with respect to the status of fusion, which the Department of Energy ignored.

The spirit and promise of future fusion development has been kept alive especially by Congressman Mike McCormack (D-Wash.), who introduced a bill into Congress Jan. 22 for an Apollo-style program to develop a commercial fusion reactor before the end of the century. The bill, H.R.6308, now has over 150 House sponsors, including most members of the Science and Technology Committee, Majority Leader Jim Wright, and Minority Leader John Rhodes. The bill calls for a $20 billion investment into the U.S. fusion effort. A companion bill, without funding specifications, was introduced into the U.S. Senate this week by Sen. Tsongas (D-Mass).

It now remains to be seen whether U.S. industry and labor have enough sense to secure the basis for genuine reindustrialization by moving an adequate fusion energy bill through Congress in the next session.

What the bill says

The following is excerpted from HR 6308, The Fusion Energy Research, Development and Demonstration Act of 1980, *sponsored by Rep. Mike McCormack (D-Wash.).*

Findings and Policy

(2) the current imbalance between supply and demand for fuels and energy in the United States is likely to grow each year for many years, aggravating an energy crisis and threatening the economic strength and national security of the nation;

(4) it is the proper and appropriate role of the federal government to undertake research, development, and demonstration programs in fusion energy technologies;

(6) the early demonstration of the feasibility of using magnetic fusion energy systems for the generation of electricity and the production of heat, hydrogen, and other synthetic fuels will initiate a new era of energy abundance for all mankind forever;

(9) the early development and export of fusion energy systems, consistent with the established preeminence of the United States in the field of high technology products, will improve the economic posture of the United States, and ultimately reduce the pressures for international strife by providing access to energy abundance for all nations. . . .

The DES hoax

Susan Cohen updates what cattlemen know and consumers ought to learn

On April 1 of this year a disgruntled Texas feedlot employee quit and wrote a letter to the company's Chicago headquarters outlining in detail the feedlot's continued use of diethylstilbestrol (DES) implants. Panicked, the company ran to the Food and Drug Administration (FDA) to confess. DES, a synthetic hormone which acts to increase the rate of weight gain in fed livestock by 17 percent and which improves feed efficiency by 12 percent, was outlawed by the FDA as of July 1979, with all use to cease as of November 1979.

There was no good reason for outlawing the hormone in the first place. It is perfectly safe and very useful. There was no good reason, therefore, unless one approaches the livestock industry from the standpoint of a saboteur, determined to keep meat off the American dinner table. That is apparently the standpoint of certain "environmentalists," the FDA, HEW Secretary Harris, and the Deprtment of Agriculture. They used the disgruntled Texan's report to launch a major disruption of the cattle industry.

An army of FDA agents poured into the field, and within weeks more than 400,000 head of cattle had been quarantined; no one knew how high the numbers would go. Hundreds and thousands of producers have been interrogated, along with their veterinarians, consultants and feed supply dealers, and the witchhunt is not over. By the end of June the FDA's "Violators List" numbered 301 cattlemen from 23 different states. FDA lawyers are operating under the "vigorous prosecution" orders barked out by Health, Education and Welfare Secretary Patricia Harris and U.S. Department of Agriculture Assistant Secretary Carole Tucker Foreman—that means each violator can get up to $10,000 in fines and three years in prison for each count against them.

Bureau of Veterinary Medicine Director Lester Crawford announced that the cattle industry and the FDA had both failed to protect the American public from cancer. The FDA, said Crawford, had been "flippant about carcinogenesis." Crawford promised that between the FDA and the USDA a "better police effort"

would be mounted. The first cases may get to court by late July or August.

Thus for the umpteenth time since the 1974 financial fallout that sent the livestock industry into a nosedive from which it has yet to recover, the beef cattle market was deliberately thrown into disarray. Implanted cattle had to be "explanted," and then held off the market for 41 days (in cases where the liver and kidney would not be used for human consumption) or for 61 days (if the entire carcass was to be used). At the producer's expense, of course. The livestock industry operates on razor-thin margins to begin with, and they've shown negative for many months.

