

Genome Coup Opens Door To New Discoveries

WASHINGTON, D.C. — Now that the history-making venture to decipher the structure of nearly all the genes in a little mustard family plant called thale cress or mouse ear cress is complete, plant researchers are intent on finding out what job each of those 25,000 genes performs.

"This remarkable accomplishment," said U.S. Agriculture Secretary Dan Glickman, "may pave the way for increasing agricultural productivity by improving crop yields and quality to help maintain a global food supply and protect the environment."

Among the investigators pursuing that ambitious goal is Athanasios Theologis, a senior scientist with the Agricultural Research Service in Albany, Calif., and adjunct professor at the University of California, Berkeley.

Theologis co-authored one of several research papers in the

December 14 issue of the journal "Nature" that document his team's success — and that of co-investigators — in elucidating the structure, or "sequence," of all of the genes in the diminutive plant known to botanists as *Arabidopsis thaliana*. Researchers finished the project three years ahead of schedule.

Theologis is based at the Plant Gene Expression Center, which is jointly operated by ARS and the University of California. The *Arabidopsis* sequencing work that is considered to be the first complete, publicly available catalog of the structure of all of the genes that come into play during the life of a flowering plant — from seed to flower to fruit.

Scientists hope to discover the traits that these genes control, such as resistance to attack by insects or diseases. Once those genes are identified, scientists may be able to shuttle them into plants that lack natural protec-

tion, or they may be able to re-tool the genes to enhance their effectiveness.

Arabidopsis has been the guinea pig for these gene-sequence investigations because it has a much smaller amount of genetic material than familiar crop plants such as corn or wheat. Knowing the structure and the function of *Arabidopsis* genes helps reveal clues to the form and function of genes in all flowering plants, as well as genes of other forms of life.

Theologis worked with scientists at Stanford University and at the University of Pennsylvania to determine the sequence of the genes of one of the five chromosomes in *Arabidopsis*. Investigators in the United States, Europe, and Japan sequenced four other *Arabidopsis* chromosomes.

USDA's Cooperative State Research, Education, and Extension Service helped fund the work.

Checkoff Capitalizes On Demand For Beef

DENVER, Colo. — The Beef Promotion Operating Committee recommended the largest budget amendment ever for demand-building programs at a meeting Dec. 6.

The \$6,642,000 fiscal 2001 budget amendment will be used to support checkoff-funded beef promotion, research, consumer information and foreign marketing efforts. These funds resulted from three sources: 1) the amount by which FY2000 record checkoff revenue exceeded projections; 2) the amount by which the Beef Board's administrative expenses came in under budget; and 3) a number of Beef Board projects that were completed for less than the amounts approved.

"The amendment, and the plan for fiscal 2001, is focused on helping the industry continue to build beef demand," said Beef Board Chairman Les McNeill, who serves as Chairman of the Operating Committee. McNeill is a cattle feeder from Panhandle, Texas.

"Beef demand for the third quarter of 2000 was up about 6 percent when compared to the third quarter of 1999. And for the first time ever, consumer expenditures for beef in 2000 are pre-

dicted to exceed \$53 billion, an increase of \$3 billion from 1999. After nearly two decades of decline, demand has been on an upswing for nearly two years."

The recommended budget amendment includes funding for Promotion, \$1,870,000; Research, \$2,585,000; Consumer Information, \$1,800,000 and Foreign Marketing, \$387,000.

"The budget amendment includes funds for additional beef safety and nutrition research," said McNeill. "Research is a long term commitment of checkoff dollars to assure consumer confidence in beef. It's important to develop the science to support the nutritional benefits of beef and the science to enhance beef's safety and eating quality."

In other action the Operating Committee approved an Authorization Request for \$185,000 from the U.S. Meat Export Federation for additional beef promotion efforts in the Japanese market. Japan is the largest market for U.S. beef. It also approved a \$70,000 Authorization Request from the American National CattleWomen to support the National Beef Ambassador Program. The Ambassador program involves training young spokespersons to deliver messages about beef and the industry to consumer audiences.

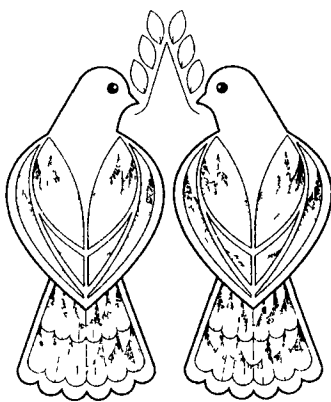
The Operating Committee was created to bring state and national beef checkoff dollars together. The Operating Committee approves checkoff program plans and contractors.

Programs authorized by the Operating Committee must be approved by the USDA before work can be done. Contractors with the Cattlemen's Beef Board work on a cost recovery basis. They are reimbursed after work is done and the out-of-pocket expenses are incurred and do not to make a profit.

May you and your family experience the joy, love and peace that is the true meaning of Christmas.

During this season our thoughts turn gratefully to those who make our business possible.

A very Merry Christmas and a Happy New Year to all of you!



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