You are the spouse of an advisor sitting on the panel of World Trade Organization (WTO) dispute arbiters which will decide whether the European Economic Community’s ban on the import of beef from cattle raised with growth hormones violates the WTO agreement. Your wife comes home near the end of the session. As a French chef, you have a clear interest in the case, and you ask her to tell you a bit about it.

She starts with . . .

A Brief History of Hormones

DES and the American Miracle Beef

Everyone knows that 1954 marks a landmark year for the American civil rights movement, but few realise that it marked an equally pivotal point for the cattle-feeding industry. While the newly liberalized Supreme Court was hearing the arguments of Brown versus the Topeka Board of Education, a junior faculty member at Iowa State University’s School of Agriculture by the name of Wise Burroughs changed ruminant-feeding forever when he discovered that ingested estrogens can promote growth in cattle.

Burroughs was trying to isolate the variable present in feeds which were known
to promote faster growth, such as clover hay, in the hopes that this ingredient could be chemically synthesized at low cost and used to supplement poorer feeds, such as corncobs. After discovering that clover hay was a rich source of phytoestrogen (plant estrogen), he began testing his hypothesis with the available synthetic estrogens. Diethylstilbestrol (DES), already in wide use since 1941 to prevent miscarriages, seemed a good candidate for initial trials in cattle.

Burroughs’s initial and subsequent results were astounding. DES-treated cattle ate less per pound of weight gain and gained weight faster without degradation in meat quality — resulting in a per-pound savings of $.02–.03. Although this discovery in itself excited the cattle industry, in this era of optimistic science, DES seemed to signal the beginning of a new partnership between science and agriculture, especially ruminant feeding, which could now partake in the recent seemingly magical advances in science and technology. Agricultural journalists heralded DES as a panacea, noting that “nothing has ever hit the meat-animal business with the impact of stilbestrol” (quoted in Marcus 23).

Although the drug was initially rejected by the FDA based on a lack of significance of the initial results,¹ the secondary trials resulted in FDA approval, so that the drug was first marketed in December 1954, within eleven months of the discovery’s announcement. DES did, in fact, mark a seachange in cattle-feeding practise. It is because of DES that feeding practises moved away from grazing and towards closed-lot feeding, and by the early 1960’s 95% of American cattle feeders used DES.

¹According to FDA regulations, each new application of a drug must be reviewed, even if the drug is approved for another use.
The age of the American miracle beef came to an end with a 1971 *New England Journal of Medicine* article which reported that a rare form of cancer was found so-called DES daughters, young women whose mothers had been treated with DES during pregnancy. Further investigation of the phenomenon, showing that DES causes cancer in lab animals and leaves significant residues in beef liver, meat, and milk, resulted in a ban on DES in all its uses by the FDA and many foreign governments.\(^2\)

With its entrance and exit, then, DES shaped the discourse about chemicals, and particularly hormones, in food safety. Its entrance illustrated an optimism about how science could improve the food we eat by making it cheaper and more plentiful while its exit coincided with a skepticism of science and government fueled by the rising consumer movement.

**The Daughters of DES**

Although DES had been banned, several newer hormones had come into use which were considered safer because of their lower binding energies.\(^3\) Thus, although they were viewed skeptically by the consumer movement, the beef industry continued to administer hormones to cattle.

A 1984 case showed children in Puerto Rico with abnormal blood levels of zeranol.

Still, even after the bans on DES, there is some evidence that DES continued to be

\(^2\)Later, a federal court overturned the ban, allowing DES as long as no residues can be found in meat, and in 1975, DES was approved as a morning-after pill, but the chemical was banned for the second and final time in 1979 after

\(\text{(Chemical Week: 4/16/80, 2/19/75 p. 15; New York Times: 8/3/72.)}\)

\(^3\)The hormones most widely used by the late 1970’s were the natural hormones oestradiol, progesterone, and testosterone, and the synthetic hormones trenbolone acetate and zeranol.
sold on the black market and found its way into the food supply in Europe.\textsuperscript{4} The 1979 case of Italian infants who developed breasts and began menstruating before the age of one, apparently because of baby food from (illegally) DES-treated cattle, shocked the public. In order to allay public concerns about the food supply, beginning in the early eighties, the European Economic Community (EEC) followed the lead of some of its Member-States by passing a series of increasingly strict restrictions on the use of growth-promoting hormones, culminating in December 1985 with a directive scheduled to go into effect on 1 January 1988 which banned the use of all hormones used for growth-promotion purposes within the EEC as well as the import of third-country beef from animals raised with these hormones; countries and slaughter plants who wished to continue exporting beef to the EEC could gain EEC approval before the ban went into effect.

