What’s Next in Feed Mill Technology

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Advancement

- Efficiency
  - Profit
  - Quality, Safety, Morale
  - High $ Value
- Necessity
  - Market Demands
  - Production Scale
  - Regulations

The Feed Mill

Equipment - Pelleting
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- Long-Term Conditioning: Hot Start Conditioner

- Pellet Mill Remote Roll Adjustment & Roll Speed Indication
### Equipment - Pelleting

- Pellet Mill Remote Roll Adjustment & Roll Speed Indication

### Equipment - Pelleting

- New Pellet Mill Designs
  - Direct Drive
  - Variable Speed
  - Small Relative Footprint

### Equipment - Pelleting

- Pellet Mill Remote Roll Adjustment & Roll Speed Indication

### Equipment - Grinding

- Manipulation of Particle Size
Equipment - VFDs
- Receiving
- Grinding
- Batching & Mixing
- Pelleting
- Cooling

Ingredients
- Challenge Examples:
  - Removal of phosphates from diets
  - By/Co-product variability
    • Due to process
    • Intentional
  - More overall ingredients
- Evolving Strategies
  - New practices
  - Changes in equipment and/or process

Equipment - Automation
- Efficiency
- SPC
- Integration

Ingredients - Strategies
- Post-Batch Grinding
  - Material Storage
    • Cereals, Byproduct Meals, etc.
  - Batching
  - Grinding
    • Batch Process
  - Mixing & Further Processing
Ingredients – New Ingredients

- Enzymes
- Probiotics
- Binders
- Throughput Enhancers

- Impact equipment needs, formulation characteristics, production efficiencies

Analysis & Testing

- Pellet Quality – Method Correlations

Analysis & Testing

- Particle Size
Analysis & Testing

• Near Infrared (NIR)

Feed Technology at NC State

• Academic Programs
  – Minor
  – Graduate Certificate
  – Certificate
• Extension
  – Service
  – Instruction
• Applied Research

Regulations

• FSMA is the biggest “what’s next” we’ve seen
• Will drive innovation in:
  – Recordkeeping
  – Sanitation
  – Training

Questions?

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