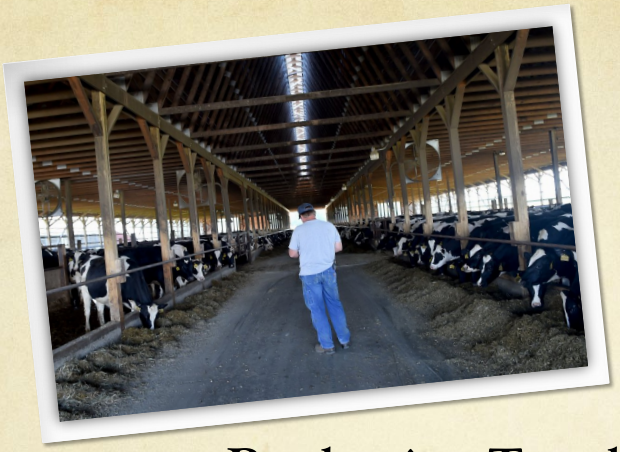
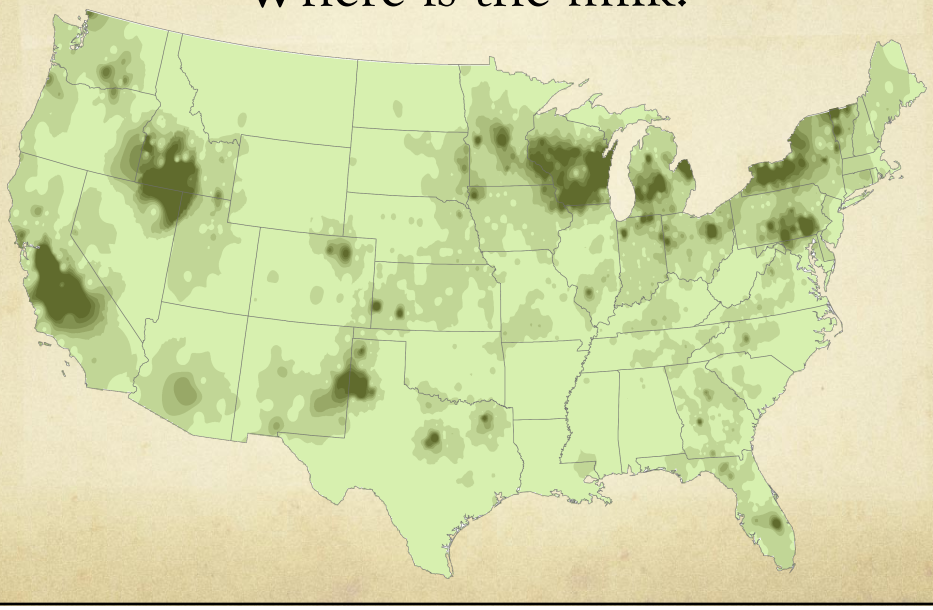


Production Trends

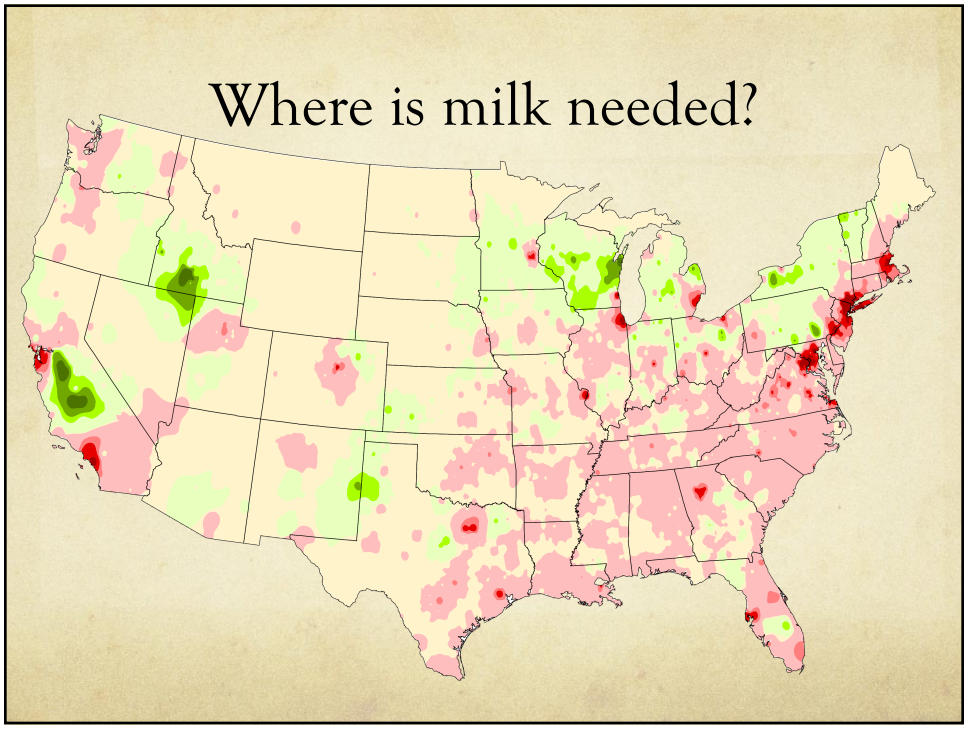
Up? Down? Sideways? What Direction for Dairy?

Mark Stephenson
Director of Dairy Policy Analysis
THE UNIVERSITY of WISCONSIN MADISON

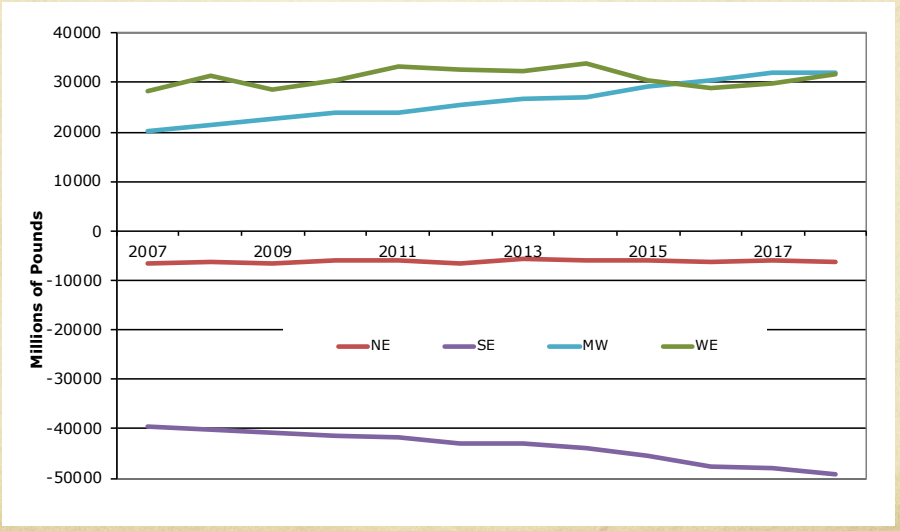
Where is the milk?




