

NORTHWEST SUSTAINABLE DAIRY PROGRAM

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NWSDP - WHAT?

- Joint partnership program between Oregon Dairy Farmers Association and Washington State Dairy Federation.
- Joined forces because of similar:
 - Milk markets
 - Producer issues
 - Regulations

NWSDP - WHAT (cont'd)?

- Self-imposed industry standards/BMPs
- Standards for:
 - Milk safety
 - Environment
 - Animal care
 - Labor
 - Efficient use of energy
- Only program of its kind in the nation



Standards/BMPs

- Developed by committees
 - Professors and extension agents (OSU & WSU)
 - Processors
 - Producers
 - Veterinarians
 - Public members
- Standards will be reviewed annually



NWSDP - WHEN

- Standards are currently being developed
 - Milk safety
 - Environment
 - Water quality
 - Air quality
 - Animal care

BIG PICTURE VIEW OF AIR EMISSIONS

- Look at emissions in general
- Technology & science is all tangled
- How does one action impact other medium?
- National Air Emission Monitoring Study
- Oregon research must deal with mitigation practices and what is the resulting reduction

OREGON DAIRY INDUSTRY IS MOVING FORWARD

- Working with producers one on one
 - Started in 2002
- Two state BMP program (WA & OR)
 - Began looking at development in late 2005
 - Complexity
 - Cost of program
 - Staff
 - Education -> producers
 - Education -> public
 - Funds for research



BMP's

- Milk Urea Nitrogen (MUN)
 - Overfeeding protein results in excess nitrogen excreted in the manure (overfeeding is expensive)
 - MUN is a measure to determine if excess protein is being fed.
 - Other factors influencing MUN concentration
 - Diet formulation
 - Water intake
 - Feed analysis
 - Time of feeding compared to milking
 - Type of feeding method & feed management
 - Cow health
 - Diet consumption



MANURE APPLICATION

Manure Injector



“Big Gun”



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MANURE APPLICATION BMP'S

- Manure injector
 - Reduces odor
 - Reduces ammonia emissions
 - Increases fuel use
 - 8 times more fuel used than with a big gun
 - Increases NOx
- “Big gun”
 - Increases odor
 - Reduces fuel use

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BMP's

- Lagoon cover
 - High cost-wind damage
 - Reduces emissions (odor)
 - Increased Nitrogen retention
 - Reduce fossil fuel fertilizer needs
 - Increase land needed to apply



ANIMAL HOUSING

Totally enclosed, mechanically ventilated
(Poultry Barn)



Open sided, naturally ventilated
(Dairy Barn)



BMP's

- Animal Housing
 - Totally enclosed facility mechanically ventilated
 - Install scrubber on air exit
 - Negative for employee health and animal welfare
 - Increased cost per animal
 - Open sided, naturally ventilated
 - Difficult to control air emissions
 - Improved employee health and animal welfare
 - Lower cost per animal



CHALLENGES

- Develop a program that:
 - Has a positive impact on air quality
 - Does not negatively impact water quality, employee health, animal care (cross media impact)
 - Is financially feasible
 - Producers see the benefit of
 - Can be quantified
 - Looks at mitigation (technology or management) from a research prospective to determine what BMP has the largest impact



QUESTIONS?



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