Post-harvest EPA Session

DATE: TBD		TIME: TBD
EPA Determination of Structural Fumigation Emission Profiles		**Moderators: Jeff Dawson/Steven Weiss**
15 minutes	EPA Overview: Jeff Dawson	
1hr 45 minutes	Open Discussion	

Goal: The U.S. EPA has evaluated the potential risks associated with the post-harvest uses of methyl bromide as well as other fumigants used for similar purposes. In its effort to develop more refined approaches for evaluating these use patterns, it has become increasingly clear that additional information can refine how factors which influence emissions from treated structures are considered in Agency analyses. Such factors include building or chamber design, sealing methods and materials, changing weather conditions, absorptive properties of treated commodities, and aeration techniques. The development of more refined information that better reflects modern practices and conditions are required to ensure that regulatory requirements are sufficiently protective yet are not overly burdensome. Examples of such factors may include: (1) placement of active aeration outflows; (2) determination of appropriate emission profiles, (3) numbers of active aeration outflows and associated performance criteria; and (4) influence of building location and design on emissions relative to surrounding terrain and typical weather conditions. The goals of this session are to begin to summarize available research on these issues, identify critical factors that should be considered in future evaluations of structural treatments, and begin to define values for those factors.

Questions:

1. Individual factors that impact fumigant emissions from structures include aeration methods, building or chamber design, climate, and location relative to topography. What are the most important factors which impact emissions from treated structures? Are they independent or do they impact emission rates in a synergistic manner? How much impact do differences in building design and aeration methods have on these results?
2. Can parameters be manipulated in a typical commercial production system, to reduce emissions yet still retain an effective, economically viable production system? If so, what techniques can be used to manipulate emissions from treated structures (e.g., high barrier films, emission stacks, recovery systems)?
3. Do data exist that can be used to demonstrate, in a reliable manner, responses to questions 1 and 2?
4. Modeling approaches have been suggested as a means for using laboratory and field-scale data for predicting emissions under varied conditions. What model systems can be used for this purpose, if any? What data are required for the reliable use of such models? What critical factors should be considered when developing modeling analyses for commodity uses of fumigants (e.g., source type, aeration methods, etc.)?
5. It is possible after aerating to a target level of concern (e.g., 5ppm for methyl bromide) emissions could occur over long periods of time due to absorptive properties of the fumigated cargo (e.g., food commodity, packaging, equipment, etc.). These emissions could lead to potential exposures that possibly exceed a level of concern for those who receive and handle such treated cargo whether it be in railcars, via trucking, in shipholds or in sea containers. What data are available which quantifies absorptive properties of various materials after fumigation? Do these data indicate the duration of such emissions and are these emissions impacted by application rate or the duration of fumigation treatment?

The intent of this session is to provide a public forum where research and initiatives related to the above goal and questions are presented. EPA is not asking participants for recommendations to make regulatory decisions.