Where are the people?

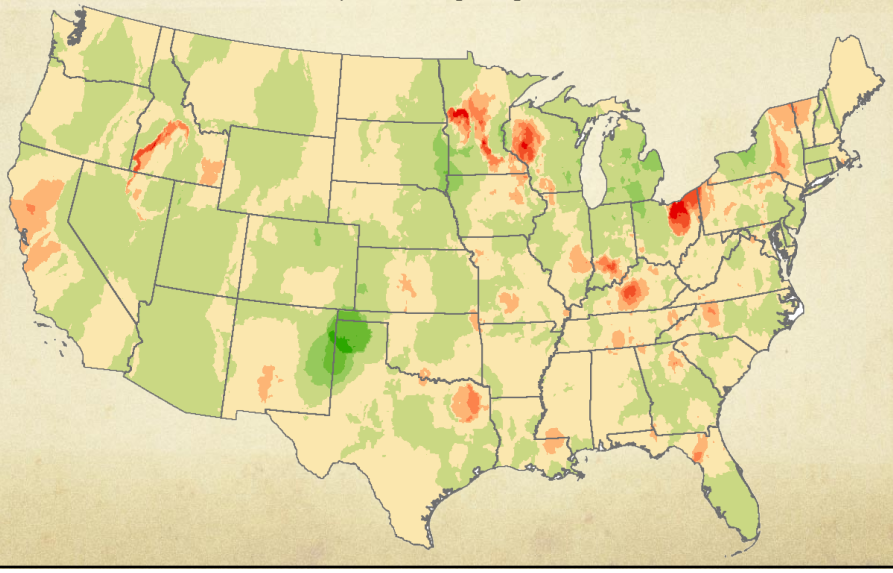

Where is milk needed?

Where is milk needed?

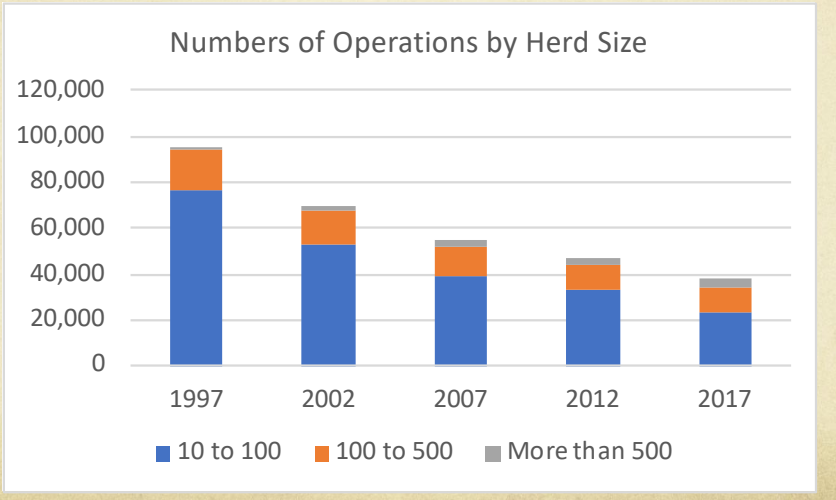


2012-2017 Census Change in Cows

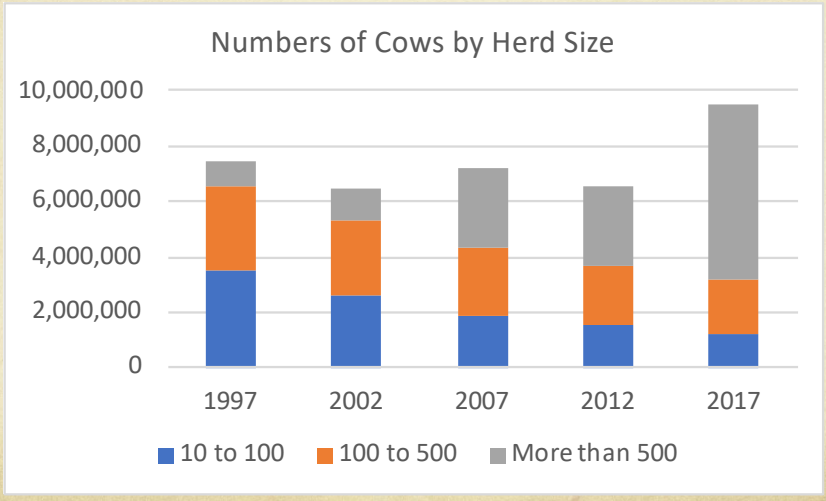
(number of animals per square mile)



