

Challenges and opportunities for the southwest dairy producer

USDA Agricultural Outlook Forum

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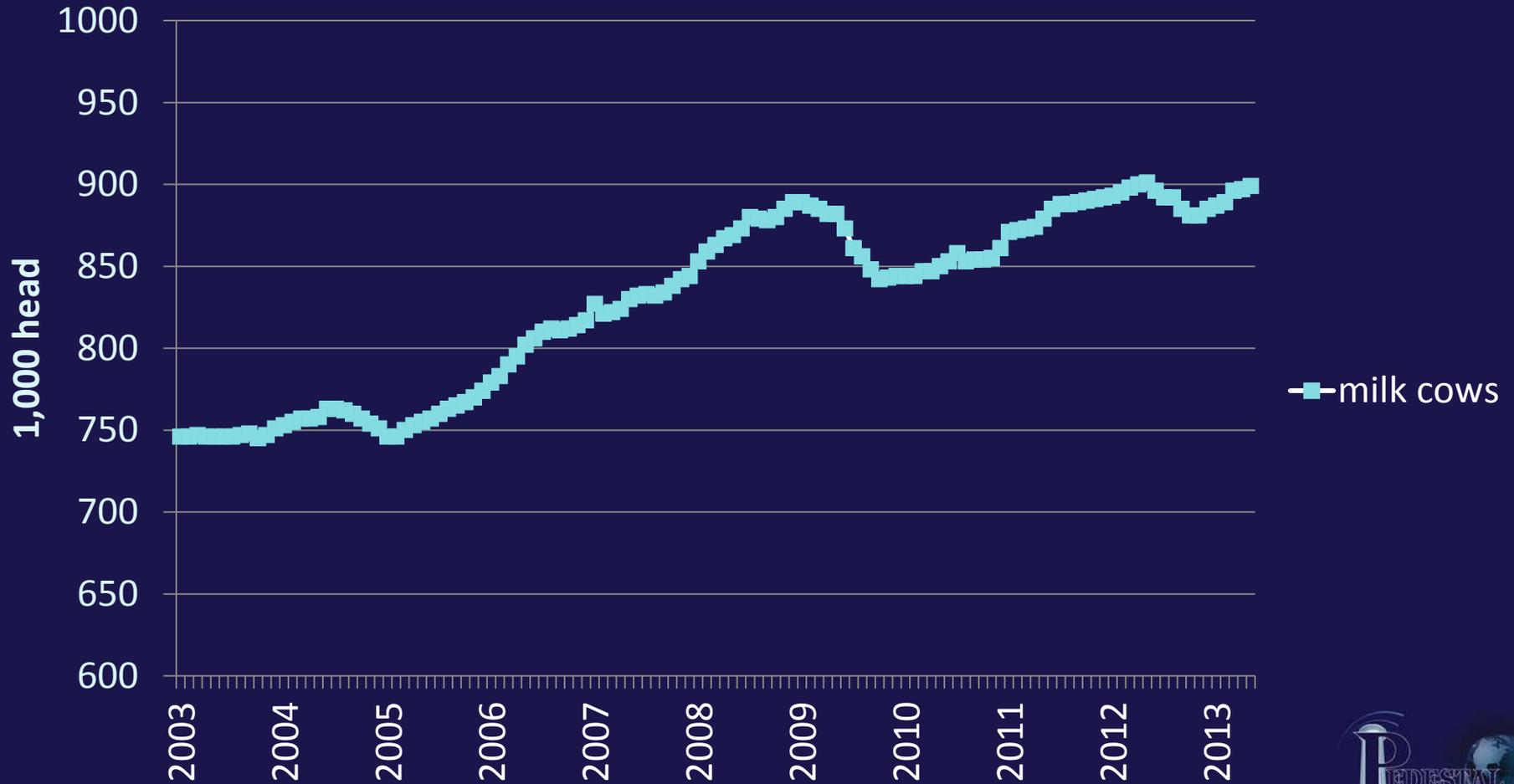
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“land of opportunity”

- Over the past 10-15 years, the Southwest has attracted dairy growth:
 - Labor
 - Not necessarily cheaper, but more abundant
 - Forage
 - Irrigation provided more predictable costs and supplies
 - Scale
 - Acreage trades in larger tracts
 - Lower barriers to entry for larger, “business” type dairies
 - Excellent environment
 - Arid to semi-arid climate
 - Few environmental issues
 - “Ag-friendly”

