Rights for Farm Animals

The Humane Society of the United States is embarking on a major campaign to promote more humane treatment of livestock. Although they far outnumber laboratory animals, farm animals have pretty much missed the ark when it comes to legal protection. They are exempted from the Animal Welfare Act and from state anticruelty laws. Transport laws do not cover the 99 percent of animals that travel by truck, and the Humane Slaughter Act excludes chickens and animals subjected to ritual slaughter.

The Humane Society contends that large livestock producers keep millions of cattle, pigs, sheep, and chickens in conditions of excessive crowding or isolation, with bad flooring, bad air, and other conditions that induce discomfort and thwart natural animal behaviors. The society says animals are subjected to such measures as debeaking and castration that would be unnecessary under better conditions, and that they are stuffed with unnecessary hormones and given drugs to ward off diseases to which their stressful living conditions make them susceptible.

Humane Society veterinarian Michael Fox says the crusade is part of a larger goal, which includes the promotion of more healthful eating habits and the encouragement of small producers. Ultimately the purpose is to demonstrate that large-scale agribusiness is unsound both economically and environmentally, leading to what Fox calls "agricultural nemesis."

The society does not want to antagonize "good" farmers by calling for new regulations. Rather it is seeking to forge an alliance between small farmers and independent producers and members of the public who care about food, animals, and the environment.

The Humane Society is supporting a bill introduced by Representative James Howard (D–N.J.) which would create a commission to investigate animal husbandry practices. Fox says the society also would like to see new money appropriated for research in humane husbandry and for stockman training and accreditation programs. Finally, it favors the adoption by production associations of voluntary codes of treatment modeled on those that have been adopted in Britain and Europe.

Fox, who has just produced a book on the subject, has been pressing the cause of farm animals for years. But he thinks the time may be ripe for progress as the number of small and part-time farmers (as opposed to the medium-sized family farms) has been increasing, and large-scale capital- and energy-intensive operations are becoming less economical.

—CONSTANCE HOLDEN

Gene-Splicing Protein to Have Orphan Drug Status

A genetically engineered version of the protein alpha-I antitrypsin (AAT) has been granted orphan drug status by the Food and Drug Administration, becoming the first recombinant DNA product to be so designated since passage of the Orphan Drug Act last year. Designation as an orphan drug speeds up the FDA review process and provides the manufacturer tax credits to offset some of the costs of developing products for a market deemed too small to be profitable. The Orphan Drug Act could prove a boon to small biotechnology companies, which lack the resources to develop drugs for limited markets.

The research and development of AAT for pharmaceutical use is being sponsored by CooperBiomedical, Inc., in Palo Alto, Calif., and includes two other corporate collaborators—Zymogenetics, which did the genetic engineering, and an undisclosed chemical company, which is doing the scale-up fermentation of the yeast cells that make AAT. CooperBiomedical then takes responsibility for purification and testing of the product.

The protein will be tested for safety and efficacy in emphysema patients who produce limited amounts of it because of a genetic defect. AAT ordinarily is made in the liver and carried by the blood to the lungs where it neutralizes the enzyme elastase, which, if unchecked, can damage lung tissues.

About 54,000 people in the United States are likely to develop emphysema because of a purely genetic deficiency in AAT, but only about half of them are candidates at any one time for preventative treatment with the protein. Clinical trials, which could begin within 6 months, will involve administering the protein intravenously. The company has long-range hopes for other uses of AAT, including to treat fire victims suffering the effects of smoke inhalation and cigarette smokers suffering from chronic exposure to smoke.

It is unlikely the company could recover its investment on AAT from sales to patients with genetic emphysema, according to the company's executive vice president Paul Kirk. "If it's effective against other emphysemas by another route of administration, we could get our investment back," he adds.—JEFFREY L. FOX

NRDC Compiling Mammoth Nuclear Reference Series

"For the arms-disarmament expert who has everything" (in the words of Jerome Wiesner), the Natural Resources Defense Council (NRDC) has produced a detailed reference book on "U.S. Nuclear Forces and Capabilities."

The volume is the first to emerge from NRDC's Nuclear Weapons Databook project. The multi-year undertaking, Wagnerian in scope, is designed to provide the public with a central source of information about global arsenals, nuclear proliferation, the history of nuclear weapons, their environmental effects, arms control, and nuclear strategy.

Volume one was compiled by NRDC physicist Thomas B. Cochran, who directs the project; William M. Arkin of the Institute for Policy Studies; and physicist Milton M. Hoenig of NRDC. The book contains extensive data on what the current modernization of the U.S. arsenal entails. It also highlights the fact that nuclearization of all branches of the armed forces "extends far beyond what is known by the public." The information was all collected from unclassified sources. Nonetheless, the Department of Energy, when asked to review the material, suggested that publication was "not in the national interest."