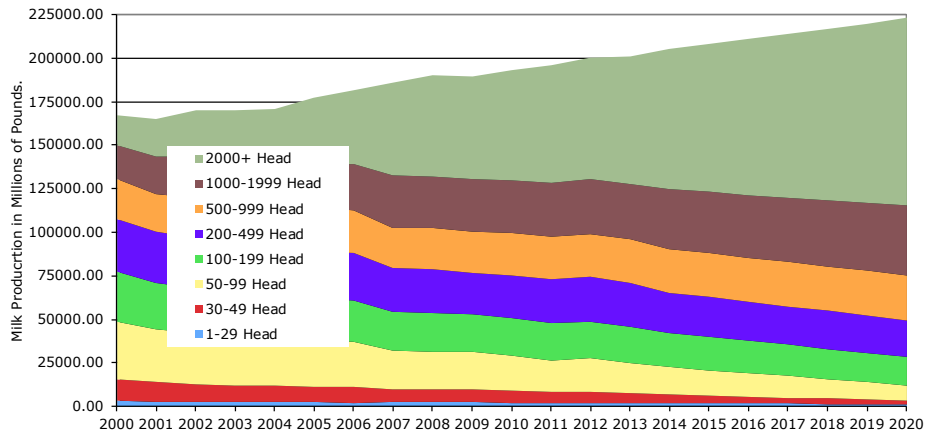
Census Change in Operations



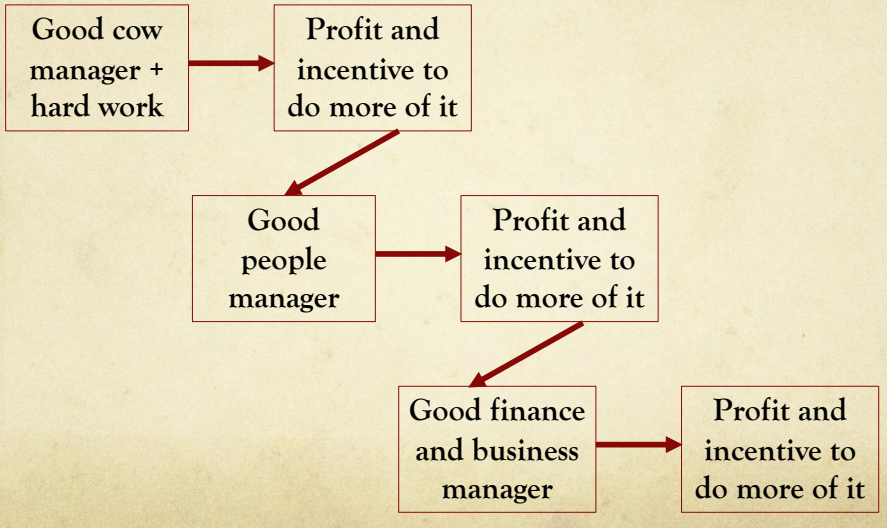
Census Change in Cows



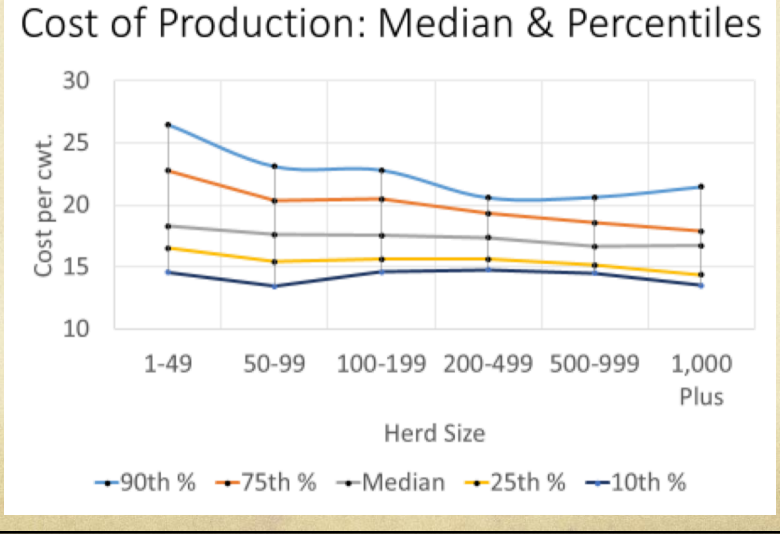
Change in Milk by Herd Size



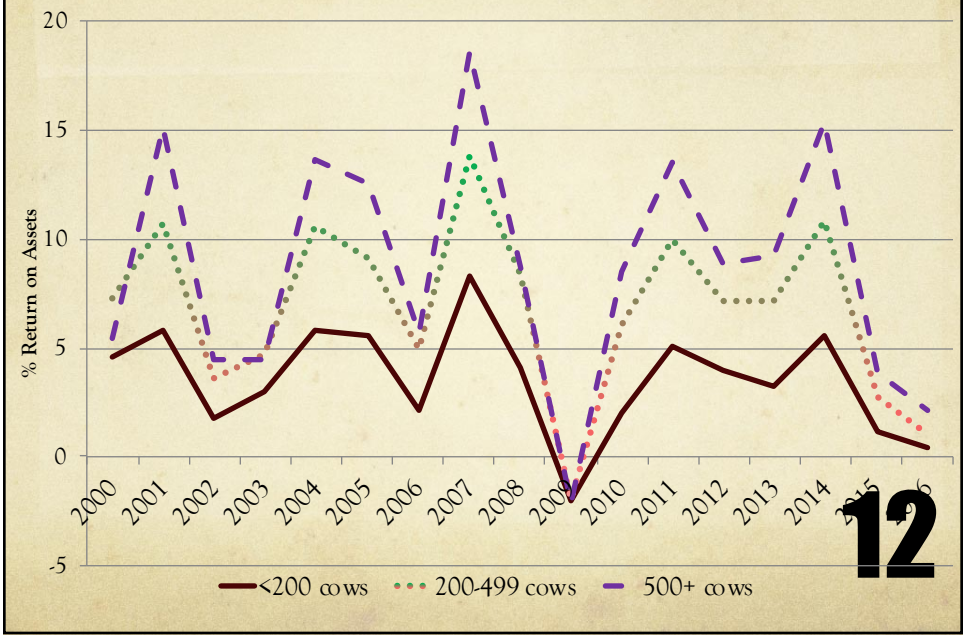
The Progression...