history of growth

Cow Population KS/TX/NM



future issues for the southwest dairy producer

- Water Supply
- Producer Economics
- Geographics of Population Growth

water supply



water supply

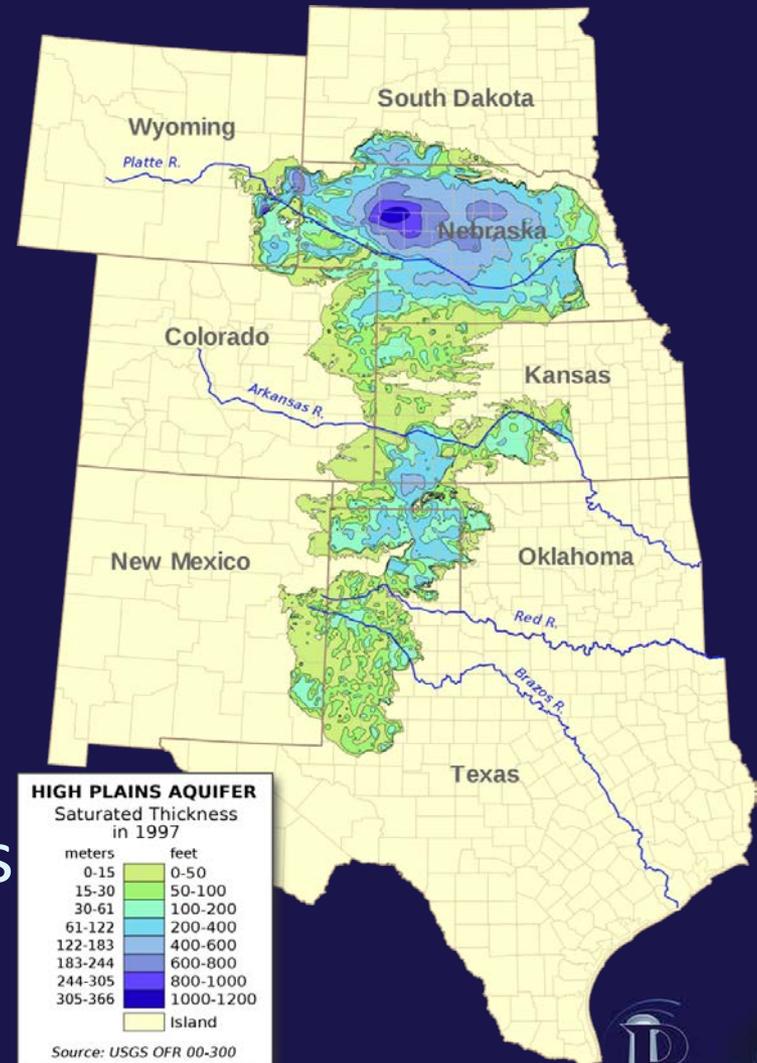


water supply



ogallala aquifer

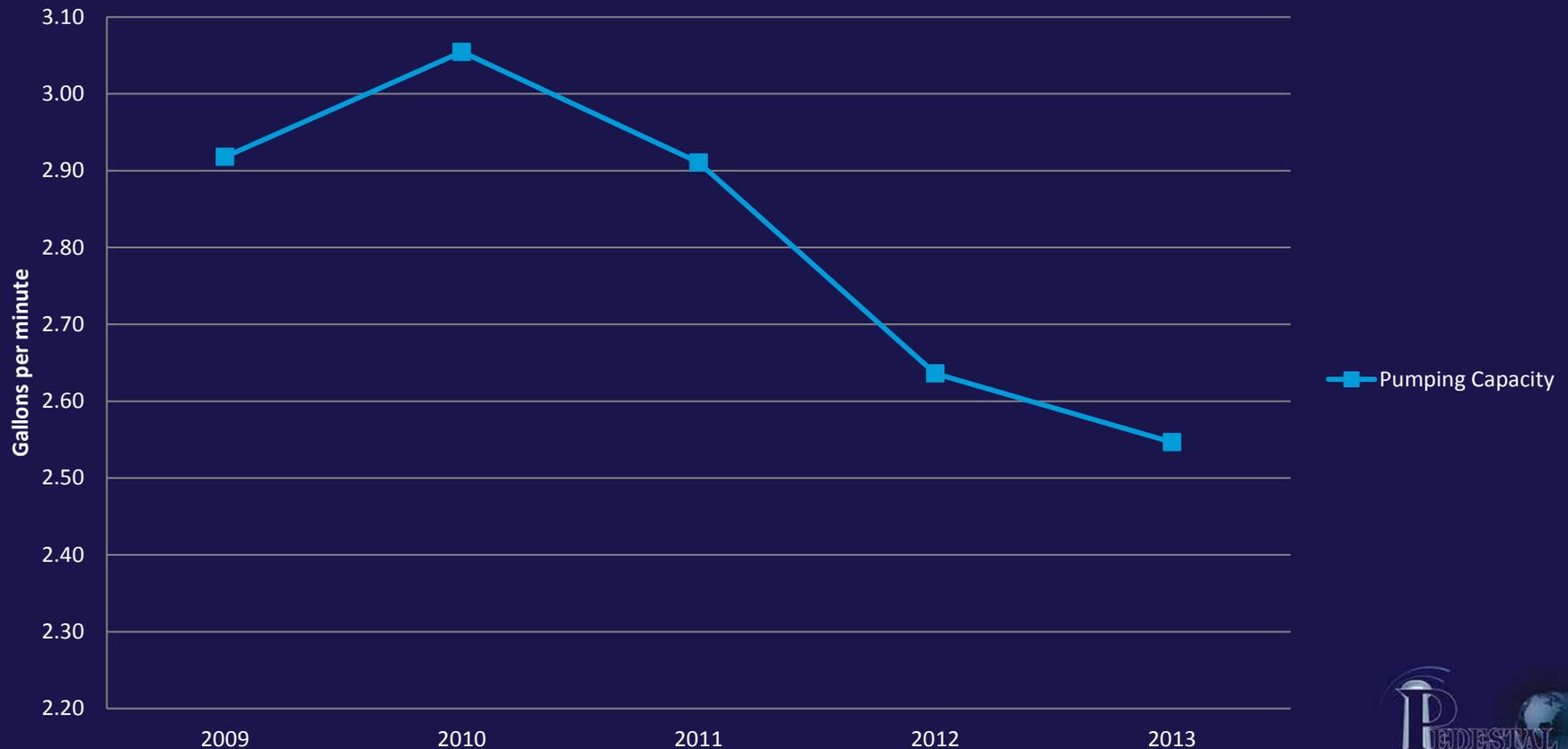
- Very slow recharge
- Ongoing depletion
- Arid and semi-arid climate
- Municipal
- Livestock production
- Crop production
- Declining saturated thickness



