Risk Regulation Lessons from Mad Cows

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Risk Regulation Lessons from Mad Cows*

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Abstract

The mad cow disease crisis in the United Kingdom (U.K.) was a major policy disaster. The government and public health officials failed to identify the risk to humans, created tremendous uncertainty regarding the human risks once they were identified, and undertook a series of policies that undermined public trust. In contrast, the mad cow disease risk never became a major problem in the United States (U.S.). The lead time that the U.S. had in responding to the disease that was first identified in the U.K. assisted in planning the policy response to avert a crisis. The absence of a comparable U.S. crisis, however, does not imply that the U.S. risk management approach was a success. Until recently, there was no systematic assessment of the domestic risks of mad cow disease. Moreover, U.S. government agencies have never undertaken a

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comprehensive assessment of the benefits and costs of any U.S. regulation dealing with mad cow disease. The absence of a sound economic basis for policy is reflected in the United States Department of Agriculture's (USDA) ill-considered decision to prohibit the private testing of beef for mad cow disease. This decision disadvantaged companies that sought such testing in order to comply with foreign testing regulations. In the absence of such testing, U.S. beef exports plummeted. One company that attempted to implement a testing program launched a legal challenge to the USDA prohibition and was unsuccessful. The policy failures in both the U.K. and the U.S. provide several lessons for regulating invasive species risks and dealing with emerging risks more generally. We conclude with a series of ten public policy lessons for dealing with similar emerging risks.

Contents

1

Introduction

The mad cow disease outbreak in the United Kingdom (U.K.) and the emergence of the new variant Creutzfeldt–Jakob disease (vCJD) in humans is one of the most prominent international risk crises of the past two decades. Beginning in the early 1990s, the U.K. had annual totals of thousands of cattle affected by bovine spongiform encephalopathy (BSE). There were fears that people would also be exposed to related disease risks. Once the link to humans was identified, some scientists estimated that the toll among people would be of a similar catastrophic magnitude. Although the mass carnage that many predicted did not occur, the U.K. mad cow experience is widely regarded as a major policy debacle. Scientists and government officials were slow to identify and acknowledge the mad cow risks to humans. Once the dangers became apparent, the risk estimates that were generated spanned enormous ranges and proved to be wildly inaccurate. Government officials lost credibility with the public, which viewed the government as being captured by agricultural industry interests.

In contrast, one might view the United States (U.S.) experience as an unqualified success. The crisis that emerged in the U.K. did not take hold in the U.S. Very few U.S. cattle have had the disease, and

there are no documented human cases attributable to BSE exposures originating in the United States. The February 2008 announcement of the largest beef recall in U.S. history resulting from a meat-packing company failing to comply with United States Department of Agriculture (USDA) inspection rules motivated by BSE risks raises questions about the U.S. risk management system (Schafer, 2008; Pacelle, 2008).

As we will show in this article, the absence of a comparable crisis in the U.S. does not signal that the mad cow experience has been a U.S. policy success story. The exposure to potential BSE risks is quite different in the U.S. so that the dangers were not great. Given the policy lead time afforded by the crisis emerging first in the U.K., U.S. policyholders had an opportunity to design and evaluate reasoned policy responses to the potential hazards. Yet there was little attempt to formulate a meaningful risk assessment and, to date, there has yet to be a full blown assessment of the benefits and costs of any regulatory initiative related to BSE or vCJD.

The main policy failures have been substantive as well. In situations of potential product risks, one might expect the government to encourage firms to test the safety of their products. In this instance, however, the government took the opposite position, prohibiting private testing of beef for the presence of BSE. This restrictive policy in turn led an affected company to fight the testing ban in *Creekstone Farms Premium Beef, L.L.C. v. U.S. Dept. of Agriculture et al.*[1] As we will show below, the testing prohibition not only blocks testing efforts that have a sound economic basis but also fails to account for the realities of the international regulatory environment.

Based on the mad cow experience, it is also possible to draw a number of lessons regarding how one should regulate invasive species risks and deal with dimly understood but potentially serious risks to large populations. BSE and vCJD have several commonalities with other types of risks and with other risks addressed by invasive species management policies. The risks are novel and uncertain, which is often the case with newly emerging hazards. The latency period before the

[1] *Creekstone Farms Premium Beef, L.L.C. v. U.S. Dept. of Agriculture et al.*, 517 F. Supp.2d 8 (D.D.C. Mar. 29, 2007).

disease becomes manifested is uncertain and complicates the problem of forming accurate risk assessments. In addition, often policymakers had to take actions such as the 1997 U.S. feed ban not only before the risk levels were well understood but also before the basic scientific linkages were fully established.

The issues raised by the mad cow crisis also have important international dimensions. The BSE outbreak in the U.K. raised questions about the safety of beef exports from the U.K. and also led other countries to restrict imports from the U.K. Similarly, the identification in the U.S. of a cow from Canada which had BSE led to concerns about the importation of cattle elsewhere. In response to the uncertainty about the level of the risk and other countries' restrictions on imports, at least one beef producer made a concerted effort to have its beef tested for BSE, which then led to action by the USDA to suppress this initiative.

Examination of the mad cow experience provides an instructive vantage point for assessing the soundness of the policy response to this type of risk and to develop guidelines for how government policies might respond to future crises.[2] Although the substantive focus of our analysis will be on mad cow disease and invasive species risks, many of the characteristics of the risk problem are shared by other hazards. For example, the hazards posed by terrorism and nanotechnology raise similar classes of concerns. In the case of terrorism, the risks are quite uncertain, not well understood even by experts in the field, but may nevertheless pose a real threat to large numbers of people. Nanotechnology likewise has similar characteristics, with the added complication that whatever risks are posed by nanotechnology may not be evident for many years, long after millions have been exposed to nano particles and whatever associated risks of illness there might be.

Our exploration of the mad cow crisis begins in Section 2 with an examination of the nature of risks to animals and humans from BSE and vCJD. Knowing what the disease is represents a useful starting point, but the size of the exposed population and the likelihood of being infected by the disease are also relevant, as these will determine the

[2] Ian Sample (2007) observes that some are predicting that "two future waves of vCJD could strike in the next 10 to 50 years."

overall consequences of the hazard. We motivate and present a mainstream public policy framework to evaluate the welfare consequences of BSE and vCJD risk mitigation instruments in Section 3. A key component of this policy evaluation is the question of how one should assess these risks. The ways in which others have conceptualized the risks for policy purposes are examined in Section 4. How the government should communicate newly emerging risks remains a daunting task. Should the government adopt a precautionary approach and focus on upper bounds to be "better safe than sorry" or should risk assessments be more balanced? After providing a chronology of the policy events and policy actions in Section 5, we examine issues pertaining to media coverage and risk communication in Section 6, consumer responses to the informational environment in Section 7, and governments' use of trade policy in Section 8. The controversial effort by one beef producer to have its beef certified as being BSE-free brings together a wide set of cross-cutting issues of risk communication, government regulation, litigation, and international trade, and will serve as the main policy case study in Section 9. In Section 10, we summarize general lessons for regulatory policy derived from this experience.

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