

PENNSTATE
College of Agricultural Sciences
E-I-E-I-O
 From Dairy and Animal Science at Penn State



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THE DAIRY COW — HIGH-TECH PROVIDER OF FOOD

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The role of animals in the production of food for humans is increasingly being questioned by consumers and the general public. Many believe that farm animals

contribute to global starvation as they consume grain and other crops which could be used more efficiently if eaten directly by people. Others hold that land used to produce animal feed could be more efficiently used to produce foods for humans, and still others that animal agriculture is harmful to our ecosystem.

These perceptions clearly point out the need for those in animal agriculture to retell the story about the role and efficiency of our farm animals in providing high-quality

food for humans.

This is particularly true for the lactating dairy cow, the marvelous ruminant animal that produces more food for humans (milk and meat) than she actually consumes

as food that could be eaten by humans. The role of the ruminant in utilizing forages, waste, by-products, and other feedstuffs not usable by humans is an "old story," but it may yet be the "new story" as we hustle to feed our ever-growing population.

A recent headline in a local newspaper indicated, "The earth may be reaching its biological limits." Based on a state-of-the-world report on global environment, the article reported slowed growth in world food supplies in relation to population growth, and wondered whether we are approaching the planet's carrying capacity. The article further stated, "Human demands are approaching the limits of oceanic fisheries to supply fish and rangelands to support livestock."

This is "heavy" information for an animal scientist to write about in *Lancaster Farming*. Is it something we need to be concerned about? Of course. It tells us that the

unique ruminant digestive system will play an even more important role in supplying food in the future.

The dairy cow, in particular, has always played a major role in our total food chain. But with population increase and the probability of less available feed grain, she will be even more important as the "high-tech provider of food."

Critics of animal agriculture often ignore the role of the ruminant, as well as other basic facts. Some land — forests, rangelands, and hilly mountainous areas — is suitable only for production of feedstuffs which cannot be used directly by humans.

Of the total land area worldwide, only about 11 percent is arable (21 percent of U.S. land is used as cropland), 23 percent is permanent pasture that can or should not be used for cropping, and 30 percent is forest. The latter

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