ogallala aquifer

- Data on 255 wells in Texas Panhandle

Declining Well Capacity



ogallala aquifer

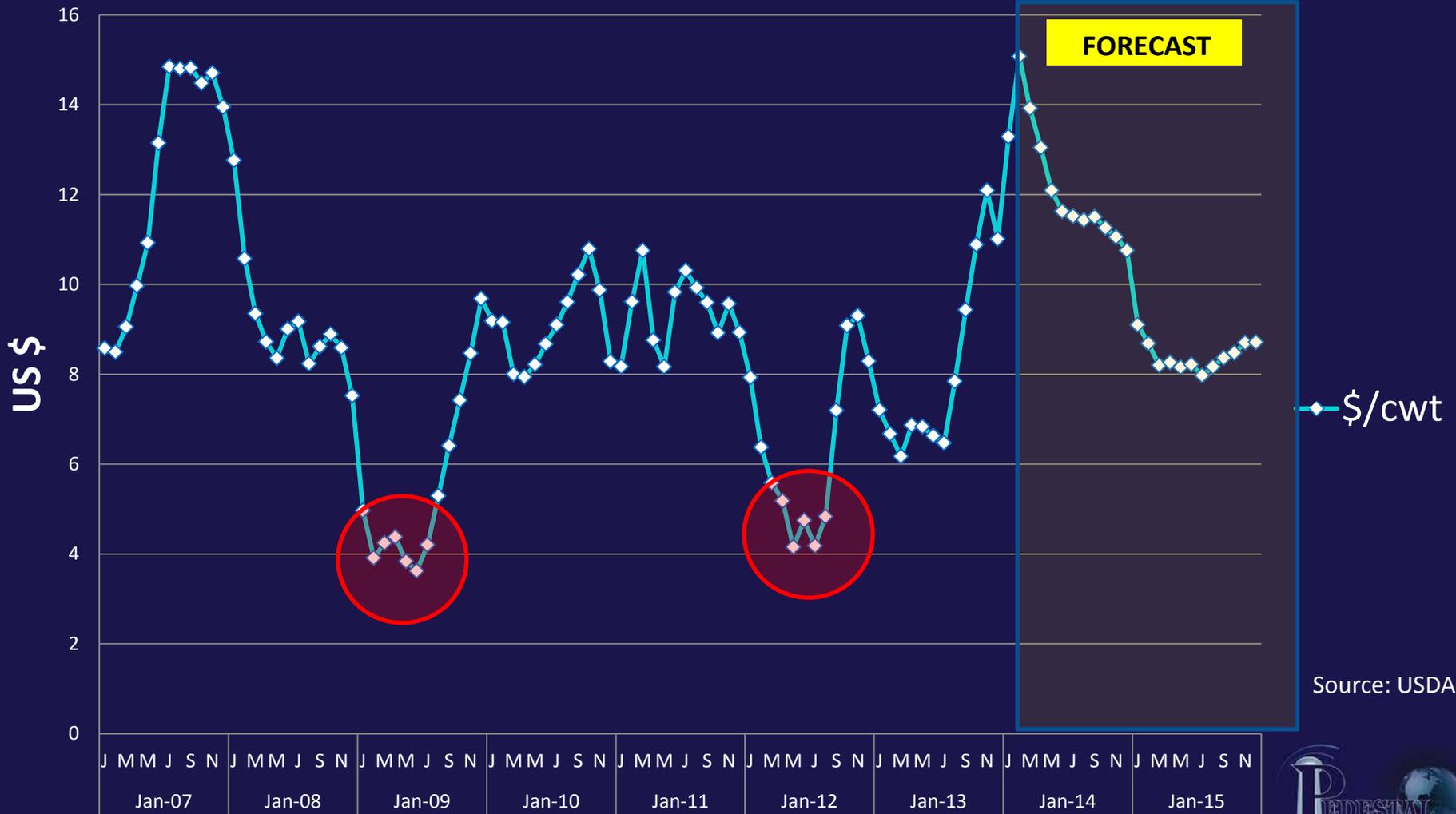
- Irrigated corn and alfalfa “requires” pumping capacity of 5 gallons per minute per acre
 - One 120ac circle (quarter section) needs ~600gpm capacity
- Each ½ gallon per minute reduction in pumping capacity...
 - Reduces planting flexibility
 - Decreases “no worry” potential corn and alfalfa acreage by 10%
 - Increases corn imports
 - Unknown effect on silage supplies
 - Less water = fewer acres
 - Corn silage requires less water than corn for grain

producer economics



how bad is "bad"....??

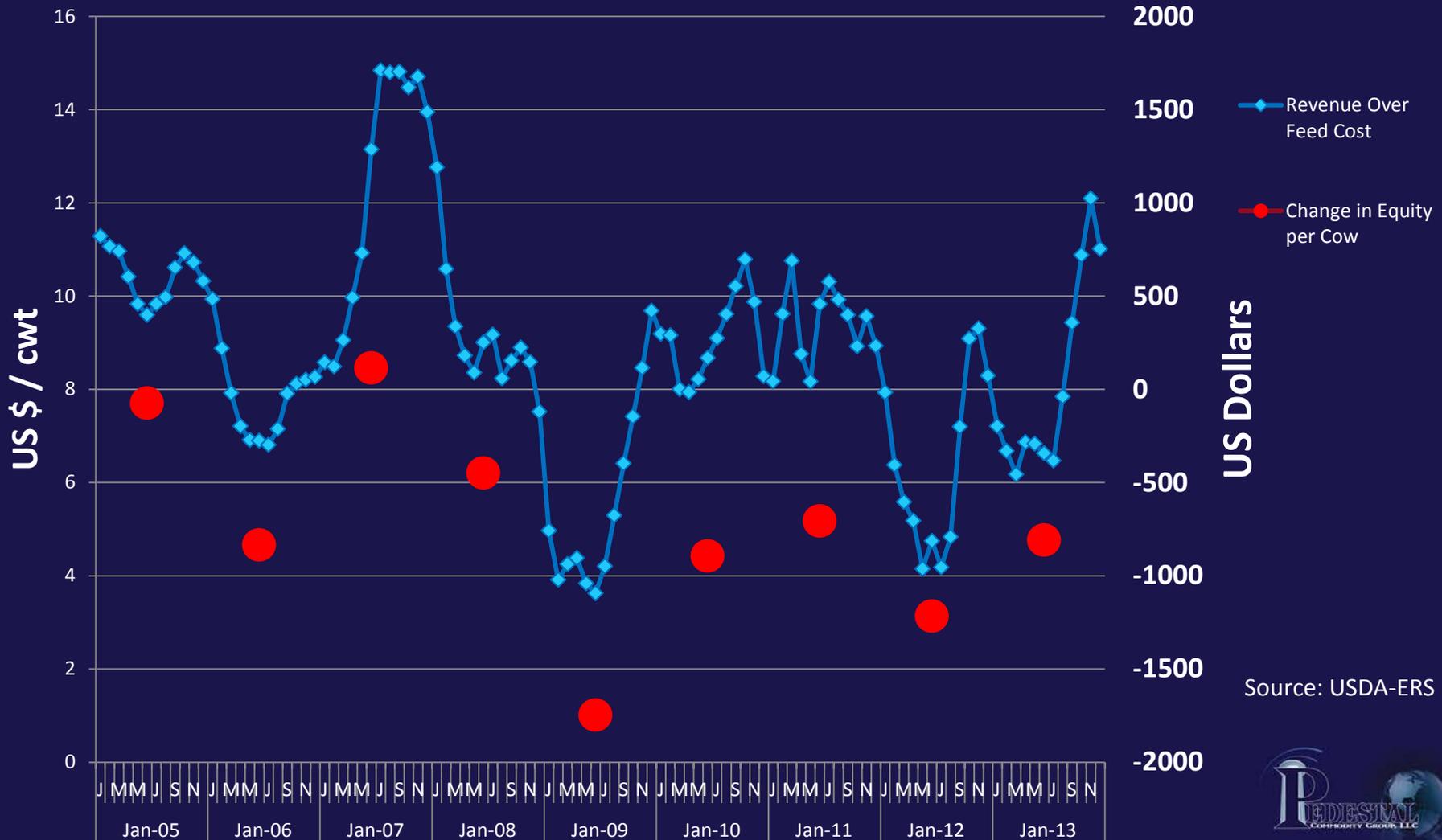
USDA-defined Dairy Producer Milk Over Feed Margin



