

Cornell soil expert heads biotechnology study group

ITHACA, NY — A Cornell University scientist is playing a key role in shaping national policy on ways to protect the public and the environment from potential dangers of genetically engineered microorganisms created by the biotechnology industry.

Martin Alexander, a soil microbiologist and microbial ecologist, headed the 10-member U.S. Environmental Protection Agency study group that recommends stepped-up research to develop safeguards against such organisms that could find their way into the environment on a large scale. The group's report was issued Jan. 30.

"I know of no major technology that has not had some deleterious effect," declares Alexander, who teaches in the New York State College of Agriculture and Life Sciences at Cornell.

Risks are small when a few genetically manipulated species find their way into the environment, but the likelihood of harm increases greatly when a large number of different kinds of these organisms are released, Alexander argues. The rapidly growing biotechnology industry is expected to come up with many different strains of organisms for agriculture and pollution control, for example.

For Alexander, though, the question is whether such exotic creatures not only will be beneficial, as promised, but also do some harm.

In its report — "Assessing

EPA's Biotechnology Research and Information Needs" — the national panel strongly recommends that EPA develop scientific tests for evaluating the survival, multiplication, dispersal, and possible harmful effects of genetically engineered organisms.

EPA says it will spend \$5.5 million in 1986 to determine the risks from products created through gene-splicing techniques. The agency's science advisory board, in the report prepared by the panel on biotechnology, says a "broader" effort is needed.

Such research is essential for the agency to gain the scientific knowledge to determine, or even predict, the potential risks of those organisms before such microorganisms find their way

into the environment on a large scale, Alexander emphasizes.

"There is always a possibility of a problem," Alexander says. "Until you have had extensive experience with a particular technology, you don't know the probability of danger. It's like writing an insurance policy before an accident occurs."

In the case of microorganisms created through recombinant DNA techniques, a system to assess the potential risks involved before new strains of such organisms cause any problem is a must, he stresses. In urging EPA to develop a reliable risk assessment system, the study group recommends that the agency focus its efforts on several key scientific questions.

These include the ability of a

genetically altered organism to survive, to grow, to multiply, to transfer its genetic material to other naturally occurring organisms, and to spread from the site of the initial release.

In addition, the research effort should be directed toward developing means of determining the effects of such an organism on the environment as well as the organism's capacity to cause disease.

The panel also recommends that EPA coordinate its efforts with other federal regulatory agencies, such as the Food and Drug Administration, the National Institutes of Health, and the U.S. Department of Agriculture, in establishing a comprehensive risk assessment system to prevent

communicable diseases caused by genetically altered organisms.

Another Cornellian, Ralph Hardy, a visiting professor of life sciences and president of BioTechnica International, a biotechnology firm in Massachusetts, was a member of the study group. Other members were: Ralph Baker, Colorado State University; Rita Colwell, University of Maryland; Stanley Falkow, Stanford University Medical School; Don Kaplan, Dow Chemical Corp.; Francis Macrina, Virginia Commonwealth University; James Moulder, University of Chicago; Gil Omenn, University of Washington; and Robert P. Williams, Baylor College of Medicine.

MD tobacco trade team visits Europe

ANNAPOLIS — A six member Maryland trade team is in Europe this week visiting tobacco manufacturers in an effort to stimulate sales of Maryland Type-32 leaf in advance of the 1986 market season.

Led by Ernest C. Shea, Assistant Secretary of Agriculture at the Maryland Department of Agriculture (MDA), the group will visit 24 companies in Switzerland, Luxembourg, Belgium, Germany and the Netherlands in an effort to strengthen and rekindle interest in tobacco from Southern Maryland.

Accompanying Mr. Shea on the mission are: Bradley H. Powers, Chief of the Marketing Services Section, MDA; Dr. Claude G. McKee of the University of Maryland and a member of the Maryland State Tobacco Authority; Edward Gieske, President of the Maryland Tobacco Improvement Foundation; Roland E. Darcey of Upper Marlboro, a tobacco grower and a member of the Governor's Export Trade Council; and Gary Hodge, Executive Secretary of the Tri-County Council of Southern

Maryland.

According to Mr. Shea, "The mission was conceived by Maryland Secretary of Agriculture, Wayne A. Cawley, Jr. over the past several years as a result of his listening to Southern Maryland farmers' concerns over the future of their number one crop. Sales to Western Europe dropped from almost six million pounds in 1981 to two and one-half million pounds in 1984.

"We want to talk directly with our traditional European customers on their turf to learn what we can do to retain and, hopefully, expand our sales to them. Over the years, there have been concerns over price, quality and numerous other factors in the international tobacco trade and we want to listen to their side of the story.

The effort being made this week on behalf of Maryland tobacco is part of Governor Hughes' "International Trade Initiatives" announced last year.

The overall export promotion

program which, for agriculture, emphasizes value-added products (such as processed foods) as well as raw agricultural products (such as grain and tobacco), has been a continuing effort in Maryland since the inception of the Department of Agriculture in 1973. Members of the Department's Marketing Services staff participate in food and agricultural trade shows throughout the world to familiarize foreign customers with local products. In addition to a new export exhibit to be used at shows, the Marketing Office is currently updating its Export Directory, researching new markets for Maryland products, developing bi-lingual brochures about specific commodities and advertising Maryland commodities overseas.

The most immediate project now underway, the tobacco trade mission, will culminate with business meetings in Amsterdam and, finally, return of the team to Maryland on February 27.

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