“Filtering through the Dust”

CornBelt Seed Conference
05 February 2019    Indianapolis, IN

Presented by: Jonathan C. Popp P.E.
Days of the week

- Friday
- Monday
“Dust”

It costs a lot of money

It does not add to the number of bags per day in the warehouse
Hi everyone, my name is Jon and I’m an engineer. I’m going to talk about the big subject of Dust today. That’s all well and good, but I guess you should know something about me first. I work at Popp Engineering in Ames IA. We get involved in all types of projects that bring the seed from the field and get it ready to go back to the field. I have worked with a lot of different companies large to small.

Which brings me to my primary point, even though it may sound like I’m giving safety, training, or economic advice, I’M NOT. I’m not a safety specialist and I’m not YOUR employee. At most, what I’m trying to do is **get you to think about your situation from a different perspective**, to do the research and ask if what you love to do makes any financial sense, or to think about your decisions from an economic standpoint. If you want real advice, talk to your supervisor, someone who knows the details of your specific situation and can give helpful advice. Besides, I’m just a farm boy from Illinois.
Hi everyone, my name is Jon and I’m an engineer. I’m going to talk about the big subject of Dust today. That’s all well and good, but I guess you should know something about me first. I work at Popp Engineering in Ames IA. We get involved in all types of projects that bring the seed from the field and get it ready to go back to the field. I have worked with a lot of different companies large to small.

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Dust -- what is it?

- Type of industry
  - Seed facility
  - Welding shop
  - Grain elevator
Dust Control
Dust — what is it?

- Location in facility
  - Sheller
  - Treating
Beeswings
One misstep?

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Pieces of the problem

![Diagram showing pieces of the problem with labels: Oxidant, Ignition source, Combustible dust, Confinement of dust, Dispersion of dust, and Explosion in the center.]

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Historical business

- That’s the way granddad did it
- We have never had a problem
- We talked about it last month
- It won’t happen because it is seed
Dust System

- Source
- Ductwork
- Power
- Capture
Source

- Shelling
- Receiving/cleaning
- White dust
- Red dust
- Fumes
Gaps in transitions
Ductwork

- Sized for a particular velocity
- Use of hoods - capture
- Balancing gates
Ductwork
Power

- Wall fan
- Dust system fan
- Open window
Capture
Limited floor space solution
Worker environment

- PPE – personal protective equipment
  - Not just for treater operators
  - Not just for treated seed

- MSDS sheets will tell you
PPE

- When it is necessary
- What kind is necessary
- How to properly put it on, adjust, wear and take it off
- The limitations of the equipment
- Proper care, maintenance, useful life, and disposal of the equipment
PPE
Personal Protective Equipment

- Employers are also required to train...

- When engineering, work practice, and administrative controls are not feasible or do not provide sufficient protection,
Management’s role

- It is your facility
- Must be a priority
- It is a journey
- Create an ownership culture
What does the seed see?

- When customer opens the bag
- When the sample is analyzed
Dust problem in a seed treater
What can you do?

- Maintenance
- Observation of sources
- Take action
- Cleaning as necessary
- Balancing gates on ductwork
Balancing
Comments

- Questions
- Test of Subject Matter
- Suggestions
- Thanks for your time!

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- Creativity
- Professionalism
- Responsiveness
- Innovation
Days of the week

- Friday
- Monday
- Saturday
- Sunday
- Thursday
- ....
- ....