An Industry view on the future focus of feed use efficiency

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Key Messages to Remember

- Commercial Feed utilizations is benchmarked on group performance
- Individual components of feed utilization are key
- Phenotypes that describe variation in digestibility, health & behavior are critical
Market Drivers of Feed Efficiency

- What measures efficient feed utilization?
- Individual Measures for Breeding Program
- Feed Input: Product Output (FCR)
- Faster to market (ADG, days to market point)
- More Protein (Carcass yield, Eggs)
Market Drivers of Feed Efficiency

What measures efficient feed utilization?

Industry Benchmark is based on group performance

Feed in : Product out (scaled by time & livability)
  - EPEF% or EBI

Individual Performance ... within the production group dynamics

FCR: Feed Input vs. Product vs. Livability
Components of Feed Efficiency

- Health
- Performance
- Environmental Stressors
- Livability
- Physical State
- Intake
- Output
- Maintenance
- Feed Type
- Behavior
Feed Efficiency: Variation

- **Performance**
- **Health**
  - Gut Health (digestibility)
  - Disease (clinical vs. sub-clinical)
- **Maintenance efficiency**
- **Behavior**
  - Feeding, activity, competition
- **Environmental Stressors**
- **Physical State**
  - Growth curve, reproduction
- **Feed Type**
Feed Efficiency: Recording Performance
Feed Efficiency: Recording Health
Feed Efficiency: Using Technology
Selection for New Traits

- Old phenotype, new environment
- Health related phenotypes
  - Relationships between gut health and FCR
  - Changing nutritional programs and nutrient absorption
  - Microbial Genomics – selection environments
- New phenotypes
  - Behavior
  - Activity
  - Biological indicators
Feed Efficiency: Summary

- Health
- Performance
- Environmental Stressors
- Behavioral
- Physical State
- Feed Type
- Maintenance
- Output
- Livability
- Intake

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Commercial feed utilization tradeoffs

- Balanced Genetic Improvements
  - Growth, Health, Welfare, Maintenance efficiency
- Breeding program investments vs commercial response
- Commercial feedback: aligning balanced breeding objectives with commercial expectations
Thank You!!