

Summary of the 1999 National Fusarium Head Blight Forum Chemical and Biological Control Breakout Sessions

Three major areas were discussed at Chemical and Biological Control breakout sessions. They were: 1) The Uniform Fungicide Trial, 2) BioControl, and 3) Application Methods.

Topic 1. Uniform Fungicide Trial. Fifteen states are expected to cooperate in the 2000 Uniform Fungicide Trial. A core set of fungicide treatments, which are limited to six in 2000, will be implemented. The Crop Protection Industry will provide input on the availability of the new products. Pathologists who are participating in the study will determine additional rates-timings-mixtures-experiments to add at the local level. Participants will work to ensure that irrigation, inoculum methods, and application techniques are more standardized.

Roger Jones at the University of Minnesota and Novartis agreed to conduct PCR testing. Those participating in the Uniform Fungicide Trials will sample the untreated plots at time of flowering. The samples will be tested for the quantitative levels of *Gibberella zeae*. Those in the Epidemiology and Disease Management Research Area who are working to improve disease forecasting will cooperate with participants in the Uniform Fungicide Trials to test their models and forecasting systems, with protocols being planned for 2001.

The breakout session participants also discussed the work of LeBelle Hicks, Pesticide Toxicologist on the Maine Board of Pesticides Control. She has written a research paper in conjunction with scientists at the University of Maine titled "A Need to Determine Relative Development Risks of Fusarium Mycotoxin DON & Benomyl in Wheat." It was suggested that LeBelle Hicks be asked to present information at the next forum.

Topic 2. BioControl. Currently three groups are working in the biocontrol area.

Group 1. Gary Bergstrom and Christine Stockwell at Cornell University and Wilmar Luz in Brazil are field testing their promising isolates in 2000. They are also looking into the treatment of corn residue (1999-2000) and the treatment of scabby seed.

Group 2. Mike Boehm at Ohio State University along with David Schisler and Nasseem Khan of the USDA Laboratories in Peoria, IL are field testing their leading biological antagonists on two cultivars of winter wheat in Wooster, OH and Peoria, IL. They are also field testing these biologicals on two spring wheat cultivars and two durum cultivars in Langdon, ND. In addition to field testing, the group is working to optimize fermentation techniques.

Group 3. Bruce Bleakly and Martin Draper at South Dakota State University are field testing promising agents in the year 2000.

At the breakout session it was determined that by 2001 each group will submit their most promising antagonists to the Uniform Fungicide/Antagonists Trial. They will look at collaborative efforts in development of these products as well.

Topic 3. Application Methods. Two groups are working on application techniques at this time.

Group 1. Marcia McMullen and her colleagues at North Dakota State University are currently building a prototype air-assist sprayer for greenhouse testing. The application techniques will be tested on hard red spring wheat, durum, and barley and additional nozzles for conventional spray booms will be tested. This group is also improving a computer imaging system and working towards making the system more portable for field use.

Group 2. Gary Van Ee and Pat Hart at Michigan State University are in the process of designing and constructing a prototype air carrier sprayer that is easy to mount in the back of a 4x4 pickup truck. They will test it in the field and compare it to other sprayers in side-by-side comparisons for head coverage and disease control.