Food and Drug Administration (FDA)

and

The Joint Institute for Food Safety and Applied Nutrition (JIFSAN), University of Maryland

INTERNATIONAL WORKSHOP ON MYCOTOXINS

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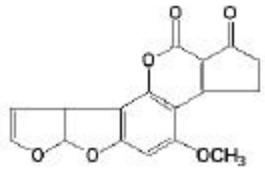

July 22-26 2002, College Park, Maryland, USA.

International Workshop on Mycotoxins
"An attempt to harmonize mycotoxin training programs worldwide"

Background

Unavoidable, naturally occurring toxicants pose a unique challenge to the goal of providing a safe, wholesome food supply worldwide. Mycotoxins are secondary metabolites produced by certain fungi in agricultural products that are susceptible to mold infection. According to the Food and Agriculture Organization (FAO), at least 25% of the world food crops are contaminated with mycotoxins. The destruction of contaminated products, or their diversion to less risk uses, is not always practical and could seriously affect the world food supply. The significance of mycotoxins to public health, the increase in mycotoxins regulations, and global trans-shipment of food commodities highlight the need to provide a forum for the transfer of knowledge and information to all regions of the world.

Objectives

The long-term objective of the International Workshop on Mycotoxins is to reduce human and animal exposure to mycotoxins through increased (1) awareness of health risks associated with mycotoxin contamination, (2) accessibility to training and detection methods, (3) knowledge of conditions leading to mycotoxin formation, (4) regulation and monitoring programs, and (5) compliance with international trade standards.

Specific objectives will include:

1. Developing a worldwide distance-learning program for mycotoxins.
2. Training regional experts to coordinate mycotoxin-training programs for each region.
3. Establishing educational collaborative activities between academia, public health officials (local, national and international), and industry (agricultural production and processing).
4. Providing opportunities for developing countries to improve food quality and safety through carefully designed and focused programs for mycotoxin detection and control.
5. Preparing educational materials including multi-lingual manuals, videotapes of specific lectures, and Internet accessible reports.

Project Scope and Duration

The scope of this project will include the development of training materials in a format that will allow for the conduct of this training, initially in the USA and, subsequently, at satellite regional training locations worldwide. Selected training programs prepared by national and international organizations will be utilized where appropriate. The duration of the project will be five (5) years. Specific tasks to be performed are identified below:

> ***Year 1*. 2001 Preparation of course text material:** A basic course text/workbook will be prepared following the general outline of the plenary lectures.

***Year 2*. 2002 <u>Development and conduct of workshop</u>:** Organize and conduct a workshop on mycotoxins with plenary lectures, laboratory training, video taping, and distance learning technologies.

***Years 3 and 4*. 2003 and 2004 <u>Conduct satellite workshop training in regional locations</u>:** Coordinate the presentation of workshop training at regional locations by trained workshop participants. Where necessary, consultants will provide assistance in the conduct of the satellite training.

***Year 5*. 2005 <u>Conduct a follow-up evaluation of the effectiveness of the training program</u>:** Invite workshop participants, both initial course and satellite, to present results of mycotoxin control programs.

Workshop Participants

Governmental public health officials, agricultural specialists, food analysts and scientists from economically-challenged regions of the world will be invited to participate in either on-site or off-site instruction.

What will be gained from the workshop?

1. Current knowledge in sampling and monitoring procedures for commodities suspected of mycotoxin contamination.
2. Hands-on experience in using recent versatile immunochemical and TLC techniques for mycotoxin analysis.
3. Information on the latest advances in research and regulation in mycotoxins.
4. Skills in workshop organization and resource tools.
5. Opportunity to network with other professionals in the field.

Workshop Organization

The format of the workshop will consist of plenary lectures, laboratory "hands-on" experiments, demonstration of instrumental analysis, and the provision of teaching materials to assist in the transfer of information and technologies to government regulatory officials, farmers, and food processors in various regions. Once the training is completed, the participants will return to their respective countries and initiate training programs following the same general format. As a follow-up, consultants will visit specific regions to assist local trainers with the teaching of the material presented during the workshop.

<u>Plenary Lectures:</u> Recognized experts will present formal lectures on conditions leading to mycotoxin formation, monitoring programs including sampling and analytical procedures, health risks associated with mycotoxin contamination, establishment of regulatory programs, risk assessment procedures, and mycotoxin prevention and decontamination procedures. Manuscripts of the plenary lectures will be available at the workshop in a proceedings publication format. These lectures will be transmitted to off-site locations via telecommunication systems. Video and written material will be prepared for attendees and future regional training programs. Selected written publications will be provided in English, French, and Spanish.

The language of the Workshop will be English.

Program Outline

- The concept of food safety
- Conditions leading to mycotoxin contamination
- Health risks associated with mycotoxin contamination
- Mycotoxins of public and animal health significance
- Risk analysis of mycotoxins
- Sampling plans for mycotoxins
- Mycotoxin methodology
- Method validation procedures
- Quality control measures for mycotoxin laboratories
- Mycotoxin reduction and decontamination
- Mycotoxin control – Monitoring programs
- Mycotoxin control – Regulations

Laboratory Training: "Hands-on" training for sample collection, test portion preparation and analytical procedures applicable in economically depressed regions with limited resources will be given. Laboratory instruction will also include instrumental analysis demonstration of more advanced techniques.

Program Outline

- Overview of mycotoxin methods
- Safety precautions
- Sampling and sample preparation
- Qualitative screening methods
- Semi-quantitative immunochemical methods
- Thin-layer chromatographic methods
- Multi-mycotoxin analysis
- Liquid Chromatographic methods
- Gas Chromatographic methods
- Future trends in mycotoxin analysis

Information and Technology Transfer: Educational materials available to the attendees will include:

- Multi-lingual manuals (English, French and Spanish).
- Video tapes/CDs of specific lectures and laboratory training (English).
- Internet/web access to published material.

Consumer Education/Information: Educational materials to better inform the consumer about food handling procedures will be prepared.

Date: 22-26 July 2002

Location: Food and Drug Administration
Center for Food Safety and Applied Nutrition/JIFSAN
College Park, Maryland, USA

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United Nations Environmental Program		
Pan American Health Organization		

**Additional sponsorship is being sought.*

WORKSHOP CONTACTS

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