USA*, Washington DC, 10 February 2006, <http://wisdeful.notlong.com>; see also, FAO and OIE, in collaboration with WHO, op cit.

20 - BirdLife International, *BirdLife Statement on Avian Influenza*, Cambridge, July 2006, <http://birdlifeflu.notlong.com>

21 - USDA, *Laos: Poultry and Products - Avian Influenza*, GAIN Report, US Department of Agriculture, Washington DC, 16 March 2005.



The culling programmes advocated by the WHO and the FAO, for instance, are indiscriminate; all birds are culled in large areas surrounding cases of infection, whether they are healthy or not. In India, the government launched a surveillance campaign in the state of Maharashtra after outbreaks at several factory farms. When a small percentage of samples collected from various villages in one of the poorest districts of the state came back positive, the government imposed complete culls over an area of 1,500 square km, involving more than 300,000 birds and over 300 villages.<sup>22</sup> The state did provide some compensation to the affected farmers, but the US\$0.88 given per bird was far below the value of a village chicken, which typically sells for three times the price of a factory chicken and produces eggs worth four times the price of industrial eggs.<sup>23</sup> Needless to say, the government has no plans for replenishing the invaluable poultry biodiversity that it destroyed and there is even talk of new state regulations to ban backyard poultry.<sup>24</sup>


Beyond such immediate measures, the FAO and other agencies are working with governments to map out long-term plans for the “restructuring” of the poultry sector that will eliminate small-scale poultry farming. According to the FAO, a restructured poultry industry of the future in Asia will have:

- more concentrated markets, with fewer, larger producers
- poultry production zones where infrastructure can be concentrated
- compartments for exporting countries, arranged in such a way that a minor outbreak in an exporting compartment will hardly affect export
- live markets moved to the outskirts of cities, with fewer licensed traders, centralised slaughtering and

- a large number of supermarket outlets in cities
- fewer small producers
- requirements to fence and house all poultry<sup>25</sup>

This would be the death of Asia’s small poultry farms. In Vietnam alone, the FAO admits that the implementation of “production zones” would result in the loss of income of potentially one million small commercial producers.<sup>26</sup> “There is concern for the future of poor backyard farmers and small commercial farmers,” said Fabio Friscia, the FAO’s bird flu programme officer in Vietnam. “A lot of them will have to leave the sector with significant economic losses. The challenge is to provide these people with alternative livelihood opportunities.”<sup>27</sup>

Such thinking goes right to the very top of the organisation. Samuel Jutzi, the FAO’s Director of Animal Production and Health, told a Swiss newspaper that small farms are behind the spread of bird flu, not the large factory farms that he describes as “highly protected”. When asked if this meant the end of small-scale poultry farming, Jutzi said “this type of production will become very marginal. High quality poultry, raised in the open air and grain-fed, will become a niche product”.<sup>28</sup>

The top-down global response to bird-flu may sit well with governments, many of them neglectful if not hostile towards small farmers and the biodiversity they sustain, but it is a disaster for the poor that these institutions claim to serve. It’s an old story being repeated, but this time under the guise of saving the world from a health crisis. The irony is that the solution proposed – a total shift to factory farming – takes us straight back to the source of the problem.<sup>29</sup> 

22 - Agence France-Presse, *Indian officials to slaughter more chickens after new bird flu cases*, 28 March 2006, <http://to-flu.notlong.com>

23 - Personal communication with Joseph Keve, a poultry farmer and researcher from Maharashtra, 30 March 2006.

24 - Jamwal N, Jayan T, Gupta R and Ghosh P, *Who flew?*, *Down to Earth*, (14:20), 2006, <http://dteflu.notlong.com>

25 - McLeod A, Morgan N, Prakash A and Hinrichs J, *Economic and Social Impacts of Avian Influenza*, FAO, Rome, November 2005, <http://ulceruid.notlong.com>

26 - *ibid*

27 - AFP, *Bird flu experts in Vietnam to aid long-term control*, 18 April 2006

28 - Kauffman A, *Le H5N1 favorisera les usines à poulets?* *La Presse*, 13 March 2006, <http://sylvapts.notlong.com>

29 - GRAIN, *Fowl play: The poultry industry’s central role in the bird flu crisis*, February 2006, [grain.org/briefings/?id=194](http://grain.org/briefings/?id=194)