

## Action is needed now, or BSE crisis could wipe out endangered birds of prey

*Sir*—As pointed out in your News feature “Testing times for BSE”, cases of bovine spongiform encephalopathy (BSE) are being reported in growing numbers across continental Europe<sup>1</sup>. Not only is the disease having an impact on human health and on countries’ economies, but it may also cause a catastrophic decline of some endangered European species of animals.

With about 30 cases of BSE detected in Spain in the past few months, the government has adopted measures aimed at arresting its spread. Since 1 January, a national law obliges farmers to incinerate all dead cows, sheep and goats, regardless of whether they are infected. From 1 March, this law has been extended to pigs, poultry and horses, despite no clear evidence for this latter group being a risk for BSE transmission. These measures are laudable from a prophylactic point of view, but they will deprive other species, some endangered, of food.

In Spain, scavenging birds have coexisted with livestock farmers for centuries<sup>2</sup>. Spain now has 17,500 pairs of griffon vultures (*Gyps fulvus*), 1,200 pairs of cinereous vultures (*Aegypius monachus*), 1,300 pairs of Egyptian vultures (*Neophron percnopterus*) and 80 pairs of bearded vultures (*Gypaetus barbatus*), comprising 80–99% of the breeding pairs of vultures in the European Union. Spain also supports 80% of European red kites (*Milvus milvus*) in winter, and the entire world population — 130 pairs — of Spanish imperial eagles<sup>3,4</sup> (*Aquila adalberti*).

Spanish populations have been used for captive breeding and reintroduction programmes in France, the United Kingdom, Italy, Germany and Austria, where the species are extinct or nearly so. The four species of vulture obtain 60–100% of their food from livestock carrion either abandoned or left out for them<sup>5</sup>. Griffon vultures alone eat about 10,000 tonnes of dead livestock per year<sup>4</sup>.

On 22 February, Spanish environmental groups and ecologists working on vulture conservation urged the government to consider measures to protect human health that are compatible with wildlife conservation<sup>4</sup>. This is not an easy task.

The first priority is that food destined for vultures must be free of BSE to avoid any risk of disease transmission to other species. But, as reported in your News feature, there is no diagnostic test yet available that reliably detects which animals are incubating the disease. Even poultry and pigs are now cautiously considered as at

risk, although transmission of BSE to chickens has not proved possible even by direct brain inoculation.

Second, research is needed to design a network of installations to provide food to scavenging birds while excluding other scavengers such as foxes. If their main food source is removed and no remedial action taken, populations will crash and decades of European efforts to conserve endangered birds will have been in vain.

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1. *Nature* **409**, 658–659 (2001).
2. Donazar, J. A., Naveso, M. A., Tella, J. L. & Campión, D. in *Farming and Birds in Europe* (eds Pain, D. J. & Pienkowski, M. W.) 117–149 (Academic Press, London, 1997).
3. Tucker, G. H. & Heath, M. F. *Birds in Europe: Their Conservation Status* (BirdLife Conservation Series No. 3, Cambridge, 1994).
4. Group for the Conservation of Vultures. Unpublished report (22 February 2001); <http://www.seo.org>.
5. Donazar, J. A. *The Iberian Vultures* (Reyero Editions, Madrid, 1993).

## We must not be bound by anti-GM extremists

*Sir*—In his review (*Nature* **409**, 559–560; 2001) of Alan McHughen’s book *Pandora’s Picnic Basket*, Dick Taverne expresses surprise that the volume contains only “a cursory mention” of “the potential of transgenic crops to fight hunger and disease in the developing world”. There is an important and subtle issue therein.

McHughen is right to de-emphasize the potential advantages of gene-splicing, or genetic modification (GM), to agriculture. Whatever the benefits of GM, the likelihood of risk in the vast majority of experiments or commercial uses is so minimal that the issue of safety stands on its own. The temptation for proponents of biotechnology to emphasize benefits not only obscures the theoretical and empirical evidence of the extraordinary precision and predictability of GM and the safety of its products, but it creates a kind of logical trap. It enables opponents of GM to argue that if the ultimate benefits will be small — such as the advantages of a tomato with a longer shelf-life or a sweeter melon — we should not tolerate any risk at all of creating an invasive, weedy or toxic plant. Hence we should not permit field experiments, or should institute draconian case-by-case review of all proposals.

Although they have seldom been presented as such, the current controversies over the testing and use of GM organisms are really about academic and individual freedom — which is being systematically undermined by discriminatory and onerous regulations. If, for example, a high-

school student doing a biology project takes a packet of ‘conventional’ (but genetically improved via plant breeding) tomato or pea seeds to be irradiated at the local hospital, and plants them to investigate interesting mutants, he or she need not seek any approval from any regulatory authority. However, if the seeds have been modified by the addition of one or a few genes via gene-splicing techniques that are more precise and predictable than conventional plant breeding, the student researcher could face a mountain of paperwork and expense (to say nothing of the possibility of vandalism).

In the United States, bureaucratic requirements by the Department of Agriculture make field trials with GM organisms 10–20 times more expensive than the same experiments with virtually identical organisms modified with conventional genetic techniques.

It is irrelevant whether the purpose of crafting a new plant variety or micro-organism is to test a scientific hypothesis or a marker gene, to offer marginal improvements or “to fight hunger and disease”. Western democratic societies have long traditions of relatively unfettered agriculture research, except when *bona fide* safety issues are raised.

Traditionally, we shrink from letting authoritarian minorities dictate our social agenda. Extremists should not be allowed to dictate the terms of the GM debate.

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## Jewish emigrants and German science

*Sir*—The News report (*Nature* **409**, 443; 2001) on my research concerning emigrants from the Kaiser Wilhelm Society stated that the Max Planck Society has “renewed on a 1948 promise to contact Jewish scientists expelled from its laboratories during the Third Reich and offer them their jobs back”.

To the best of my knowledge no such promise was ever made and there was no general policy for the reintegration of emigrants. The activities of the Max Planck Society in 1948 were directed more towards the recruitment of foreign scientific members from a small number of renowned emigrants, a symbolic gesture intended merely to restore the organization’s international contacts and reputation. To what extent personal and unofficial attempts were made to offer the jobs back is currently under investigation.

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