Large farms are 1 part scale economies and 9 parts self-selection

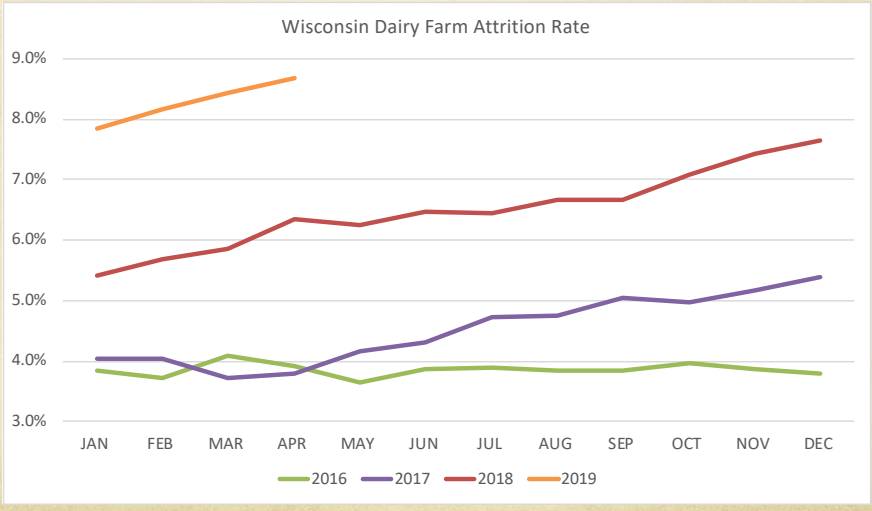


Average ROA by Herd Size



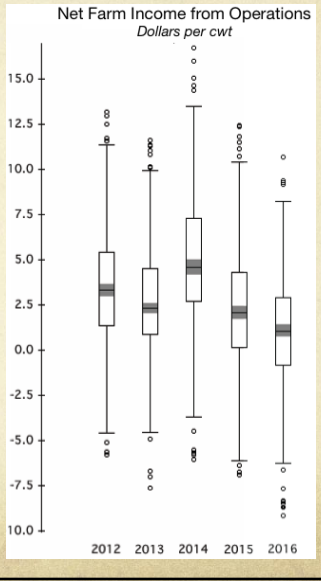
12

How Bad Is It?

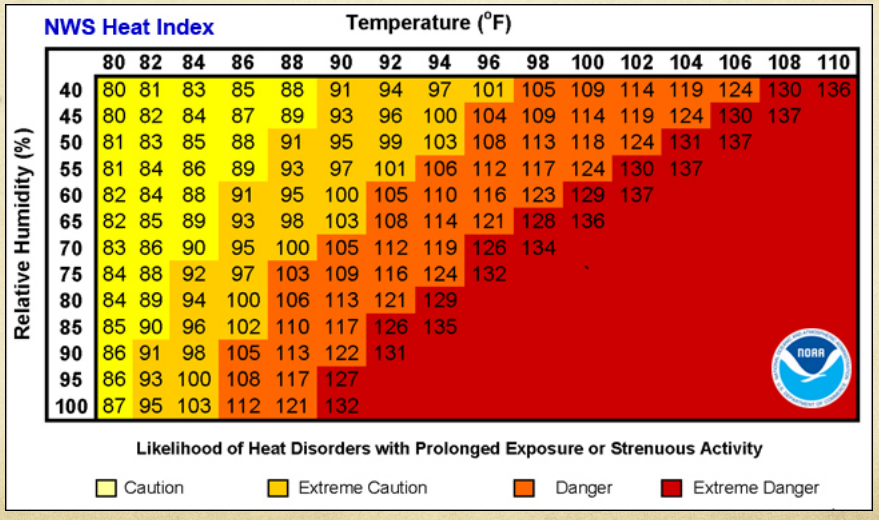


Why is farm loss so bad?

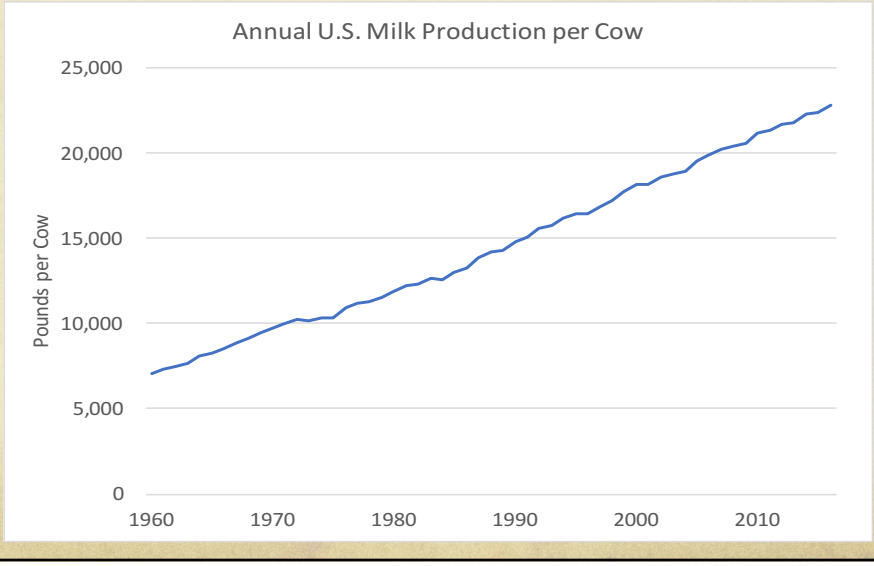
- We see a $10 range every year in the cash costs of production on WI dairy farms.
- 20% of farms have cash flowed right through this trough
- 30% have had to borrow more
- 30% have had to restructure loans
- 20% are in real trouble.



