HERBICIDE-RESISTANT CAULIFLOWER THROUGH CELL FUSION

These new plants are the first genetically altered cauliflower developed using the process known as cell fusion, according to Cornell Univ. scientists Elizabeth D. Earle, a specialist in tissue culture and cell fusion technologies, and Martha A. Mutschler, a plant breeder, both in the University’s College of Agriculture and Life Sciences.

The atrazine-resistant cauliflower was created using the fusion technique to combine cells of an atrazine-resistant rapeseed and a cauliflower that was vulnerable to atrazine. The resulting fused cells then were exposed to atrazine, and some of the surviving cells developed into atrazine-resistant cauliflowers.

Using the fusion process, other scientists have previously introduced herbicide resistance into potatoes and tobacco, and disease resistance into tobacco. Other experimental plants produced by the technique include the “pomato,” a test-tube hybrid of a potato and tomato, but the Cornell work is the first in which cell fusion was used to create a new cauliflower.

Earle said that the atrazine-resistant cauliflower represents an important step in refining cell fusion as an efficient genetic engineering tool to design new superior crop varieties. Through cell fusion, improved plants could be produced in only several months, whereas the conventional breeding method may take many years to accomplish the same task.


NATIONAL CLONAL PLANT GERMPLASM REPOSITORY FOR TROPICAL FRUIT AND NUT CROPS

Papaya from South America, breadfruit from Samoa, and macadamia from Australia will be protected for the first time in a repository in Hawaii. Varieties of these and four other tropical fruits and nuts will be preserved at a new National Clonal Plant Germplasm Repository for Tropical Fruit and Nut Crops, which opened in August at the Univ. of Hawaii’s Waiakea Agricultural Research Station in Hilo. Other fruits such as pineapple, guava, passion fruit, and acerola cherry will be included. Wild and cultivated strains from around the world will be stored in the new collection. Such strains could be used to breed for resistance to insects, diseases, or drought. A search has been started for specimens of the popular Kapoho solo variety for yellow papaya that lack the pin-hole navel usually found in this fruit. Other strains of fruits and nuts could have qualities that could increase their appeal to consumers. Fruits could be bred, for example, for better taste or a more desirable texture, color, or aroma. Cuttings, seeds, or other plant parts from the collection will be shared with researchers, plant breeders, and others in the United States and abroad. For additional information on the new Repository, contact Henry L. Shands, National Program Staff, ARS-USDA, Beltsville, MD 20705; telephone 301-344-3311.

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NEW AGROFORESTRY PROGRAM AT THE UNIV. OF FLORIDA

The Dept. of Forestry in the School of Forest Resources and Conservation at the Univ. of Florida announces the initiation of an interdisciplinary graduate program in the technical and socio-economic aspects of agroforestry/tropical forestry. The program encourages training and research on an interdisciplinary and interdepartmental basis within the Institute of Food and Agricultural Sciences and within the Univ. of Florida. Graduate students with interest in tropical tree fruits as a component of tropical agroforestry systems may have interest in this program.

The Univ. of Florida has active on-campus centers for Tropical Agriculture, African Studies, and Latin American Studies. P.K. Ramachandran Nair, internationally recognized for his research in agroforestry, has recently joined the Dept. of Forestry as Professor of Agroforestry to provide leadership in program development. Nair holds a PhD in Agronomy from Pantnagar, India, and a Dr. Sc. Agr. from Goettingen, West Germany. Nair was, until recently, Principal Research Scientist with the International Council for Research in Agroforestry, Nairobi, Kenya. For further information contact P.K.R. Nair, Dept. of Forestry, IFAS, Univ. of Florida, Gainesville, FL 32611.

AGRICULTURE YEARBOOKS

The following is a list of Agriculture Yearbooks currently available: 1948, Grass ($15); 1973, Handbook for the Home ($12); 1977, Gardening for Food and Fun ($12); 1978, Living on a Few Acres ($13); 1979, What’s to Eat? ($8.50); 1980, Cutting Energy Costs ($12); 1981, Will There Be Enough Food? ($7); 1982, Food from Farm to Table ($12); 1983, Using Our Natural Resources ($7); 1985, U.S. Agriculture in a Global Economy ($10); 1986, Research for Tomorrow ($10); and 1987, Our American Land ($9.50). Please send your order and remittance to: Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. We still have a few copies of the 1986 Yearbook, Research for Tomorrow. You may send your request for the 1986 Yearbook only, along with a self-addressed label to: Fennie A. Tolver, CSRS-USDA, Room 430-A, Administration Building, Washington, DC 20250-2200.

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