THE AMERICAN PHYTOPATHOLOGICAL SOCIETY

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The American Phytopathological Society's (APS) governing Council approved on August 29, 2001 a statement expressing its position on biotechnology. The APS Public Policy Board recommended an initial draft of this statement to Council. The approved statement acknowledges the many benefits of using biotechnology for plant pathogen and plant research and for disease management. It also expresses support for responsible and science-based oversight and regulation of biotechnology. Further, it calls for placing consideration of risks associated with managing plant diseases through biotechnology in perspective with other disease management approaches, including social, economic, and environmental issues and concerns. The following is the approved statement.

APS Statement on Biotechnology and its Application to Plant Pathology

The American Phytopathological Society (APS), which represents approximately 5,000 scientists who work with plant pathogens, the diseases they cause, and ways of controlling them, supports biotechnology as a means for improving plant health, food safety, and sustainable growth in plant productivity.

Virtually all aspects of plant pathology are affected by biotechnology, a term which includes recombinant DNA technology and other new genetic technologies. Early fundamental research in plant pathology provided the foundation from which plant biotechnology emerged. Genome segments from plant pathogenic viruses and bacteria are widely used as vectors into which genes are inserted to make transgenic plants. Insertion of viral sequences into the plant genome causes the plant to resist virus infection through a process akin to immunization, providing an effective new genetic approach for managing plant viruses. Biotechnology and genomic approaches have enhanced the process of identifying plant pathogens with greater accuracy, a prerequisite for managing the diseases they cause.

Plant genes and gene products that interact with pathogens have been identified and either inserted into plants or used as specific molecular markers to enhance plant breeding for resistance. Reduced insect feeding on Bt-corn, produced through biotechnology, has also been found to result in fewer fungal infections and less toxin production. Thus the information learned from applying biotechnology to plant pathogens and to plant-pathogen interactions is providing new knowledge and new approaches to improve plant health and increase the yield and quality of plants contributing to food, feed and fiber. Future environmental benefits of biotechnology for improved management of plant diseases are enormous, particularly the potential to reduce the dependency of commercial and non-commercial growers on synthetic pesticides, and enhance approaches that minimize adverse effects on the environment.

The concerns that are being raised of environmental and food safety risks of biotechnology through gene exchange and evolution of new pathogens, or from putative increased or unexpected allergenicity are legitimate risks that will be addressed as have similar potential risks with any new plant or plant product. Assessment and management of these and other risks of new technologies in a formal process is appropriate, and must be conducted in a science-based manner and also include economic, human and animal health, and ecological consequences. However, these risks and concerns are not limited to plants and plant products produced through biotechnology and thus must be placed in perspective. The consequences of foregoing the use of biotechnology for improving plant health and sustainable plant productivity must also be considered.