dairy producer liquidity

- Operation Liquidity provided by the cows (cow line)
- Market value of the herd
 - \$1,700/hd per productive cow
 - \$800/hd cull price (recently ~\$1,100 due to high beef price)
- Loan value 75% of ~\$1,350/hd = \$1,012.50

milk over feed margin vs. equity per cow (KS/TX/NM)

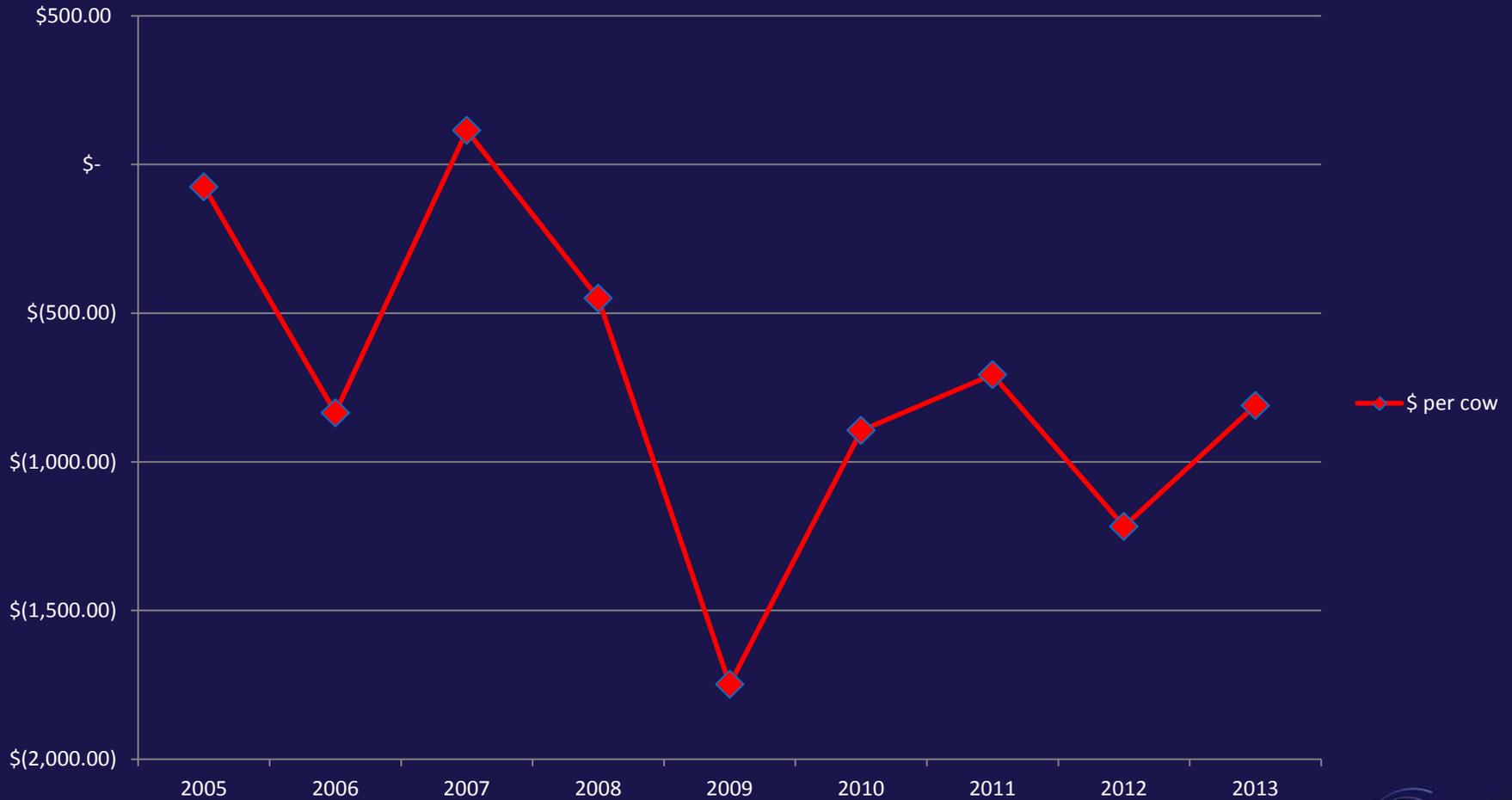


Source: USDA-ERS



Very volatile equity...

