

ProFume Workshop at Kansas State University August 20, 2009

### Wheat Miller's Perspective of ProFume

Andrew Soukup, Plant Operations Manager, ADM Milling Co.

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BS: Milling Science and Management, Kansas State University 1991

18 Years with ADM Milling Co.



Archer Daniels Midland Company (ADM) is the world leader in BioEnergy and has a premier position in the agricultural processing value chain. ADM is one of the world's largest processors of soybeans, corn, wheat and cocoa. ADM is a leading manufacturer of biodiesel, ethanol, soybean oil and meal, corn sweeteners, flour and other value-added food and feed ingredients. Headquartered in Decatur, Illinois, ADM has over 26,000 employees, more than 240 processing plants and net sales for the fiscal year ended June 30, 2006 of \$37 billion. Additional information can be found on ADM's Web site at http://www.admworld.com/.



#### ADM Milling Co.

23 US Wheat Flour Mills US Wheat flour capacity: 279,400 cwt.

8 Canadian Flour Mills Canadian Wheat flour capacity: 86,737 cwt

Plus Milling Operations in the Caribbean and UK.



#### ADM Beech Grove, IN 18,000 cwt Wheat Flour Mill





The Beech Grove facility completed it's first trial of ProFume for a "General Fumigation" in 2004. At that time ProFume was not labeled for packaged product so the ware-house portion of the facility was still fumigated with Methyl Bromide.



Packaged product was added to the label in 2005 allowing us to eliminate Methyl Bromide from the scope of our fumigations. Including the Beech Grove facility, at least eleven (11) ADM wheat mills have used ProFume.



Some have alternated between Methyl Bromide and ProFume.

The ADM Cocoa division is also using ProFume to fumigate cocoa beans. One of ADM's plants was the first paid ProFume fumigation of cocoa beans.



Since that fumigation the cocoa industry in the U.S. has switched as a whole to using ProFume in place of Methyl Bromide for fumigating cocoa beans.

#### Cocoa Beans in Warehouse





# Let's talk about things that changed with our switch to ProFume.



#### ProFume cylinders outside mill



ProFume is more active than Methyl Bromide. Sealing is more critical for success.





•Less windows and doors is an advantage for a longer half life for gas concentrations.



•It is important that windows and doors are tight fitting.

Panel joints and roof lines may be

areas of gas loss.

•Large overhead doors can be a challenge for sealing crews.

The Fumiguide program, which you have heard about previously in this workshop, allows for preplanning and more detailed tracking of time/concentration exposures.



The plant is typically sealed off into smaller areas that are monitored separately and tracked with the fumiguide to insure that each area achieves the desired c/t.

## Is ProFume effective?



#### Sifter Tailings prior and following ProFume fumigation



#### Bioassays



Bioassays have been placed in each area during fumigations.
The bioassays are monitored on thirty days intervals out to 90 days for insect

emergence.

•100 % of the bioassays to date have shown no emergence at 90 days for the ProFume fumigations at the Beech Grove facility.

#### Downside

Cost (The difference in price has shrunk as methyl bromide supply has become restricted.)
More demanding sealing
Not as effective as methyl bromide on molds and other micro. (Beech Grove has <u>not</u> seen a rise in plate counts since using ProFume.)



### Conclusion:

Profume is an effective tool to include in an integrated pest management strategy.