Although the ban was passed to harmonize the widely variant hormone policies of member states with a policy of “no risk”, at the time of its passage there was a lack of consensus among EEC members about the safety of the current hormones. Some Member-states, such as France and the UK, used the hormones, while others had banned them. The European Commission launched an investigation into the safety of the hormones, “but. . . [the] committee of inquiry was disbanded when it became clear it would find no evidence beef-fattening steroids were damaging to humans.”\textsuperscript{5} The EC’s farm commissioner Franz Andriessen stated, “Scientific advice is important, but it is


not decisive. In public opinion, this is a very delicate issue that has to be dealt with in political terms.”\(^6\); the decision was highlighted by one commentator as “the first time the EC took into account the interests of consumers”.\(^7\)

Given the political nature of the debate and the widely variant policies of the Member-states, then, it is unsurprising that the directive was controversial. Objections were raised by the UK, France, Denmark, and Ireland, with the UK and Denmark voting against the final form of the directive (Meng 821).\(^8\)

However, though it seems clear that the directive proceeded from some non-protectionist motives, such as the desire to harmonize EEC members’ trade policies and allay consumer fears about the food supply, some have pointed out that the ban also coincided with a time of increasing beef surpluses for the EEC, though some of the surplus (about 600,000 tons) was in hormone-treated beef (Dick 874).

In response to this feeling that this directive was simply a technical veiling for protectionism, the US called for an expert review of the policy and threatened retaliatory measures allowed under section 301 of GATT, but finally agreed to refrain from retaliatory measures if the ban were delayed by one year. The EEC passed a delay to the ban, allowing further negotiation with the Americans, as well as the exhaustion of its current supply of hormone-treated beef and giving French producers a chance to phase out the use of hormones. Even the delay’s passage, though, did not cool the trade


\(^8\)After its passage, the UK even attempted to block the directive on procedural grounds. This movement passed, but the directive was simply passed again, under a different section of EEC law.
tensions: before negotiations began, the US issued a list of the $100 mil of European agricultural products (the estimated size of the European market for American beef) which would be subject to a 100% tariff if the ban on beef were not lifted.

Until December 1988, negotiations were unsuccessful, at which point both sides reduced their retaliatory measures: livestock fodder became exempt from the ban, quotas for high quality beef (the so-called Hilton quota) were increased, and a bilateral group of experts worked to qualify US companies for beef exports to the EEC, all decreasing the American punitive measures as larger sections of the European market opened to it (Meng 826). At the same time, a group of cattle breeders in Texas, led by Texas Secretary of Agriculture John Hightower, worked towards making available beef raised without hormones for European export; this move was hailed by American consumer groups who also wanted hormone-free beef available in the domestic market (Meng 827).

While limiting the access of the 70% of American beef produced using hormones to the $100–150 million market that American beef exporters had found in Europe is clearly worth some ado, beef represents less than 1% of American exports to Europe. Some have suggested that the US acted with such speed on this measure to avoid this kind of “no-risk” policy from becoming precedent for the EEC as it seeks to unify its trade policies (Froman 555).

The EEC made the following arguments:

1. The Sanitary and Phytosanitary (SPS) Agreement provides that Members may always choose a higher level of protection than the Codex Alimentarius gives, as
long as there is scientific evidence for that decision. The EEC has simply chosen such a level of protection: no risk. Although no scientific evidence has shown conclusively that these hormones are dangerous, no evidence has proven their safety.

2. Precautionary Principle. The EEC has chosen to accept no risk from hormones, particularly in view of the unequal distribution of benefits and risks. While the consumer assumes all of the risk of hormones, the main party to benefit from the use of hormones are drug companies.9

3. DES Ban Enforcement: According to agricultural experts (including those testifying in the WTO case), it is possible to tell cattle raised with hormones from those raised without, but it is not possible to distinguish cattle treated with illegal hormones from that treated with the legal. Thus, in order to enforce their DES ban, the EEC must keep all hormones out, to facilitate inspection. Given their no-risk standard, preventing the illegal use of a known carcinogen is certainly justified.

4. Not discriminatory. The EEC ban on hormones applies equally to all countries, even EEC countries who once used hormones in cattle raising.

The US argued the following:


It is impossible to prove conclusively that anything is completely safe; it is possible

9Note the assumption that there may not be a significant price or profit differential once the market reaches equilibrium.
only to prove the absence of danger in N trials.

2. The scientific consensus is that these beef hormones are safe. Whether or not the EEC has based its standard of risk on scientific reasoning, their risk standard is in conflict with the scientific consensus, and so unscientific.

3. Equivalence: Why has the EEC not banned pork or poultry hormones, or any antibiotics?\textsuperscript{10}

4. Precedent: If all member states could choose their level of protection, they could have arbitrarily selective trade barriers.

“So,” says your wife, “I have the following questions about the case before I cast my vote."

1. First, what definition of “health” ought we use? Even if there are no risks to physical health from these hormones, there is clearly psychological dimensions to this case because of the perceived risk.\textsuperscript{11} Is perceived risk a valid concern? Even if this case would not be appropriate for a case based on perceived risk, are there any cases when such a standard might be appropriate?

2. Okay, now that the primary issue is dealt with, I have a question about presumption. The US has had to compromise on a lot of agricultural issues under the Agriculture Agreement: specifically, the levels of subsidies allowed the EEC

\textsuperscript{10}Actually, since the seventies, there have been many European bans on the use of antibiotics (Halpern 151).