Change in Producer Equity per Cow (KS/TX/NM)

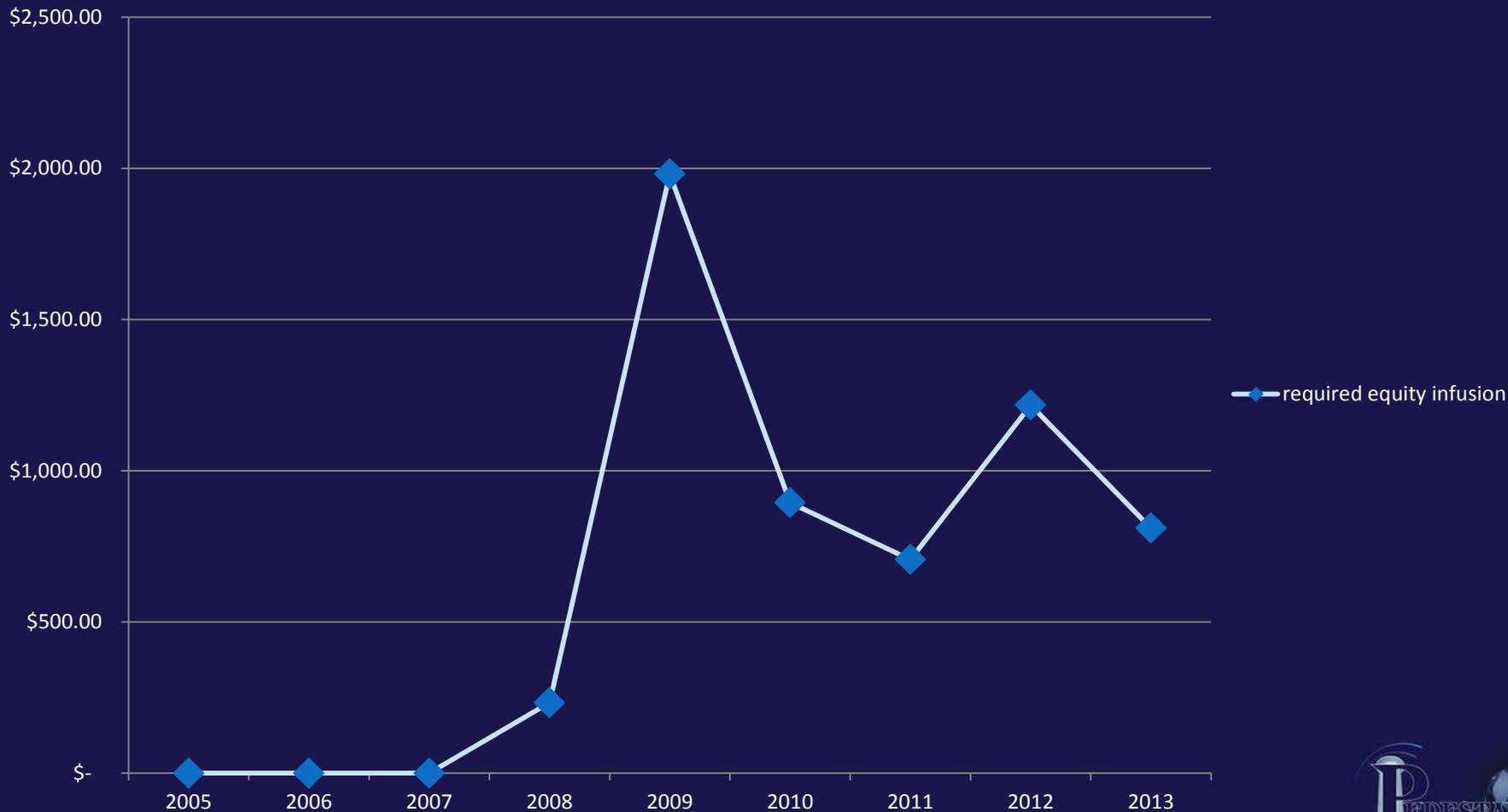


Source: USDA



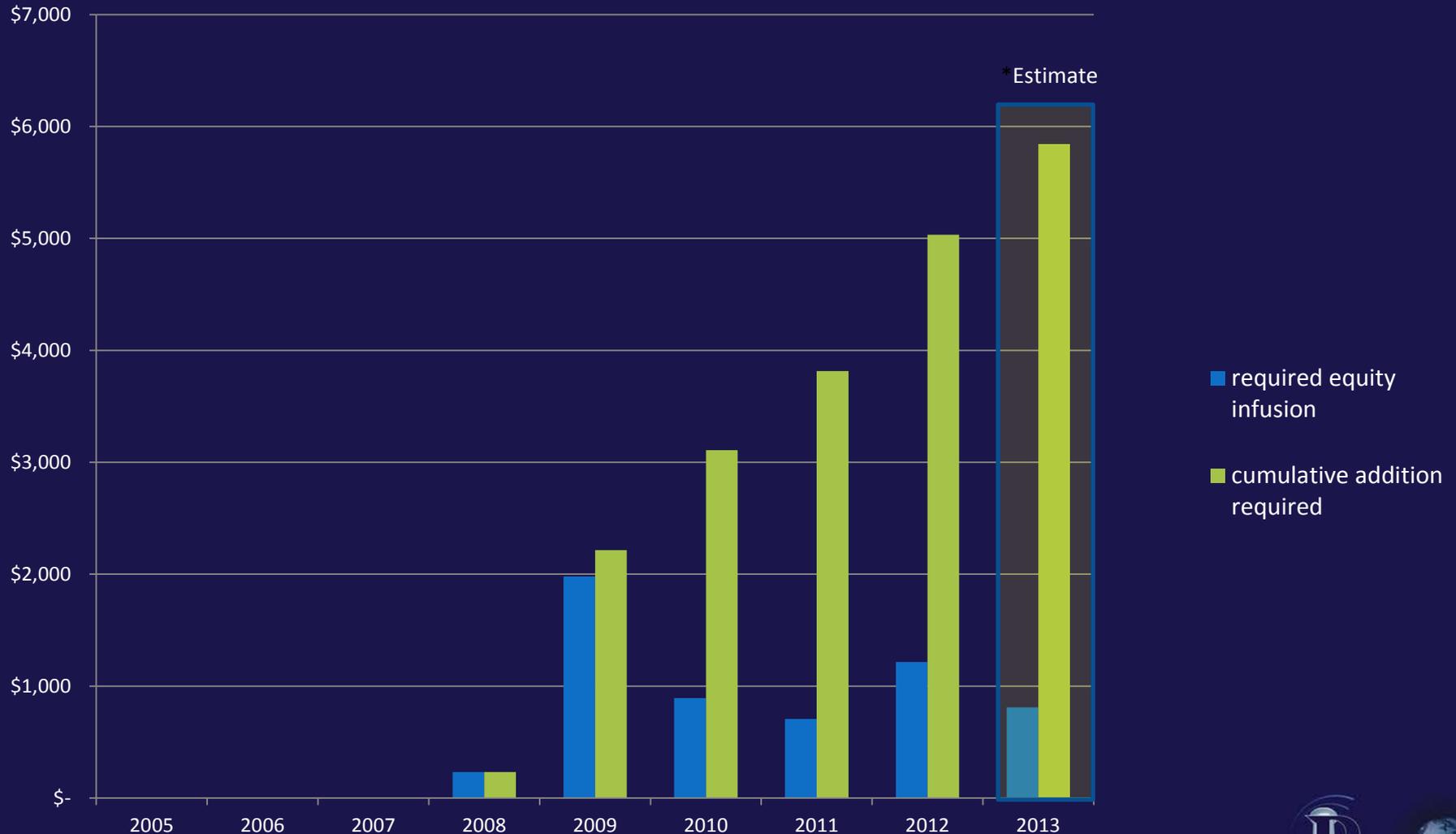
