lary offenses. Animal-control agencies frequently deal with chronic offenders of leash laws and other ordinances, so recidivism is a good measure of the impact of such laws. Prior to Multnomah’s revised dangerous-dog law, 25 percent of all biting dogs had bitten someone else within one year. Under the new regulations, that rate fell to 7 percent. The number of bites in the community has dropped by about 8 percent since 1987 and the number of dangerous-dog cases presented to animal-control officers has dropped by 18 percent. Mr. Oswald notes that the program has also been an outstanding vehicle for educating the public and community leaders to the need for responsible pet ownership and responsive animal control. He observed, “We were facing a 75 percent cut in funding, but being able to document the effectiveness of our program helped lead to full reinstatement of our budget in a very competitive fiscal arena.”

Despite the dramatic rise in awareness of the problems caused by dangerous dogs, the widespread adoption of dangerous-dog laws, and continued successes against dog fighting, there seems to be little evidence in most areas that the dangerous-dog situation is improving. What is preventing effective solutions?

We know from the experience of Multnomah County and others that dangerous-dog laws with good enforcement can work. However as cities are increasingly facing fiscal crises, animal-control budgets are usually among the first to be cut. John Snyder, past president of the National Animal Control Association, said, “In the last year, I have heard many horror stories about governments taking away what little resources these agencies have. The public demands and expects animal-control services, but they have no idea of what is needed to do it right.”

Perhaps the main reason why progress has been limited is that animal-control agencies and local humane societies, with sparse and often diminishing resources, are attempting to deal with dangerous-dog problems that have very deep roots. The underlying causes are the ways people breed, raise, train, socialize, and supervise their animals. It is time to look at what individuals, rather than governments, can do to end the dog-bite epidemic.

Puppy mills and many other breeders continue to engage in widespread breeding of dogs without concern for their inborn temperament. As more people have acquired dogs primarily for protection, there has been a rapid rise in the number of questionable animals from guarding and fighting breeds finding their way into naive or irresponsible hands. The result has been an increase in problems associated with protective breeds such as chows and rottweilers that have traditionally shown few problems in the past.

Not all bite problems can be blamed on those people seeking or breeding animals for protection. For example the traditional “family” dog breeds—Labrador and golden retrievers and cocker spaniels—were involved in more than 12 percent of the severe attacks in Palm Beach County, Florida, in 1991. This may be in part due to breeding that ignores temperament, but aggression problems can also result from improper socialization, training, and care. Many individual dog owners, as well as shelters and humane societies, prevent the dogs they love from becoming part of the dog-bite problem.

If you are among the growing number of people seeking a dog for protection, you should seriously assess your needs and motives. Few people really need a guard dog. For most families an “aunt” or “uncle” dog who will sound the alarm or look intimidating without actually showing aggression can provide protection without the risk. Nearly any dog provided with love, care, and proper training can develop the kinds of bonds to people that allow them to fill this need while remaining a safe family companion, so follow the HSUS suggestion to “adopt one” from your local shelter.

Be sure your pet is spayed or neutered. Statistics show that unsterilized animals make up a majority of the biting population.

Urges those who continue to breed dogs to exercise care and restraint to preserve the breeds they love. A high rate of breeding of any breed, particularly one with a guarding or fighting history, is not only contrary to pet overpopulation but can also quickly lead to declines in health and temperament standards. The damage that has been done to the reputation and quality of today’s “problem” breeds such as rottweilers, Doberman pinchers, and chows may take years to undo.

All dog owners should socialize and train their dogs early and well. Training need not be aimed at meeting some competitive standard. For most pet owners, the primary goal of training should be to build a bond of trust and understanding, to set appropriate limits, and to help the dog become a trustworthy member of the family. If one establishes a firm foundation of basic obedience, correcting most dog-behavior problems at an early stage becomes much easier.

We need to teach children and others how to behave when they meet unfamiliar dogs. Help lead to full reinstatement of our budget in a very competitive fiscal arena.”
Researchers at the University of California at Davis opted to splice extra growth-regulating genes from sheep into lambs to avoid the use of human tissue because, according to Dr. James Murray, "...transgenic organisms convey their traits to every offspring. The sheep's offspring can pass them on to future generations and their offspring, and so on."

Dr. Murray hoped to develop a strain of sheep whose lambs would efficiently convert their feed and rapidly grow to marketable size. But the technique, which had developed slowly and others suffered serious health problems that killed them before they ever reached puberty. Dr. Murray concluded, "The cause of death varied, but there is clear evidence that the overexpression of GH [growth hormone] adversely affects liver, kidney, and cardiac function."

