

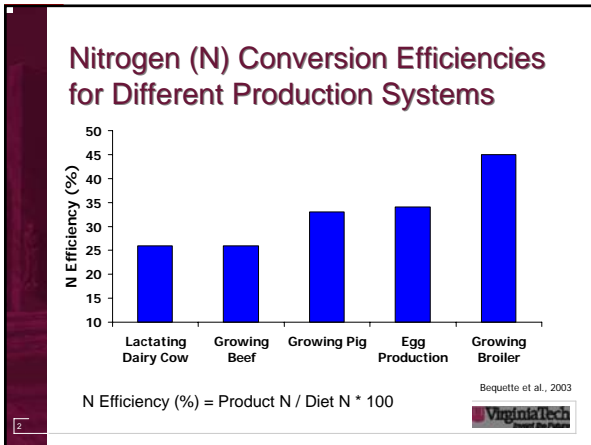


Mitigation of Nitrogen Excretion through Dietary Manipulations



Mark Hanigan, Jactone Arrogo, Linsey Marr, and Katharine Knowlton
Virginia Tech

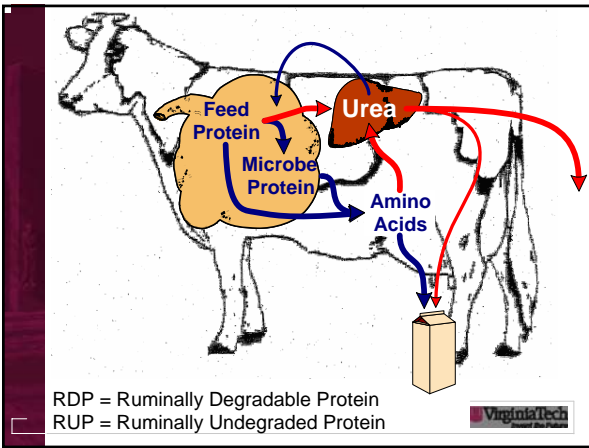


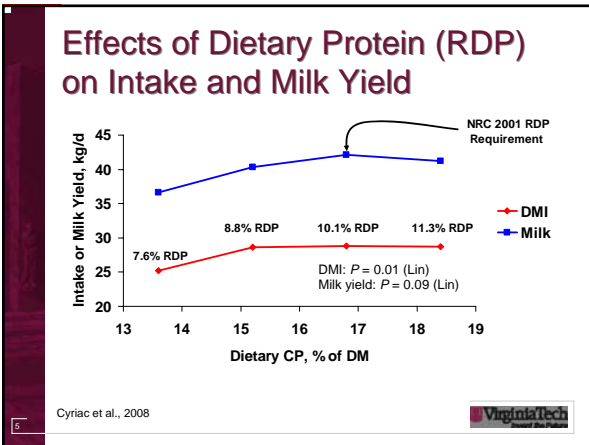


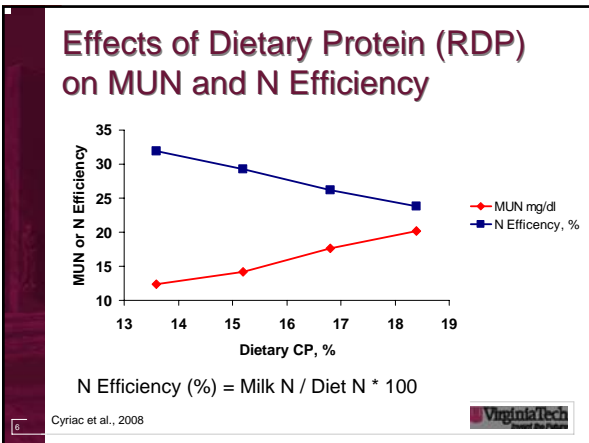
Environmental Impact of Waste N

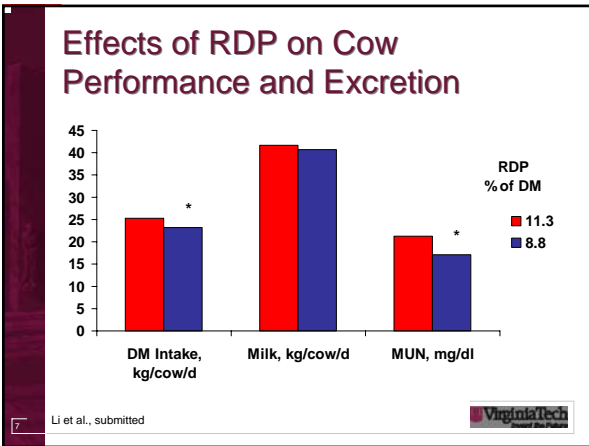
Eutrophication Air Quality and High N Rain