what happens when the cow line runs out.....?

Required Equity Infusion per Cow (KS/TX/NM)



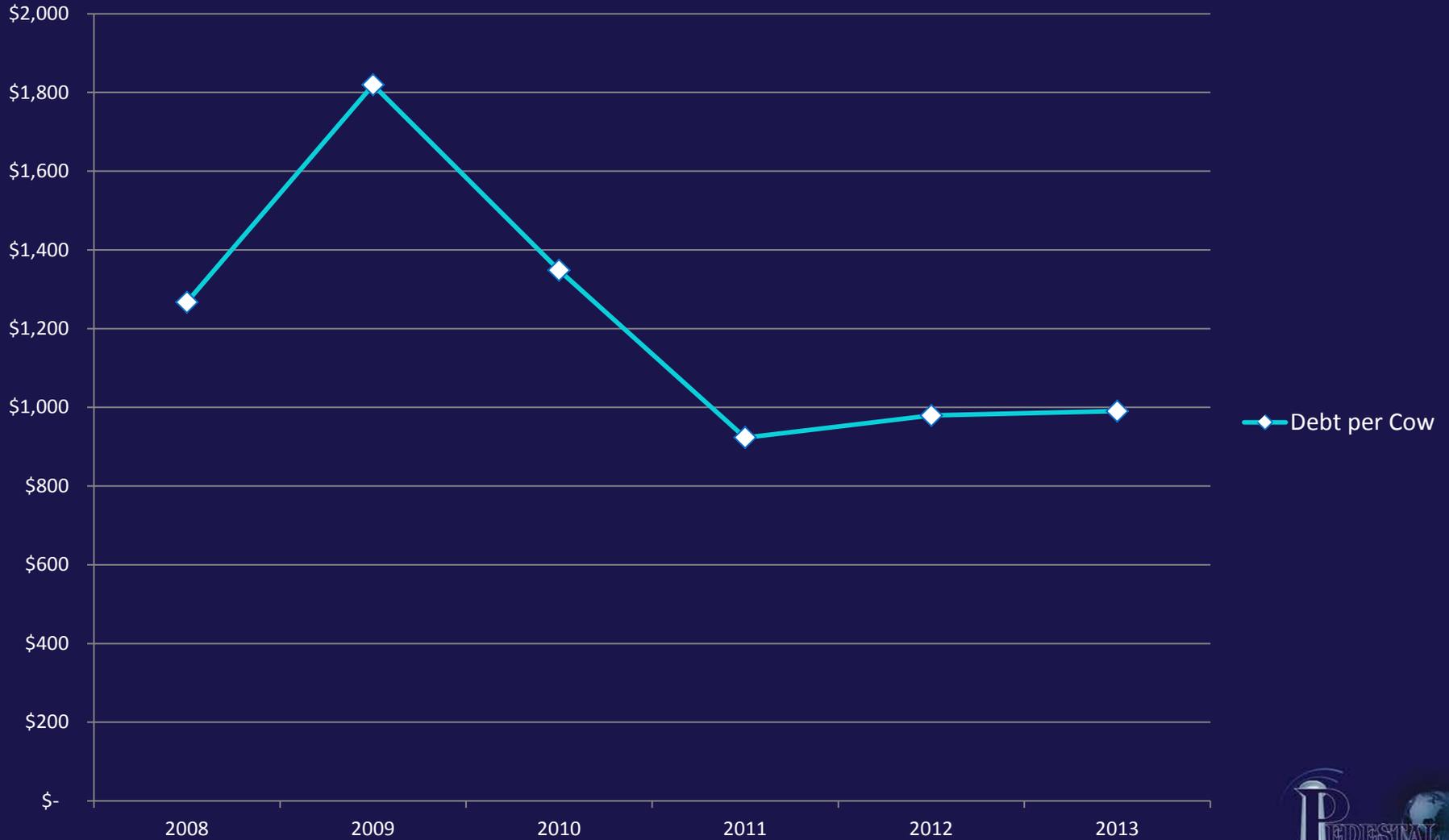
when the cow line runs out....