Merk and Company, an international pharmaceuti-
cal firm, applied for a patent in Europe on a "superchicken" it called Macro-Chicken. In the hopes of cor-
ertering the worldwide poultry market with highly feed-
efficient, fast-growing birds, Merck developed theMacro-Chickens, a line of broiler chickens that carry the growth-gene from cattle. With these animals may well have a variety of health problems, but if the birds eat well and grow quickly, they may be ready for slaughtering before severe health problems ever develop. What will happen to the reserve stock of transgenic chickens, the ones not raised for slaughter? They will suffer.

Because such information is proprietary, corpora-
tions are not likely to reveal the problems and risks of their new transgenic creations. Trade secrets notwithstanding, creating transgenic farm animals has social and economic consequences for farmers, agribusiness distributors, consumers and—consequences that have been given scant attention.

Critics of the genetic engineering of farm animals have pointed to the use of public funds to make these animals produce more meat (even if it is leaner) when the short- and long-term costs of such research are not considered. In a recent article in the winter 1992-93 issue of The American Journal of Veterinary Research, "A major problem of modern intensive animal agriculture is overproduction. In many nations, meat and milk overproduction is a chronic problem. In many years before the "frost.""

Before and after the "frost," many smaller farms were able to make ends meet by selling their animals for meat. On the other hand, the large farms that raised animals for milk and dairy products were unable to sell their milk and make money. This situation created a market for the large farms to produce more milk and meat, which in turn caused the prices of milk and meat to decrease. As a result, many small farmers were forced to go out of business, and the large farms were able to increase their market share.

The genetic engineering of farm animals has also raised concerns about the ethical implications of using animals as research models. Some critics argue that using animals for research purposes is inherently unethical, because it involves causing the animals physical and emotional harm. Others argue that the benefits of using animals for research purposes, such as the development of new treatments for human diseases, outweigh the ethical concerns.

In conclusion, the genetic engineering of farm animals has brought about significant changes in the livestock industry, with both positive and negative consequences. It is important to carefully consider the ethical implications of using animals for research purposes and to ensure that the animals are treated humanely throughout their lives.
Animal Patenting

The controversy over patents on genetically engineered animals began on April 7, 1987, when the U.S. Patent and Trademark Office filed a lawsuit against two firms that had unilaterally patented certain animals. The firm in question was the University of Pennsylvania Medical School, which had patented a new strain of mice genetically engineered to produce human hormone.

The Senate is currently considering a bill (S. 1291) sponsored by Senator Hart that would make it illegal to patent a five-year moratorium on the granting of patents on invertebrate and vertebrate animals, including those that have been genetically engineered. The Senate bill (H.R. 4069) was introduced in the House by Rep. Benjamin Cardin in April 1992. The HSUS supports both bills.

Animals for disease resistance or increased growth should be encouraged.

Five sheep cloned from a single embryo in England: in a recent poll, fewer than half of the Europeans questioned thought biotechnological research on farm animals for disease resistance or increased growth should be encouraged.

... products must be viewed from these perspectives: ethical, spiritual, moral, and religious, legal and political, social, economic, and environmental, and cultural. Because these areas of concern, constraint, and direction have been virtually ignored by policymakers or seen as obstacles to economic growth and industrial expansion, the current patentable subject matter has been vigorously opposed by The HSUS and a coalition of other animal welfare groups.

To question this development should not be misjudged as antiscience or antipopular. With greater involvement, an informed public can direct the policy-making process. Advances in science and technology, in biotechnology in particular, may then serve the public good and help enhance the quality of life and the environment alike.

Today the U.S. government is attempting to deregulate and privatize the world’s resources and of the genetic materials of life itself, coupled with the misapplication of the genetic-engineering biotechnology, the social, economic, environmental, and ethical ramifications of such advances need to be fully assessed. Considering the rapid pace of developments in this field, which will be speeded up by the altered animals, a five-year moratorium on the granting of such patents is a wise and necessary decision. A moratorium would enable Congress to fully assess, consider, and respond to the economic, environmental, and ethical issues raised by the patenting of such animals and in the process, establish the United States as the world leader in the appropriate, ethical, and appropriate applications of genetic engineering biotechnology for the benefit of society, and for generations to come.

References


14. “New Progresses for Gene-Altered Fish Raise Hopes and