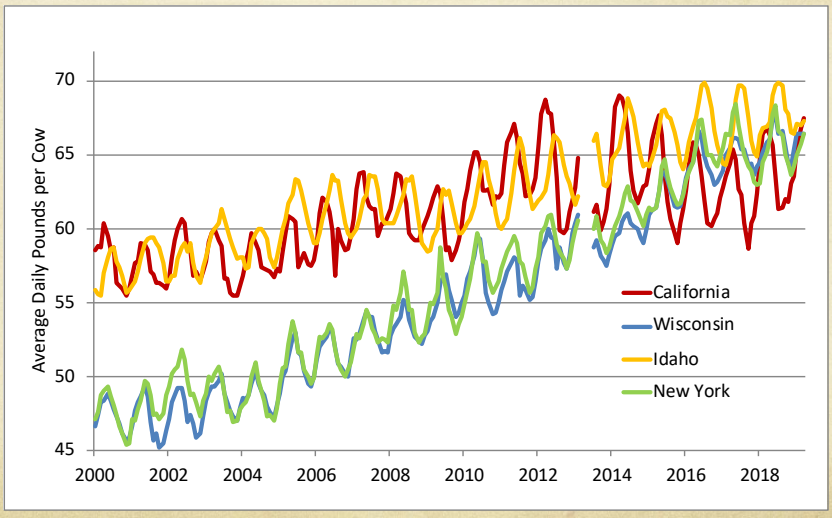
Heat Index–Temp & Humidity



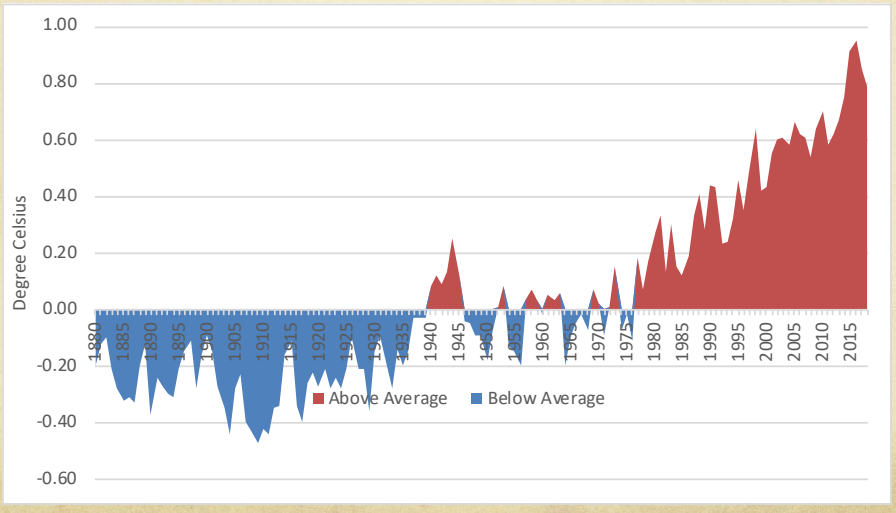
Improved efficiency



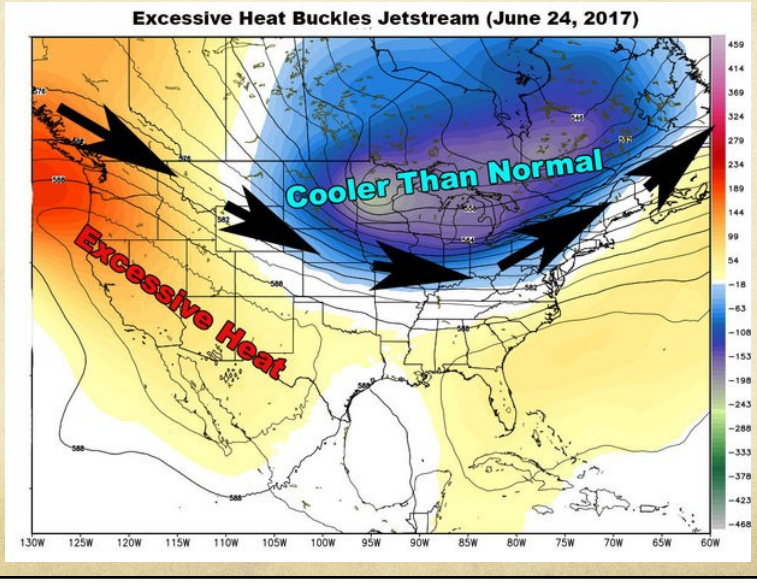
Consider trends in top four states



History of Global Surface Temperature Anomaly Since 1880



Temperature Extremes



New Federal Report

Climate change will have dire consequences for US, federal report concludes

Jen Christensen and Michael Nedelman, CNN

Updated 3:15 PM EST November 23, 2018

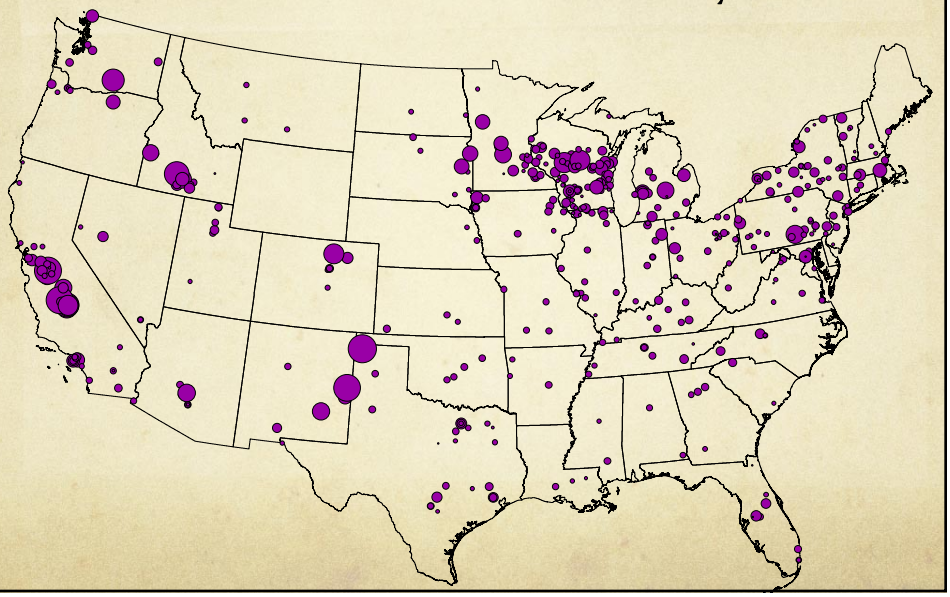
The expense

The costs of climate change could reach hundreds of billions of dollars annually, according to the report. The Southeast alone will probably lose over a half a billion labor hours by 2100 due to extreme heat.