Cumulative Equity Infusion Required per Cow (KS/TX/NM)



debt levels

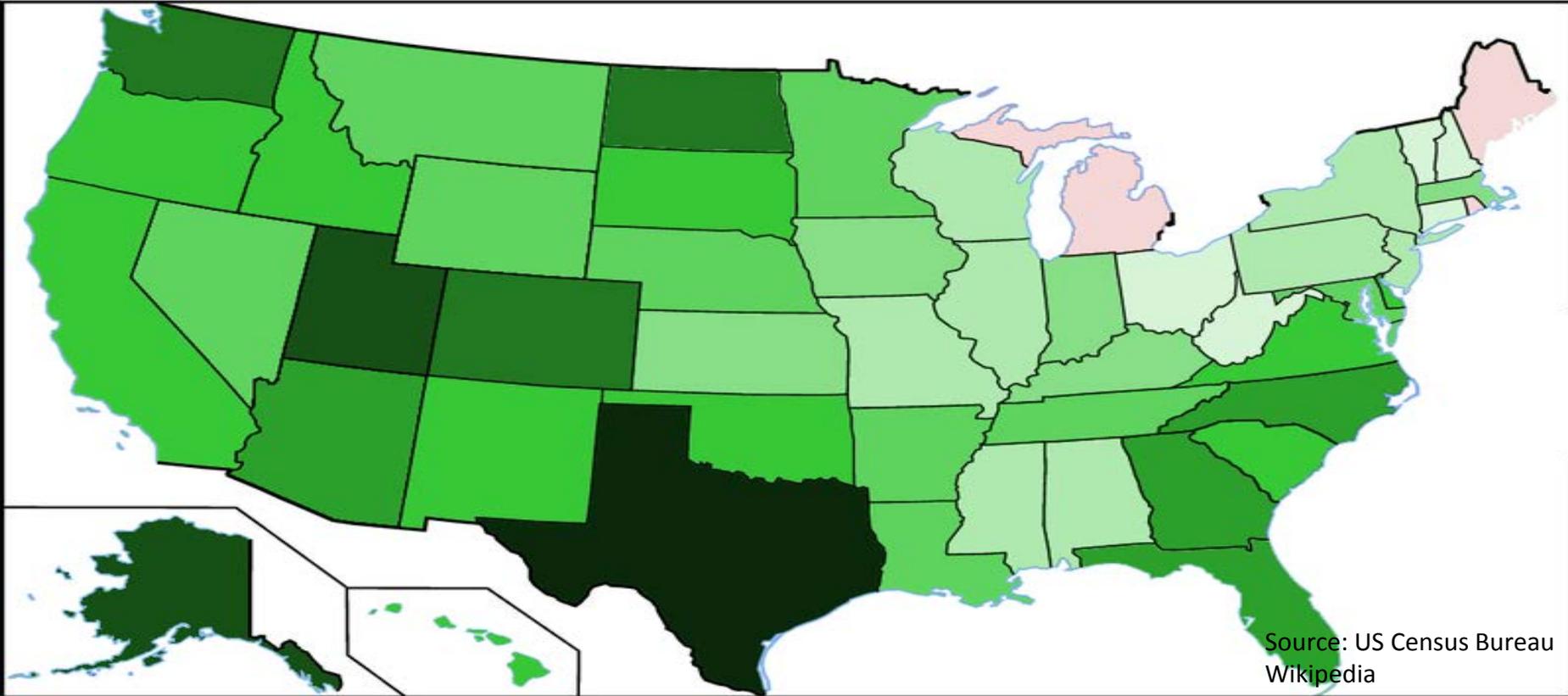
Debt Level per Cow



population growth

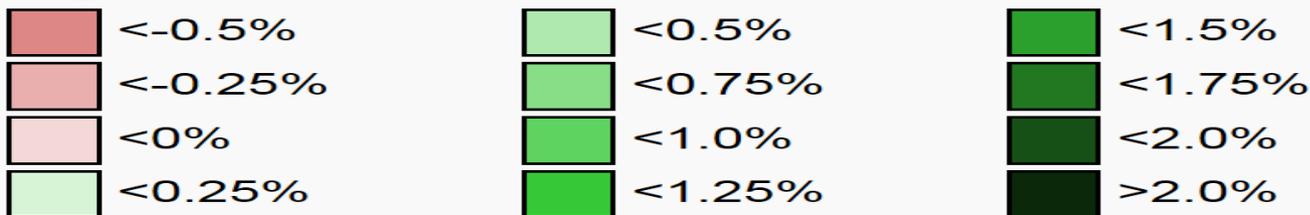


population growth



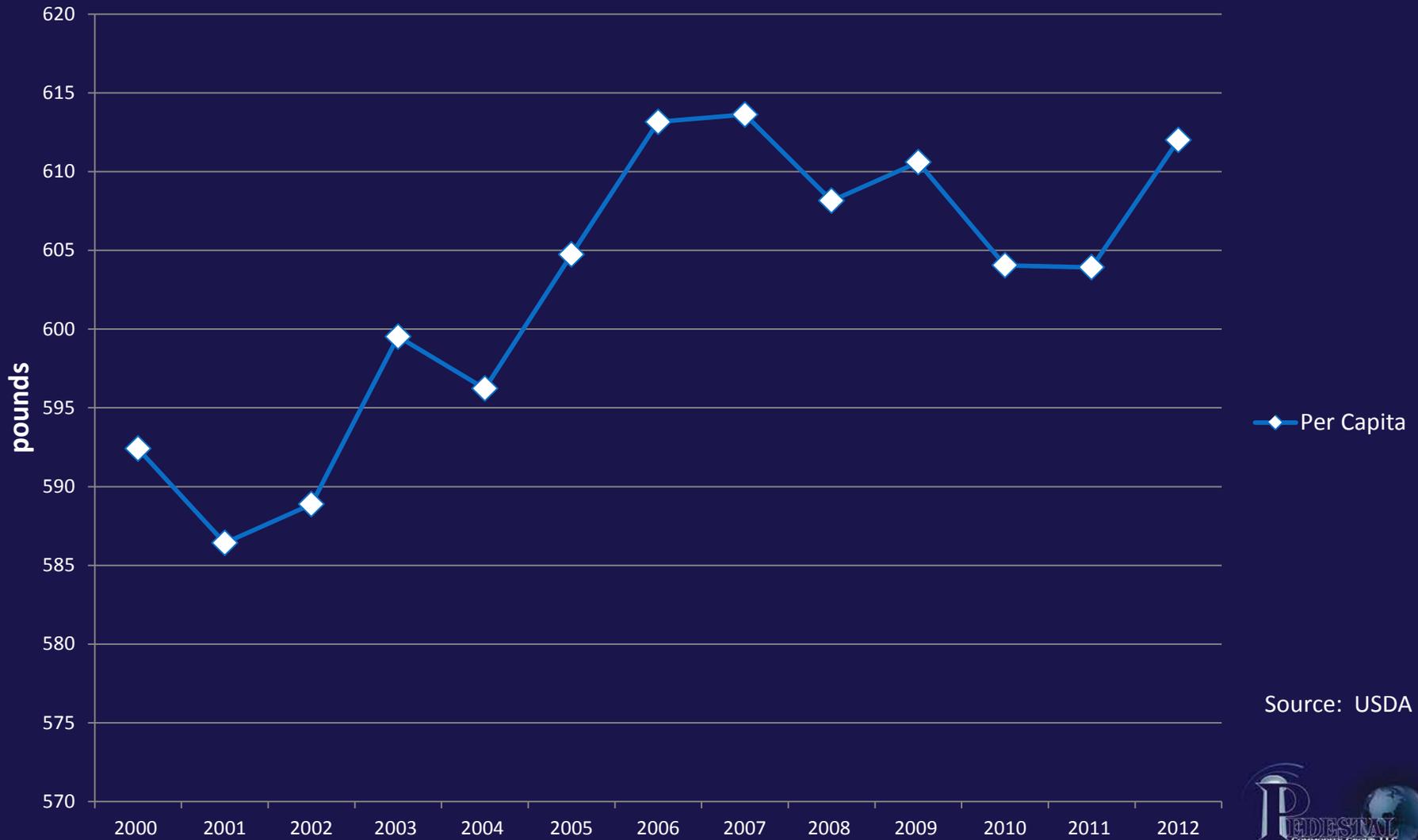
