

Meat and milk from cloning are safe, 2 FDA scientists say

The study, which deems labeling unnecessary, signals the agency's receptiveness to formally approving such food.

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A long-awaited study by federal scientists concludes that meat and milk from cloned animals and their offspring is safe to eat and should be allowed to enter the food supply without any special labeling.

The finding is a strong signal that the Food and Drug Administration will endorse the use of cloning technology for cattle, goats and pigs when it publishes a key safety assessment intended to clear the way for formal approval of the products. That assessment is expected next week.

"All of the studies indicate that the composition of meat and milk from clones is within the compositional ranges of meat and milk consumed in the U.S.," the FDA scientists concluded in a report published in the Jan. 1 issue of the journal *Theriogenology*, which focuses on animal reproduction.

The study prompted a sharp reaction from some food safety advocates.

The FDA "has been trying to foist this bad science on us for several years," said Andrew Kimbrell, executive director of the nonprofit Center for Food Safety in Washington. "When there is so much concern among so many Americans, this is really a rush to judgment."

Many ranchers and dairy producers have already cloned animals for meat and milk production, but a voluntary moratorium initiated about five years ago by the FDA has largely kept those animals and their offspring out of grocery stores and restaurants.

However, ranchers say some animals taken to slaughterhouses in the last couple of years have undoubtedly been the offspring of clones. (The clones themselves are too precious to slaughter.)

"There's been lots and lots of them that went into the food chain," said Larry Coleman, who raises Limousin cattle in Charlo, Mont., and has made five clones of his prize bull, named First Down. He estimated that at least 10 of their offspring have wound up on dinner tables.

Since Dolly the sheep was cloned in 1996, agricultural scientists have imagined a time when they could dispense with the uncertainties of conventional breeding and make copies of their best animals.

Cows were cloned in 1998, pigs in 2000.

Consumers greeted the news with a combination of amazement and revulsion. Even experts conceded the technology provoked a certain "yuck" factor.

Cloning involves replacing an egg's nucleus with DNA from a prized animal. A tiny electric shock induces the egg to grow into a genetic copy of the original animal. Scientists often refer to clones as identical twins born at different times.

The FDA sees cloning as a natural extension of livestock reproductive technologies — such as artificial insemination and in vitro fertilization — that have become routine, said spokesman Doug Arbesfeld.

"It's the next step," Arbesfeld said. "We now have the technology to do things in petri dishes and much more inside the cell as opposed to the way breeders have done things for centuries."

Though cloning is expensive — Coleman paid \$60,000 to clone First Down — producers have embraced it for the efficiencies it can bring to a farm or ranch. If a particular bull consistently sires strong offspring or a dairy cow is an unusually prolific milk producer, clones can multiply those advantages.

But a study released this month by the Pew Initiative on Food and Biotechnology found that 64% of Americans were uncomfortable with animal cloning and 43% believed food from clones was unsafe.

Safety isn't the only concern among consumers. "It's not that they fear if they drink cloned milk, they're going to choke and die," said Carol Tucker Foreman, director of the Food Policy Institute at the Consumer Federation of America in Washington. Foreman said the primary issue was that the food should be labeled so consumers could avoid products derived from clones.

"I should have freedom not to spend my money and not to eat products that offend me," she said. "Some people only drink free-trade coffee. Others only choose organic food. Others choose halal or kosher food. This product, which causes great discomfort to a great number of people, goes on market with no labeling that enables me to make a choice."

The FDA scientists who wrote the paper, Larisa Rudenko and John C. Matheson, concluded there was no basis for labeling the meat and milk products or for treating them differently than other food.

"The U.S. food safety system is designed to screen meat and milk for hazards, regardless of the means by which the animals were derived," they wrote. "There is no science-based reason to apply additional safeguards."

The paper relies on dozens of studies from around the world, many of which examined genetic and health problems in cloned animals and the risks to animals that birth clones.

Though clones are more likely to die in utero or shortly after birth and to have birth defects, animals that are healthy and make it to adolescence face "no additional risk of illness or death," according to the report.

Two of the largest studies were provided by commercial clone producers Cyagra Inc. and ViaGen Inc. They tracked the growth of cloned and conventional animals and found no problems specific to clones. Clones are no more likely to get infections or diseases and "are virtually indistinguishable from their comparators," according to the FDA report.

The scientists also analyzed 13 studies on the composition of meat and milk from clones and their offspring. Vitamins, minerals, proteins, amino acids, fat, water and carbohydrate content were scrutinized, and no "nutritionally or toxicologically important differences" were found, they said.

"It's pretty clear from all of the research that a cloned animal or the offspring of a cloned animal is indistinguishable from an animal that's conventionally bred," said Arbesfeld, the FDA spokesman.

Skeptics remain unconvinced.

Kimbrell, of the Center for Food Safety, said too few animals had been cloned to conclude that they were safe to eat. He also called for more independent research provided by companies that are not in the cloning business.

Sen. Dianne Feinstein (D-Calif.) and six other senators sent a letter last week to Health and Human Services Secretary Mike Leavitt, whose department includes the FDA, asking that he require a more thorough review of the available scientific data. Given consumer wariness about clones, the senators said, they were particularly concerned that allowing the sale of milk from cloned cows could "result in a 15% drop in purchase of U.S. dairy products."

Others insist there has been plenty of study and are eager for the FDA to proceed with the release of its draft risk assessment. An executive summary was released in 2003, but the full report has been stalled.

"I don't think every cloned animal and the offspring that have been produced are standing in a feedlot someplace waiting for the government to release this risk assessment analysis," said Don Coover, a veterinarian and rancher in Galesburg, Kan. "The industry has moved on."

Coover himself has sold about 30 offspring from a cloned bull. He has even eaten meat from a few of them.

"They taste like every other normal animal out there," he said, "because that's what they are."

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TO MARKET? Dairy cows Cyagra and Genesis are among Maryland farmer Greg Wiles' cloned stock. The FDA's endorsement may allow him to sell their products.

(Chris Gardner / AP)

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