OMICS Group Conferences
Accelerating Scientific Discovery
4th World Congress on Biotechnology
September 23-25, 2013 Raleigh-North Carolina, USA

B-cert: A training program for producers of bioengineered plants

Ronnie W. Heiniger

North Carolina State University, USA

Ron_Heiniger@ncsu.edu

Abstract

The introduction of genetically-engineered (GE) plants that produce proteins that have pharmaceutical uses for improving human health or reducing diseases depends upon production systems capable of producing these GE plants in controlled conditions that prevent the movement of genetic materials from the target plant into the environment. As a result of public concern over the stewardship of biotechnology in the US, USDA-APHIS developed the Biotechnology Quality Management System (BQMS) program. BQMS is a federal program designed to improve the stewardship of GM organisms through intensive education, monitoring, and oversight of all aspects of process from laboratory to the field. The BQMS Program helps organizations involved in biotechnology research and development, including small businesses and academic researchers, analyze the critical control points within their management systems to better maintain compliance with the APHIS regulations (7 CFR part 340) for the import, interstate movement, and field release of regulated genetically engineered (GE) organisms. Unfortunately, the BQMS program does not address one of the most important links in the production process – the grower. To correct this deficiency North Carolina State University in cooperation with the North Carolina Biotechnology Center and the Northeastern Economic Development Corporation have developed a grower certification program called B-Cert. The B-Cert program brings together the procedures required to prevent loss of genetic materials from the target site, the standards for certification, and the requirements established by USDA-APHIS for growing transgenic crops to develop guidelines and standards for crop management, isolation requirements, equipment sanitation, environmental safeguards, record keeping requirements, and other critical processes.

Biography

Ronnie Heiniger is a professor in the Crop Science Department at North Carolina State University. He received his PhD in crop ecology from Kansas State University in 1994. Dr. Heiniger has worked for the past 15 years as a research and extension specialist at the Vernon G. James Research and Extension Center in Plymouth, NC. Dr. Heiniger is known for his applied research and has published over 30 journal articles and presented papers covering his work in precision agriculture and crop management. Dr. Heiniger has received the Gerold O Mott Award for outstanding research from the American Society of Agronomy and is a member of the Academy of Outstanding Extension Specialists at North Carolina State University.