

Learning from “Bird Flu:” A Sisyphean Task

As the case notes, Asian poultry markets will face potential bird flu threats as long as they preference live poultry markets over centralized slaughter and distribution. Also, discoveries subsequent to this case’s publication indicate that the Asian preference for freshly-slaughtered chicken might deserve less regulatory weight than the risk of a global pandemic: genetic reconstruction of the 1918 “Spanish influenza” marks the deadly virus as of avian origin. Although the H5N1 strain that has broken out repeatedly in Hong Kong has caused only a few dozen death—as opposed to H1N1’s 20-40 million killed—the recent discovery of Spanish flu’s origin adds to the urgency of regulatory oversight, especially in the light of continued outbreaks since 2003.

When H5N1 first broke out, in 1997, the government was clearly caught unawares. The case cites weak coordination in the actual slaughter operation and mixed messages from governmental agencies as the primary weaknesses. (for one example, Director of Health Margaret Chan’s advice was at odds with that of the Hong Kong Medical Association). The crisis also made the government realize that it was far from prepared to handle a total culling, whether in terms of gassing supply, logistics, or the location and number of existing poultry.

The procedures set in place between 1997 and 2001 helped clarify the government’s handling of the 2001 crisis. The structural reorganization from interagency coordinating committee to Environment and Food Bureau (headed by Lily Yam Kwan

Pui-ying) helped provide the necessary clarity and unity of vision to act in a time-constrained crisis.

It was only thanks to procedures set in place to inspect and monitor facilities and exports/imports and carry out random testing that the 2001 crisis was detected on three farms, culled within five days, and verified within six. Loath to seem ineffective again—both international export markets and to domestic consumers—Mrs. Yam ordered a region-wide culling. This time, the culling went off as planned. The structural reorganization undertaken in response to the 1997 outbreak proved successful by placing her at the top of the decision-making hierarchy, and since guidelines were developed for such a crisis, all that needed to be done was to follow them under Mrs. Yam's unified orders.

Mrs. Yam also learned to better nuance her reports about food safety and personal eating habits. By stressing that the 2001 strain of H5N1 was distinct from the 1997 strain responsible for six human fatalities in 1997, she was able to defuse at least some of the public tension.

In my view, one major failing of the second culling (2001) was the government's inability to have a comprehensive compensation package in place before the crisis arose. Although a compensation package had been proposed, its opposition by individual workers in trades (who would not be compensated) sunk the entire package before legislators); the intensity of such opposition might have been underestimated, but the opposition itself should have been easy to predict.

Without a clear (generous, even) compensation package, poultry farmers have a strong incentive to withhold potential evidence of flu: the farmer who fears that the

government will come and kill all of his chickens, ducks, and geese without remuneration will be less likely to volunteer health information than a farmer who is confident of pecuniary returns for his cooperation. A compensation package worth HK\$244.7 was passed on 1 June, 2007, but prior knowledge of a generous compensation package could have alerted regulators before thousands of birds were already dead from the flu.

On the other hand, the case mentions the potential for abuse of the existing compensation package (HK\$30 for each chicken and HK\$18 for each chick killed); such concerns should be taken seriously, as any student of U.S. farm policy since the first Agricultural Adjustment Act is well aware! However, barring government inspectors on-site at all the myriad poultry facilities—a daunting prospect—self-regulation by farmers seems an essential first recourse for preventive care.

Unlike the learning curve between the first and second crises, the second crisis seems to have done comparatively little to prepare the government for the 2002 crisis. This may be in part due to a 2001 compromise between food safety and greasing the trade wheels that seemed to come down on the favor of maintaining open lines of trade. The precise timing of the third outbreak, however, points to the root cause of the bird flu's recurrence in East Asia. Only eight weeks after the second outbreak, the sudden death of 30,000 chickens directly preceded the New Year festivities in which fresh chicken dishes are especially common. The Chinese consumer's insistence on freshly slaughtered chicken is a driving factor behind the continued regional reoccurrence of bird flu crises.

Since the death event was not reported for a full two days, the government's monitoring capabilities could clearly have been better (a stronger coordination with farmers—or a stronger incentive system for farmers to divulge illness information, while

of course taking measures against abuse of regulatory loopholes—might have allowed for faster identification and remediation).

The bird flu case prevents a perfect example of an ever-improving regulatory response to a Herculean task that would require industry restructuring to truly deal with the problem. The nature of intensive poultry production (close conditions conducive to transference of airborne pathogen vectors) and the incentives for producers to withhold bird-health-related information combine with the consumers' demand for fresh meat and the resultant requirements of dispersed distribution outlets to render regulatory oversight a Sisyphean battle that can be forestalled but not won.

The EFB's May 2002 expert investigation (co-executed by the University of Hong Kong and the Massey University EPOCentre of New Zealand) into the genetic basis of H5N5 indicated as much when it stated that regulatory measures would only work with the cooperation of—and, barring full compensation from the public purse, at the expense of—the affected trades.

In light of the near impossibility of completely eliminating bird flu without major structural overhaul, EFB should be extraordinarily proactive in dealing with food scares that *are* manageable. The stevioside incident is a case in point. It is admittedly easy to dictate from hindsight, but EFB should have kept a closer eye on WHO toxicology proceedings, especially because domestic tests for chronic toxicity (in this case, carcinogenicity) were not conducted on stevioside. Awareness of stevioside's absence from U.S. and European markets, especially in the face of [binding?] WHO guidelines, would allow EFB to be more nimble in supporting producers' search for a viable substitute.

Wishful thinking about past actions aside, however, EFB should learn the following lessons from the bird flu ordeal when dealing with the stevioside incident: 1) provide incentives for suppliers and shopkeepers to cooperate, 2) coordinate the message you send to the domestic and international publics to avoid inconsistency, 3) begin engaging in random testing of food products for all present substances (not just for what is listed on the label), and 4) if possible, streamline the food safety regulatory regime to accord to the highest feasible standard [e.g., to U.S./European rather than Chinese/Japanese standards].

Regarding lesson 1, the case does not specify whether shopkeepers, producers, or citizens (through compensation) bear the burden of the recall; barring a comprehensive inspection regime, and given a strong enough enforcement system, it should be producers rather than shopkeepers (small shopkeepers in particular will have an economic incentive to ignore the recall) who foot the bill, unless producers were entirely unaware of the regulatory restriction, in which case public compensation should be called for.

The lesson of point 2 is to avoid the dual extremes of terrifying the public and coddling the citizenry into resentful indignation. The “carcinogen” scare, for instance, is often vastly out of proportion to a variety of other, more pressing food safety concerns. (I rather doubt that many people have stopped to think that antioxidants are so termed because oxygen is a potent carcinogen!)

The lessons learned from point three present two distinct options. Either Hong Kong should strengthen its domestic capabilities in the field of predictive toxicology (following the OECD Test Guidelines to support legitimacy), or it should adopt the WHO standards.

Given the financial and regulatory atmosphere in place, lesson 4 might be unrealistic to implement. In such a scenario, the most viable alternative would be to segregate products within stevioside's ambit according to provenance and destination. An apposite analogy from the bird flu case would be the importance of separating different types of waterfowl, specifically of separating geese/ducks—the original carriers of bird flu—from chickens.