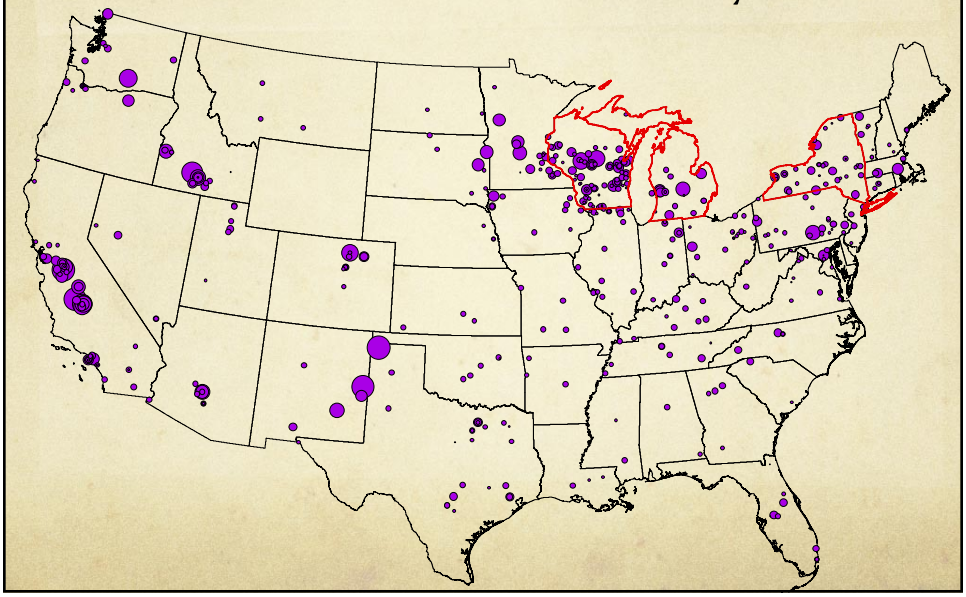
Farmers will face extremely tough times. The quality and quantity of their crops will decline across the country due to higher temperatures, drought and flooding. In parts of the Midwest, farms will be able to produce less than 75% of the corn they produce today, and the southern part of the region could lose more than 25% of its soybean yield.

Heat stress could cause average dairy production to fall between 0.60% and 1.35% over the next 12 years — having already cost the industry $1.2 billion from heat stress in 2010.

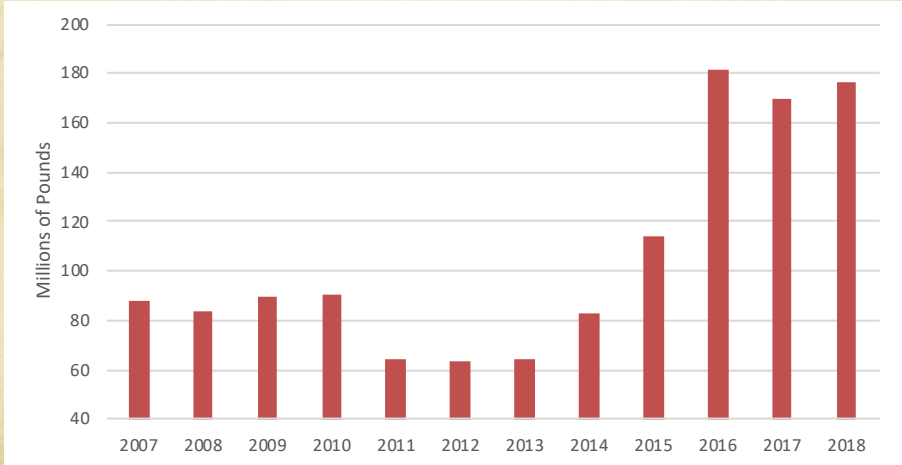
Location & Volume of Dairy Plants



Location & Volume of Dairy Plants



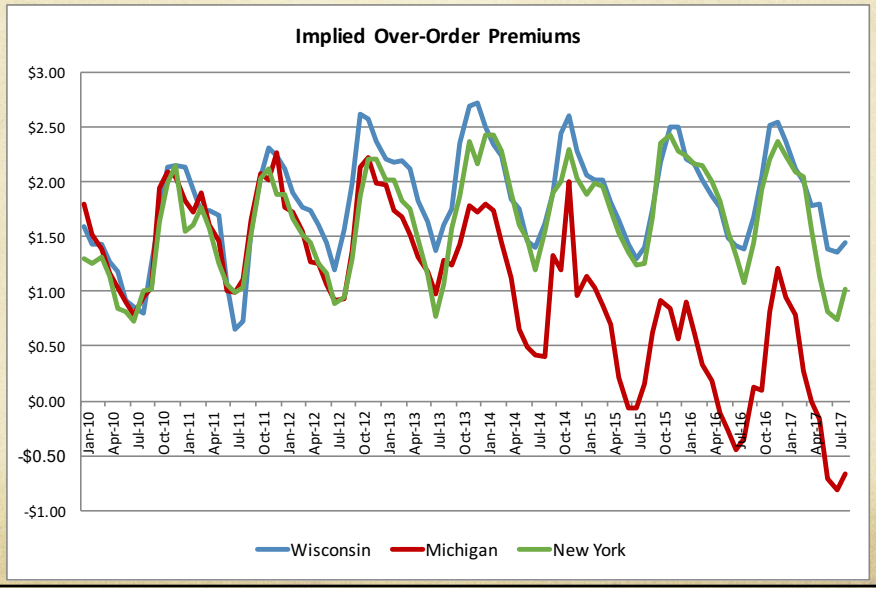
Dumped and Distressed Milk in the Northeast Federal Order