But, as the DES scandal points up, the industry is up against more than just the Carter-Volcker economic steamroller and has been for some time. The environmentalists who first assailed the livestock industry several years ago with their "Unfinished Agenda," charging that it was wrong to feed grain to animals instead of people, are behind the DES hoax today. It is ironic to note, in this regard, that the effect of DES and other chemical feed additives is to sharply increase feed efficiency—estimates are that the use of DES alone saves at least 7.7 billion pounds of feed annually!

According to the Council for Agricultural Science and Technology, since 1954 approximately 90 percent of the feedlot cattle in the U.S. have received either a one-time treatment with the hormone, normally in the form of a 24-36 milligram implant in the ear of the animal that is slowly absorbed, or have been orally fed 10 milligrams of DES per day. Under procedures approved by the FDA prior to July 1979, the DES implant or ration was to be withdrawn from the animal within a certain period before slaughter, in which case no trace of the hormone is subsequently found in either the muscle or the liver of the animal.

DES was first targeted when a rare type of cancer developed in the daughters of a few of the women who, when pregnant years earlier, had been given DES by their physicians in doses up to 300 milligrams per day in an attempt to prevent miscarriage. Then, in 1976, a USDA-FDA analysis of 1,815 beef livers showed nine violations of DES residue standards—in these nine cases the liver contained 0.5 to 2.0 parts of DES per billion. The panicmongerers were off and running.

But look at the facts. At 2 parts per billion, one pound of liver would contain only .001 milligram of DES—1/300,000th of the daily dose of 300 milligrams once used to prevent miscarriage. If DES occurred at a concentration of 2 parts per billion in all beef liver, a woman would have to eat 26,666 pounds of liver to obtain the amount of DES (24 milligrams) contained in a single "morning-after" birth-control pill—an eating job which would take 17,000 years at the annual average rate of beef liver consumption in the U.S.! The daily estrogen dose in oral contraceptive agents now used by 35 percent of U.S. women of reproductive age is several million times the dosage that those women would receive from eating liver from animals fed DES.

Medical studies have shown that the cancer risk from beef production using implanted DES is less than one case per 133 years in the U.S. population, and other scientific studies have concluded that the risk is effectively zero.

Facts notwithstanding, the FDA banned the use of DES in cattle and sheep in 1979 on the grounds that its safety had not been proved. This was accomplished by first disqualifying the analytical method that had been in use since 1963 to monitor for DES residues. Without an approved method of analysis, DES fell under the provisions of the Delaney Clause, a much-disputed law under which "potentially carcinogenic" substances such as feed and food additives can be outlawed. (Beyond the scientific fraud and regulatory sleight of hand, there is some evidence that the FDA actually set up producers for the recent hoax, by accepting without comment their petitions to use the rest of their DES supplies.)

Actually, an operation to ban all feed additives—not just the hormonal supplements, like DES, but subtherapeutic use of antibiotics such as penicillin as well—appears to have gone into gear at the very beginnings of the livestock industry's takeoff.

An early 1960s investigation by the Swann Committee in Great Britain pointed to the dangers of promoting antibiotic-resistant strains of disease with subtherapeutic use of antibiotics in animal feeding, and as a consequence use of antibiotics in feed additives was put on a prescription basis in Britain. Several years later, in Britain several human deaths were attributed to transfer of an antibiotic-resistant strain of disease to humans from calves. In thirty years of concentrated use of antibiotics in animal feeding in the U.S., there has not been one such alleged case.

Yet, the British Swann Committee and related findings seem to be a principal pillar of precedent and scientific authority for the FDA's current vigorous efforts to outlaw all subtherapeutic use of antibiotics in the animal industry. Congressmen Dingell (D-Mich.) and Waxman (D-Cal.), with the apparent support and encouragement of the Bureau of Veterinary Medicine's Crawford, are pushing a bill now that would streamline FDA powers to do away with all subtherapeutic use of antibiotics in feed. Among other things the legislation would do away with the need for evidentiary hearings in such cases, and would automatically supersede all existing law and or approvals in these matters. According to *Feedstuffs* reporter John McClung, Crawford seems mainly concerned with making the law stand up in court.