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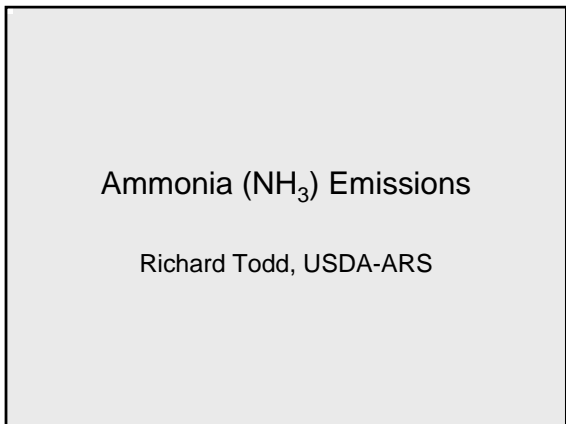
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### Reactive Nitrogen Impacts Air Quality

Respirable particulates that degrade visibility and can cause respiratory problems form when ammonia emitted from animal agriculture reacts with urban pollution.

Particulate haze over California's Central Valley



sig.umbc.edu/usag/images/2003-11-25\_2022-2031\_USSW\_010403\_HKM.jpg

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### Reactive Nitrogen Impacts Terrestrial Ecosystems

Loss of species diversity in N-sensitive ecosystems from overfertilization or acid rain.



Trees killed by acid rain in the Great Smoky Mountains.

www.scienceclarified.com/images/uesc\_01\_img0005.jpg

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### Reactive Nitrogen Impacts Surface Waters

Eutrophication of fresh and coastal waters - toxic algal blooms, low oxygen, fish kills, and loss of species diversity.



Algae bloom, Florida  
www.marietta.edu/~biol/biomes/mangroves.htm



Microcystis bloom in Matilda Bay, Australia  
www.ga.gov.au/ozestuarines/indicators/freq\_algal\_blooms.jpg

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### Reactive Nitrogen Impacts Ocean Life

Hypoxic bottom zone in coastal Gulf of Mexico caused by excessive fertilization.

www.cop.noaa.gov/stressors/extremeevents/hab/features/hypoxia/s\_report1206.html  
www.noaa.gov/news.noaa.gov/stories/2006/s2755.htm

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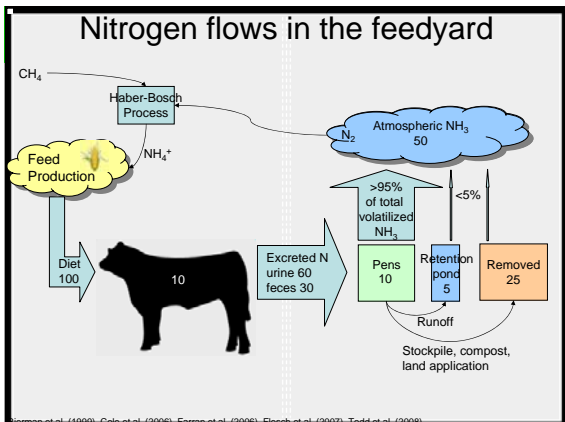
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### Feedyard A 9,000-17,000 head

