



**Above: E-Beam General Manager Doug Johnson talks to Texas public school officials about the National Center For Electron Beam Research. The conference was Sept. 17-19 in College Station.**

# Explaining E-beam

## Texas public school officials learn about electron beam irradiation

**I**t happened again just like Dr. Andy Vestal knew it would.

“What’s the first thing that comes to your mind when you hear the word ‘irradiation?’” Vestal asked the group.

“Cancer,” one participant said, while others nodded in agreement, some uttering the word under their breath.

“Glowing,” another said. Vestal nodded, having heard it all before.

One of his jobs as associate director of the Institute of Food Science & Engineering at Texas A&M and specialist for Texas

Cooperative Extension is to dispel those incorrect notions. Vestal is in charge of outreach efforts at the institute, and spends time organizing conferences to educate groups on irradiation, specifically electron beam irradiation.

A group of about 40 Texas public school foodservice directors and regional service center representatives recently traveled to College Station for a Sept. 17-19 conference on childhood obesity and irradiation. The Texas Beef Council, Texas Cooperative

Extension and the Institute of Food Science and Engineering sponsored the conference.

Lately, public schools have sought information since irradiated beef will be available to schools through the National School Lunch Program in January 2004. Each school district will decide for itself if it accepts the irradiated beef or not.

“What we challenge each and every school district and the parents within that district to do is learn what the benefit/risk relationship is regarding adopting this technology in their school district. ... No doubt schools find themselves looking for answers by which they can make a knowledge-based decision and looking for knowledge so they can share information with parents in their school,” Vestal said.

Vestal has also noticed an increase in information sought by school districts since early September when a Washington State Supreme Court upheld a jury’s verdict of more than \$4 million against a rural school district for undercooking hamburger meat that contained a harmful strain of *E.coli*.

The beef was served to elementary students in the fall of 1998.

During the conference, participants learned about electron beam irradiation, which uses electrons accelerated to 99.9 percent of the speed of light to break the DNA strains of harmful pathogens and bacteria, such as *E. coli* O157:H7, in already packaged food. Breaking the DNA strains either kills the organism or prevents it from reproducing.

Irradiation has been approved by the United States Department of Agriculture, the World Health Organization and the Food and Drug Administration. It has been endorsed by the Center for Disease Control and Prevention, the American Medical

Association, the American Dietetic Association and more.

Also discussed at the conference was the history of irradiation. In 1895, a paper with the idea of irradiating food was published. In 1905, scientists received the first patent on the process of food irradiation.

NASA’s astronauts in training and in space have been eating irradiated food for more than 30 years. The astronauts’ food is irradiated because they cannot afford to get sick in space.

“NASA’s choice is that the astronauts won’t leave home without it,” Vestal said of irradiated food.

The foodservice directors and service center representatives also learned that a number of non-food products are irradiated for customer safety. Feminine products, diapers, Band-Aids, baby bottles and spices are irradiated, as are medical supplies and equipment.

The group toured the Electron Beam Food Research Facility in Research Park on the A&M campus. The multi-million dollar facility was completed in the spring of 2002, and uses electron beams to irradiate

food.

Diane Dahm, director of child nutrition services at College Station ISD, said the conference helped her understand the science of irradiation better.

“I knew it was safe,” she said when asked what she knew about irradiation before the conference. “I had read only a little bit of information from the USDA.”

After the conference, Dahm said she had a better understanding of the history of irradiation and how it worked. Learning that medical supplies were sterilized by irradiation helped her understanding.

“I thought the whole thing was excellent,” Dahm said after the conference. “I would certainly recommend this.”

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~ Diane Dahm,  
College Station ISD,  
on the conference

