EVERY DAY in life, we face the issue of whether an action is right or wrong? In agriculture, we face that issue with almost every aspect of the industry. From animals to plants, morality comes into play. Often two opposing sides emerge. The industry and its consumers must decide the outcome of many of agriculture’s greatest ethical issues. Explore this E-unit to discover how ethics and biotechnology play a role in the agricultural industry.

Objective:
Discuss issues related to animal ethics, animal welfare, animal rights, and biotechnology.

Key Terms:
- animal rights
- animal welfare
- biotechnology
- cloning
- ethics
- genetic engineering

Ethics in Agriculture

For years, the agricultural industry has encountered its share of controversial issues. From sanitation in the late 1800s to biotechnology in recent years, the agricultural industry has dealt with the inclusion of ethics and opposing views. Ethics is the examination of moral issues to determine right from wrong when dealing with human character and conduct. Controversy
arises from the societal acceptance of opposing viewpoints on the same ethical issue. In agriculture, the main ethical question that emerges in the public mainstream is whether society should raise animals to kill for food.

With this ethical issue of animals as sources of meat, many line up on both sides. Although humans have used animals for meat throughout history, many people feel that animals should not be raised for food. However, meat consumption has increased, leading others to feel that animals should be raised to meet this demand. Those opposed question whether humans should have the power to use animals for this purpose. They ask why humans need animals to consume when they have a world of satisfying plants to consume for nutrition. What makes this an issue of ethics and so controversial is that no facts exist to support either viewpoint. This leaves the consumer to decide the morality of the issue.

Animal hides are also used by humans. Many of the same questions about the use of animals for their meat also apply to the use of animals for their hides.

Another issue of controversy is the environment in which animals are raised within the industry. Most people agree that animals should be raised free of pain and suffering. However, differences abound about what constitutes humane treatment of animals. In advanced countries, like the United States, many in society question techniques used in animal production. For instance, dehorning, branding, and castration often emerge as controversial because many feel that the animals should be numbed with medication before the procedures. However, others oppose this viewpoint because they are not willing to pay more for meat.

Other ethical issues associated with agriculture involve the use of confinement and small living areas for animals, the withholding of medical attention to decrease production costs, the harvest of animals in view of other animals,
the selection of animals for rapid growth, and even the creation of turkeys by natural selection that cannot reproduce naturally because of their large breast muscles.

Animal Welfare and Animal Rights

In short, animal welfare and animal rights relate to the safe, humane treatment of animals for companionship or production purposes. **Animal welfare** is the belief that humans should provide animals with surroundings that meet their needs and with protection from suffering while under human control. **Animal rights** are the rights of animals to life and liberty, just as afforded humans.

Most animal producers are concerned with animal welfare. The typical producer knows that raising an animal improperly can cause that animal to become ill and not fully develop. This could damage the producer’s herd. A sick or dead animal takes away from the producer’s profits. If a person believes in animal welfare, then that person believes that the harvesting of livestock should be done in a humane manner.

However, many producers struggle with the issue of animal rights. If one believes in animal rights, then that person feels that the harvesting of livestock is murder.

The debate is far from over. In fact, many in the agricultural industry and in society as a whole feel that the choice to believe in animal welfare or animal rights is up to the individual. Like any view, it is an opinion based on knowledge of the situation and feelings about it. As the size of farms increases and the number of farmers decreases, fewer people will have the opportunity to see how animals are raised. With this in mind, a small number of producers and a large number of consumers are left to ponder the stresses of thirst, hunger, lack of comfort, disease, and emotions of animals.

Biotechnology in Agriculture

Over the past decade, genetics and biotechnology have changed the agriculture world as we know it. **Biotechnology** is the application of biology to technology. Often, biotechnology uses living cells and components to research advances in technology. Many different processes are involved, and several debates stem from these. The research done is used to benefit both animals and humans.

Another form of technology influencing the agriculture world is genetic engineering. **Genetic engineering** is the movement of genes from one cell to another. Improvement of feedstuffs and improvement of animal breeds are two benefits of genetic engineering. Manipulation of genetics has resulted in new species of plants and animals, the addition of specific genes or traits to plants and animals, and, more recently, cloning. Cloning has stirred up much controversy over the moral issue of modification of animals. By definition, **cloning** is the creation of duplicates of plants and animals.
Along with the grand hopes for various benefits associated with genetic engineering, many risks evolve. These include the loss of genetic diversity, modifications with harmful consequences over time, a hamper to the economic stability of our country, and the use of animals to carry pathogens, resulting in exposure to humans.

Summary:

Today, several controversial issues exist within the agriculture world. Most of these stem from the concept of ethics, which is the examination of morality to determine right from wrong when dealing with human character and conduct. With each ethical issue, two sides emerge—one for and one against the viewpoint. Often these issues center around animal welfare and animal rights or around biotechnology and genetic engineering. With each issue, the agricultural industry leaves to the consumer the choice of what is right.

Checking Your Knowledge:

1. Define ethics.
2. Identify an ethical issue.
3. Compare and contrast animal welfare and animal rights.
4. Name two benefits of genetic engineering in agriculture.
5. What are four risks associated with genetically engineered animals?

FURTHER EXPLORATION...

ONLINE CONNECTION: Breeding Biotechnology

Imagine that you could take all the good traits of one organism, discard the poor traits, and combine the good ones with those of another organism. If this were done with a species of animal, the result would be a super breed of that species. Amazingly, you do not have to imagine! With genetic engineering, this is a reality in the agriculture world. Explore online the many breeds of animals developed for specific purposes to improve society. Start by visiting these Web sites:

http://www.equineinfo.com/breedtable.htm
Expanding Your Knowledge:

Online or at your local library, research an ethical issue associated with agriculture. Write your issue at the top of a sheet of paper. Beneath the issue, draw a line down the center of the paper. At the top of the left column, write a statement representative of the pro side of the issue, and at the top of the right column, write a statement representative of the con side. Explore 10 facts that support each viewpoint and write the results of your research in the appropriate column.

Web Links:

Association of Veterinarians for Animal Rights
http://avar.org/

Animal Welfare Information Center
http://www.nal.usda.gov/awic/

Raising and Harvesting Animals