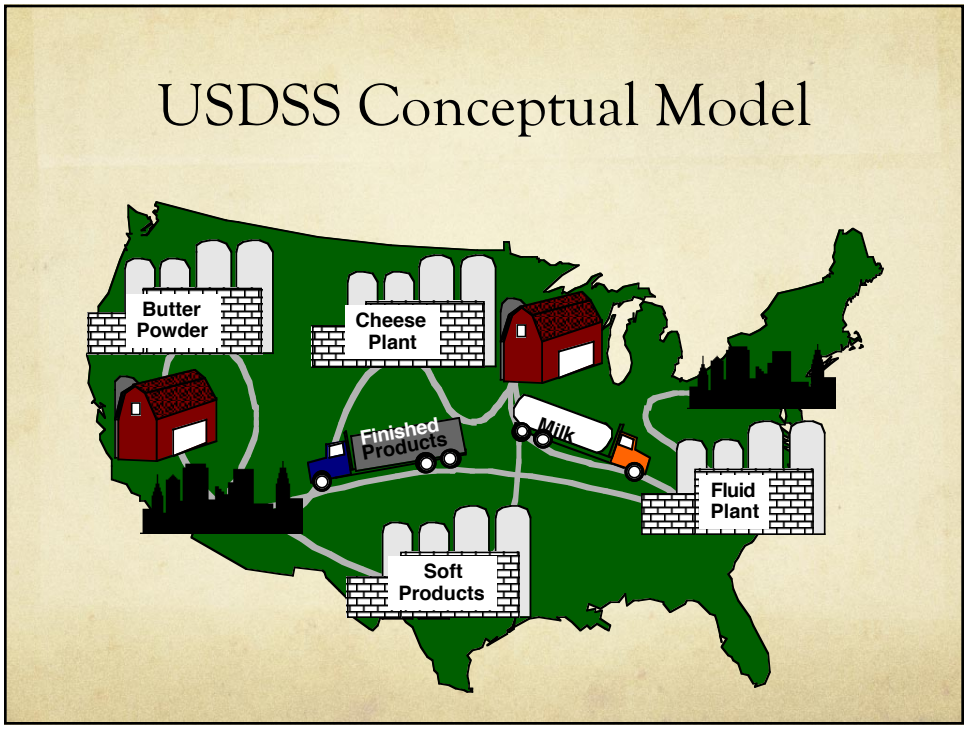


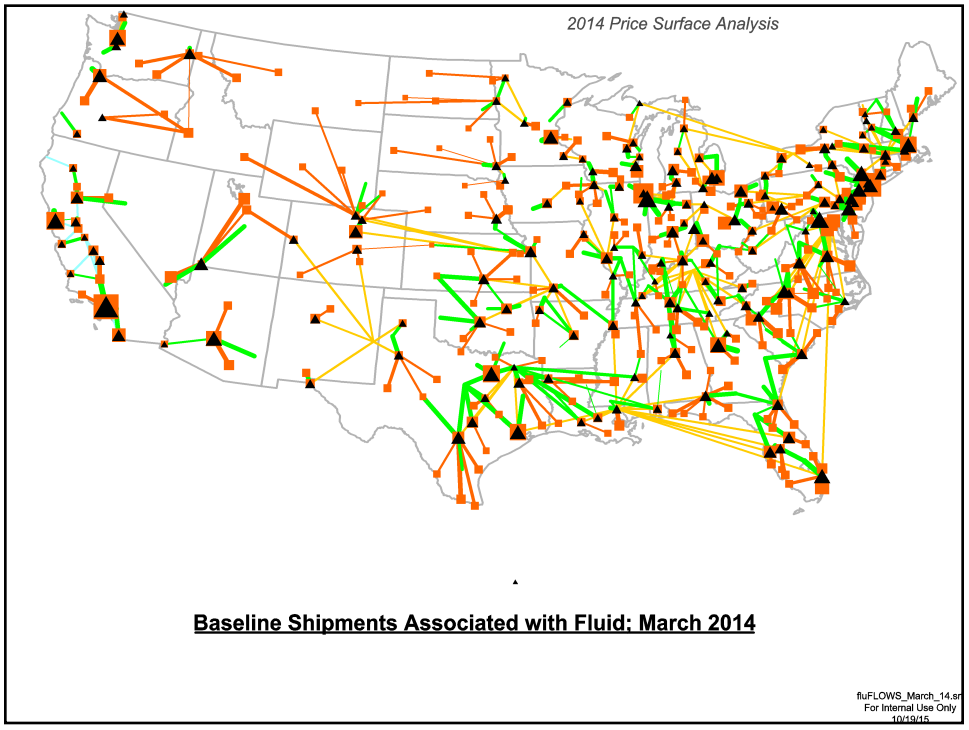
Who are your customers?

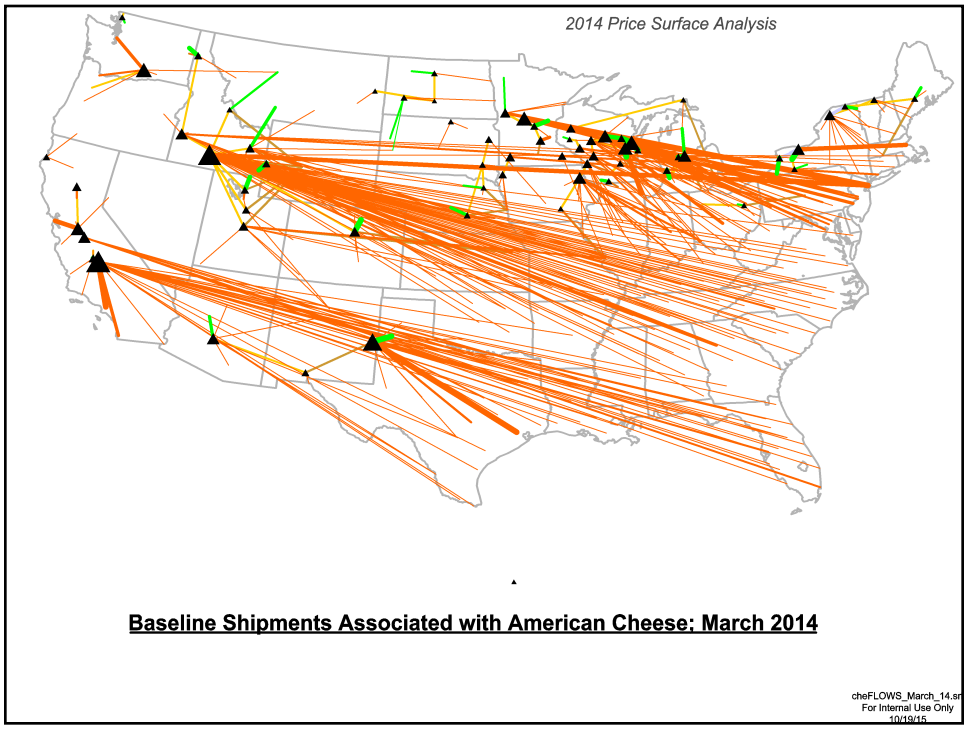
- We can build a plant, but…
  - Plants are expensive!
  - Where do we put it?
  - What products do we produce?
  - Who are your customers?
  - How do you get the products to them?
- Raw milk is expensive to move!