\textsuperscript{11}Although the unanimous 1982 Supreme Court decision, Metropolitan Edison Co. v. People Against Nuclear Energy (460 US 766) concluded that perceived risk was not a valid concern in deciding whether to restart a shut-down nuclear reactor.
and Japan were higher in many cases than the US wished to allow. Would a presumption towards the United States in this case be fair compensation for the weaknesses of the Agriculture Agreement?

3. What model of trade do we want to work with? Do we want a merchantilist view of trade as a personal relationship which works best if reciprocal, or do we want to view free trade as a means of creating more efficient markets? Remember that the real cost of tariffs are borne by citizens of the countries with the tariffs, who must pay higher costs for goods, regardless of the trade balance.

4. In forming international trade policy, is it fair to plan for contingencies, such as abuse or violation of another country’s domestic laws?

5. Is there a fair way to allow for the consistent application of the Precautionary Principle? What would a test be which could determine if it’s been applied legitimately or not? Is the potential for abuse of the Precautionary Principle sufficient to reject it as a decision calculus?

6. This was the first WTO case which used expert testimony. How much should expert testimony affect your decision? What kinds of expert testimony might have been lacking, and might alter the decision? e.g., If an expert provided testimony on the pervasiveness of the black market for European agricultural hormones, would this change your decision?

7. A large portion of the dispute revolves around the meaning of "scientific evidence". What constitutes "scientific evidence"? Do you favour the view that
scientific evidence derives from the scientific consensus, or that principles should simply be guidelines?

8. Most victims of previous hormone scares were poor, minorities, and female. How could this have affected the perception of risk within the EEC?

9. There are many cases where the EEC and US have differing standards, and as a result, goods are blocked from a country for supposedly sanitary or phytosanitary reasons with no “scientific” basis, and yet no complaints have been filed with the WTO. What do you think are the differences between the hormone-treated beef case and the following cases?

   New Drugs. FDA approval is often slower than approval abroad, and in many cases, purely political motives may delay approval. (e.g., RU486)

   French cheese. Many French cheeses are made with unpasteurized milk, and thus are not allowed into the United States, despite a lack of evidence that cheeses made with unpasteurized milk post a health risk

   German beef/pork. The US does not allow the import of German beef or pork except from certified disease-free farms because of fear of trichinosis and hoof and mouth disease, although all animals are inoculated against these diseases (Meng 829).

10. In the case of pollution regulations, many trade economists express the view that it is not “unfair” for regulations to be non-symmetric because the side with more pollution regulations receives the positive externality of less pollution in return
for higher manufacturing costs and a competitive disadvantage (see Verbruggen and Kuik, 1996). How might this theory apply to the hormone-beef case, if at all? (Hint: Think about whether a differential of competitiveness exists between the EEC and US and which externalities accrue to each side.)

11. The WTO voted in favour of the US side in both the original case and the appeals. Shortly after the final decision was rendered, the EEC announced that it would prefer to pay the fine, rather than allow hormone-treated beef to be imported.

The American beef community was outraged that a fine could compensate for a lost chance to compete in the marketplace, and claimed that their sales within Europe could have been up to $250 mil, up from $100 m in 1988. National Cattlemen’s Beef Association spokesperson Alisa Harrison stated, “We’re hopeful that the US and EU will sit down now and look at ways to get more US beef into Europe.” (Clark).

Would allowing such a fine or compensatory tariff reduction on American goods be a fair balance between promoting free trade and independence of national policy?\textsuperscript{12}

\textsuperscript{12}Columbia economist Jagdish Bhagwati, a noted free-trader, offers his opinion: “I must add one final thought to assure those who feel that their own moral view must be respected at any cost, even if others cannot be persuaded to see things that way. Even they need not worry under current international procedures. Thus, suppose that (say) American or French public opinion on an issue (as in the Tuna-Dolphin case for the former and the Beef-Hormone case for the latter) forces the government to undertake a unilateral suspension of another GATT Member’s trading rights. There is nothing in the GATT, nor will there be anything in the WTO, which will then compel the overturning of such unilateral action. The offending Contracting Party (that is, the one undertaking the unilateral action) can persist in a violation while making a compensatory offer of an alternative trade concession or the offended Party can retaliate by withdrawing an equivalent trade concession. Thus, unless one resents having to pay for one’s virtue (since the claim is that our labour standard is morally superior), this is a perfectly sensible solution even to politically-avoidable unilateralism: do not import glass bangles
Does this change your opinion of the EEC's possible reasons for initiating its ban?

made with child labor in Pakistan or India, but make some other compensatory trade concession. And remember that the grant of an alternative trade concession (or tariff retaliation) makes some other activity than the offending one more attractive, thus helping one to shrink the offending activity: that surely should be a matter for approvation rather than knee-jerk dismissal.” (Bhagwati 44)
References


WTO case