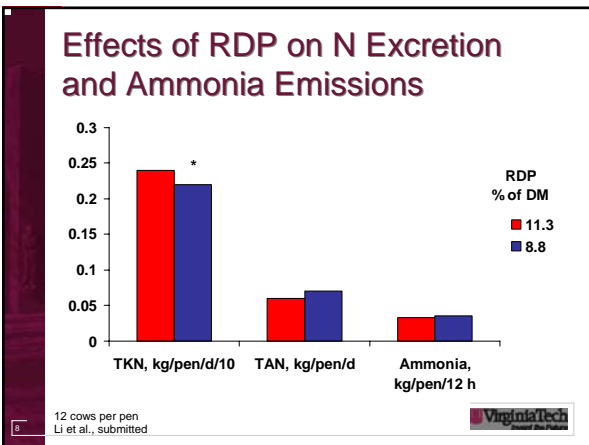


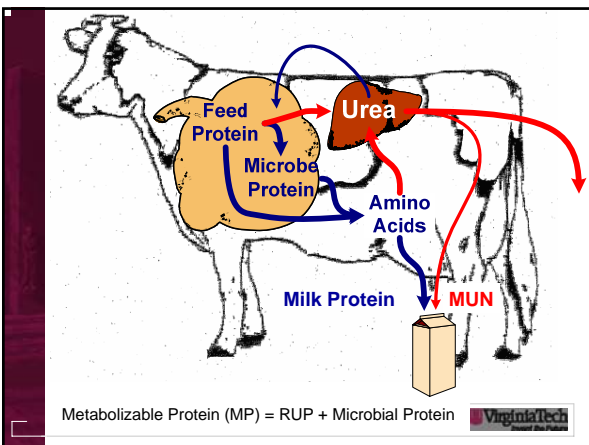


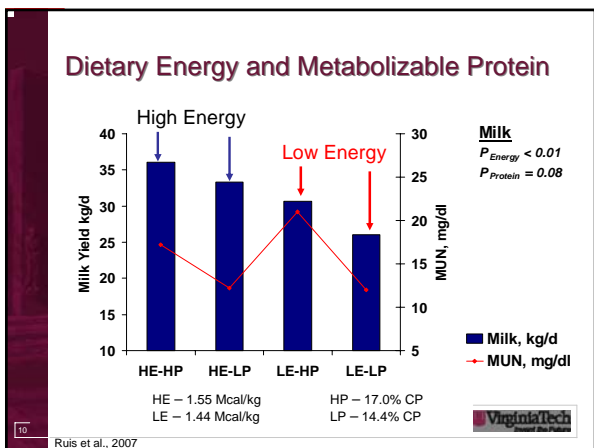


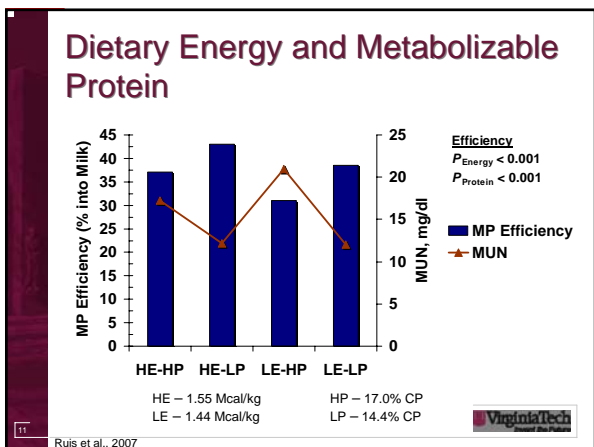












Summary

- We can improve N efficiency of Dairy Cows
 - Reduce RDP below NRC requirements
 - Reduced RUP will improve efficiency but lost production results
- Given all the ethanol byproducts, ↓RDP currently increases Feed Costs
 - Has saved money in the past
 - May again in the future
- Reduced dietary N leads to reduced manure N and ammonia emissions
 - Very little N is lost from the barn
 - ↓ ammonia emissions from manure storage facilities
 - Huge temperature effects

Virginia Tech

Ruis et al., 2007

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