Laser path  
Heat tower

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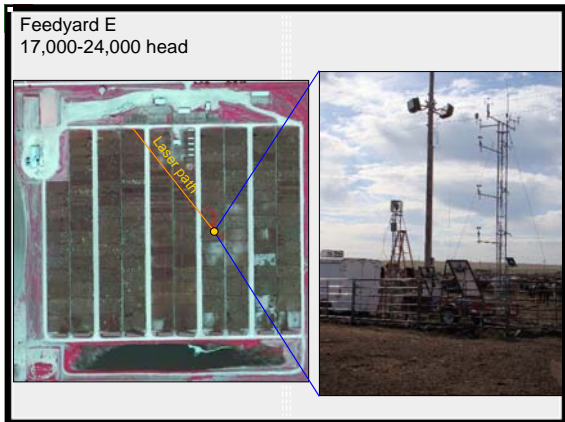
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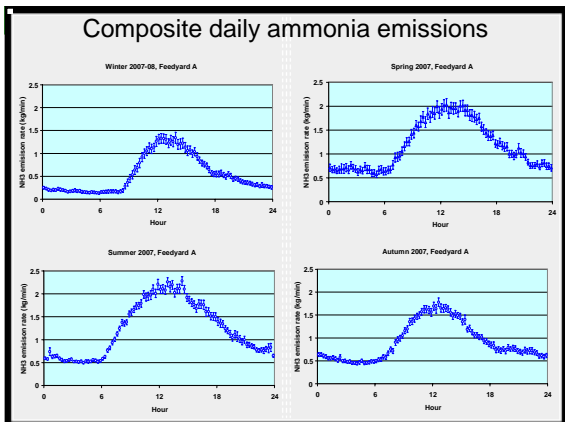
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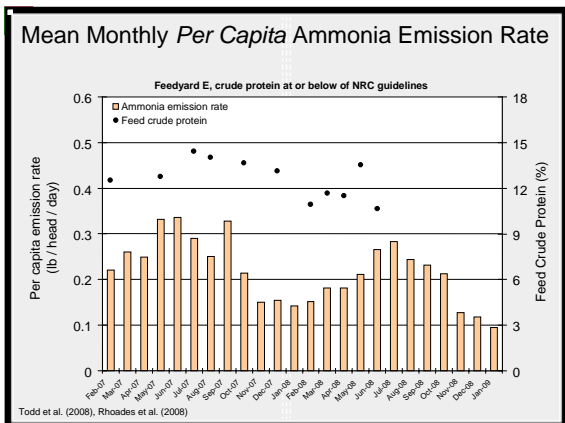
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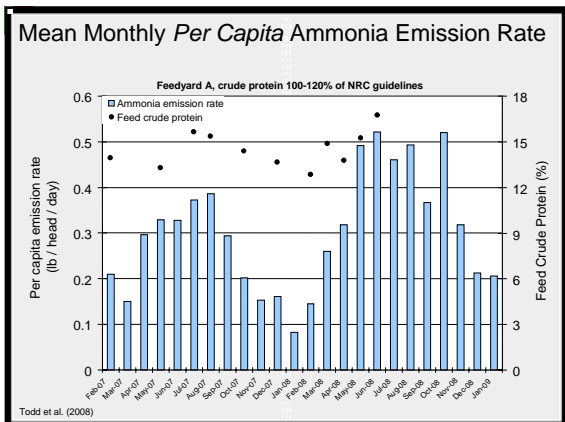
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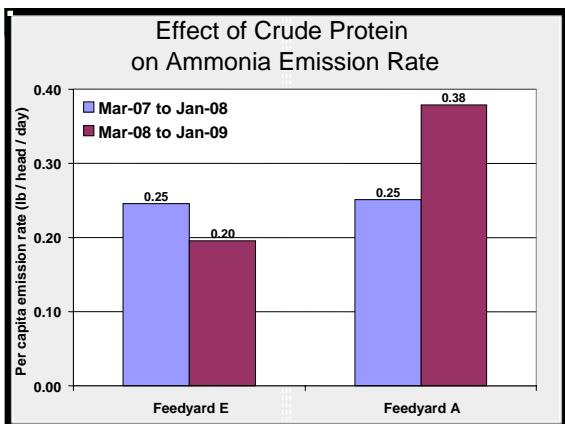
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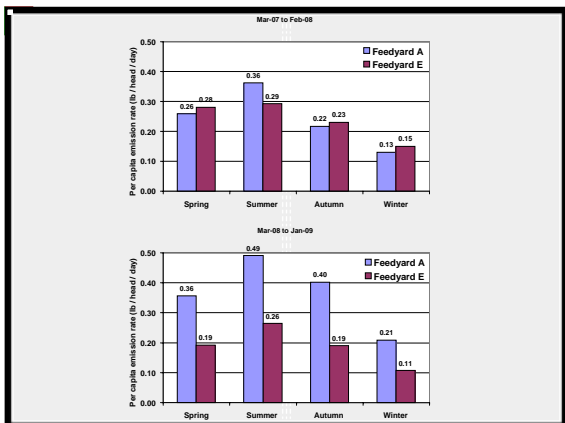
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