



Electronic Resource—Crop Biosecurity/ Agroterrorism

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Editorial Note

Dr. Eugene Cole serves as an Associate Editor of *Applied Biosafety* and as a member of the publications committee. He has published several articles in the Journal and has provided occasional brief reports on topics of broad interest to the Association's members. In the following discussion Dr. Cole calls to our attention an often overlooked area of biological warfare and bioterrorism—biological threats to food crops. He describes the American Phytopathological Society's web site as a useful source of information on agroterrorism, which should be included in members' "favorite" sites.

Ira F. Salkin
Editor

Understandably, attention to national defense against biological warfare attacks continues to focus primarily on agents of highly infectious human diseases (smallpox, anthrax, tularemia, plague). It is necessary, however, that greater attention be given to potential biological threats to our food crops. New and emerging plant diseases have been on the increase in the United States. These include bacterial canker of citrus, high plains virus of corn, sorghum ergot, and Karnal blight of wheat. Is the increase due to natural causes such as increased air travel or international trade, or do deliberate introductions play a role? Covert attacks against our food supplies, if successful, could result in untold economic chaos and civil unrest. As a champion of policy, research, and information in this area, the American Phytopathological Society (APS) maintains an out-

standing web site (www.apsnet.org) with ready-reference information on Crop Biosecurity and Agroterrorism.

Arriving at the APSnet home page, a click to the right of the Crop Biosecurity logo takes us to an accessible listing of Biosecurity Initiatives compiled by the APS Bioterrorism Committee. First on the list is the APS White Paper on "Biosecurity Issues Affecting Agricultural Crops & Communities: Genomics, Biotechnology, & Infrastructure." Its preamble states that "With U.S. and global vulnerability to agricultural bioterrorism, the nation's research and education must now protect our gains, continue consumer confidence in the safety of our food, and assure sustainable growth in the production of food and fiber products produced from plants." Investments in basic research projects are proposed, which, among others, include:

1. Sequencing a wider representation of microbial pathogens that are potential agent threats
2. Developing new tools for rapid detection and diagnosis of plant diseases, including remote sensing
3. Expanding genomics and plant biotechnology research leading to development of crop plants that are resistant to bioterrorist pathogens.

Similarly, investments in infrastructure are proposed, such as:

1. A system of diagnostic laboratories as first responders
2. A national plant disease laboratory
3. A list of plant disease experts to serve as a national resource for response to bioterrorist attacks using plant pathogens

The site also has a Crop Biosecurity Feature Page, with a full-length, referenced paper addressing the

topic in great detail, including a list of 24 potential bioterrorist plant pathogens. In addition, the web site provides the abstracts of the 1999 APS Symposium on "Plant Pathology's Role in Anti-Crop Bioterrorism and Food Security." Furthermore, there are a number of APS Biosecurity Press Releases, one of which details APS' recent meeting with Congress to inform them of efforts to protect the world's food supply. Finally, a click on "Crop Biosecurity: Related Sites" brings up a narrative of global resource links for reporting, understanding, and evaluating plant diseases.

What about laboratory containment for work with exotic plant pathogens? At the Main Menu click on APS Press, then do a search using the word "containment." You'll then find a detailed description

of the recent APS text on "Containment Facilities and Safeguards for Exotic Plant Pathogens and Pests," which can be ordered online. This 1999 hardcover publication, with 213 pages and 75 illustrations, provides a wealth of information on containment and quarantine facility design, regulations, and research. The editors provide a multinational look at containment facility use and safeguard procedures from a number of countries including China, The Netherlands, Kenya, Portugal, and the United States.

The APS web site should be on the Internet favorites list of all biosafety professionals. When the need arises, there's no need to vegetate! APSnet.org is there to serve as the prime focus of your search for instant plant disease biosecurity information.