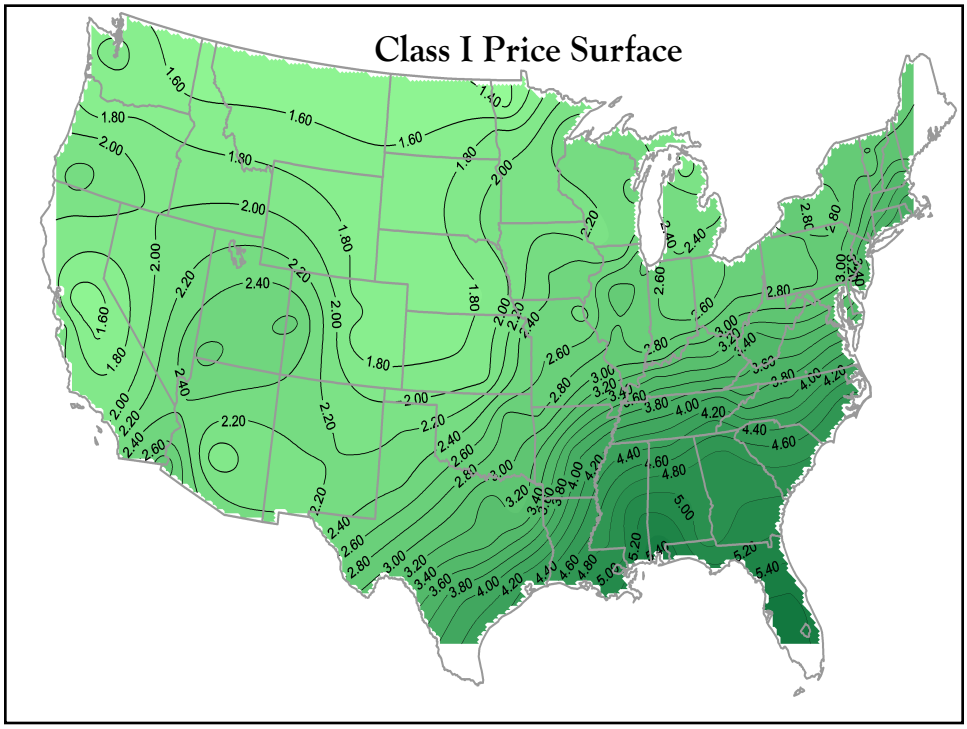
Implied Premiums

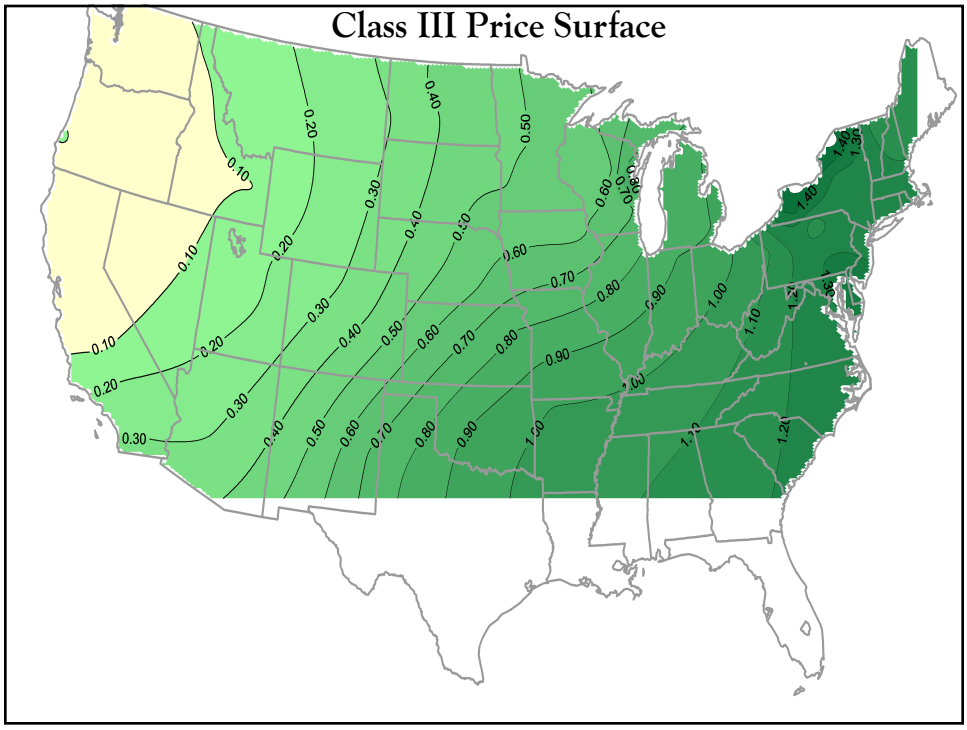



USDSS Conceptual Model
Butter Powder
Cheese Plant
Finished Products
Milk
Fluid Plant
Soft Products


2014 Price Surface Analysis
Baseline Shipments Associated with Fluid: March 2014
fluFLOWS_March_14.sr
For Internal Use Only
10/19/15


2014 Price Surface Analysis
Baseline Shipments Associated with American Cheese: March 2014
cheFLOWS_March_14.sr
For Internal Use Only
10/19/15


Class I Price Surface



In Summary…

- Farm trends are moving milk around the country
- Trends in productivity are pushing against trends in climate
- Strong milk production increases in the Northeastern quadrant of states—some slowdown in the West and continued declines in the Southeast
- Plant capacity *may* be an issue, but a bigger factor is probably who the customer is for the product
- Changes in how much milk is produced and where are expressed as changes in milk prices.
  - In the short-run, Exports move the U.S. price up and down
  - Regional shifts change the pattern or "tilt" of prices

In Conjecture…

- I don't get the sense that larger farms are prepared to grow right through this downturn and are more circumspect about the future.
- In talking with processing firms, decisions about plant expansions or greenfield operations are being approached with care.
- There is no room at the farm or plant level for mediocrity. The attention to details are making the difference between getting through this downturn well and experiencing a setback that will take years to overcome.
- I wonder if plants will alter processing and location strategies to ship even perishable products longer distances to customers. One-way distribution can lower transportation costs.

Questions…

THE UNIVERSITY of WISCONSIN MADISON

UW Extension Cooperative Extension