Map of population change in US states between April 2010 and July 2011.

Legend:



population growth

US Milk Consumption, milk equivalent, milkfat basis



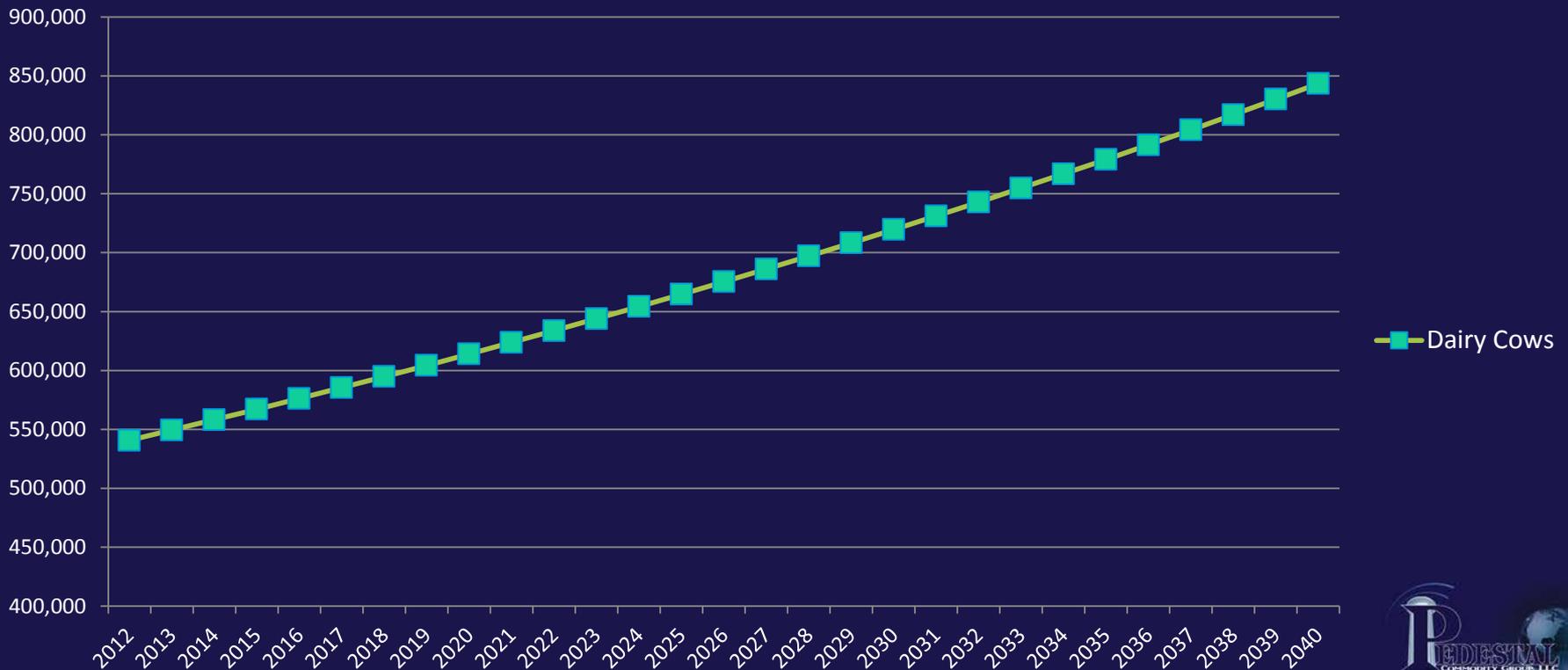
Source: USDA



population growth

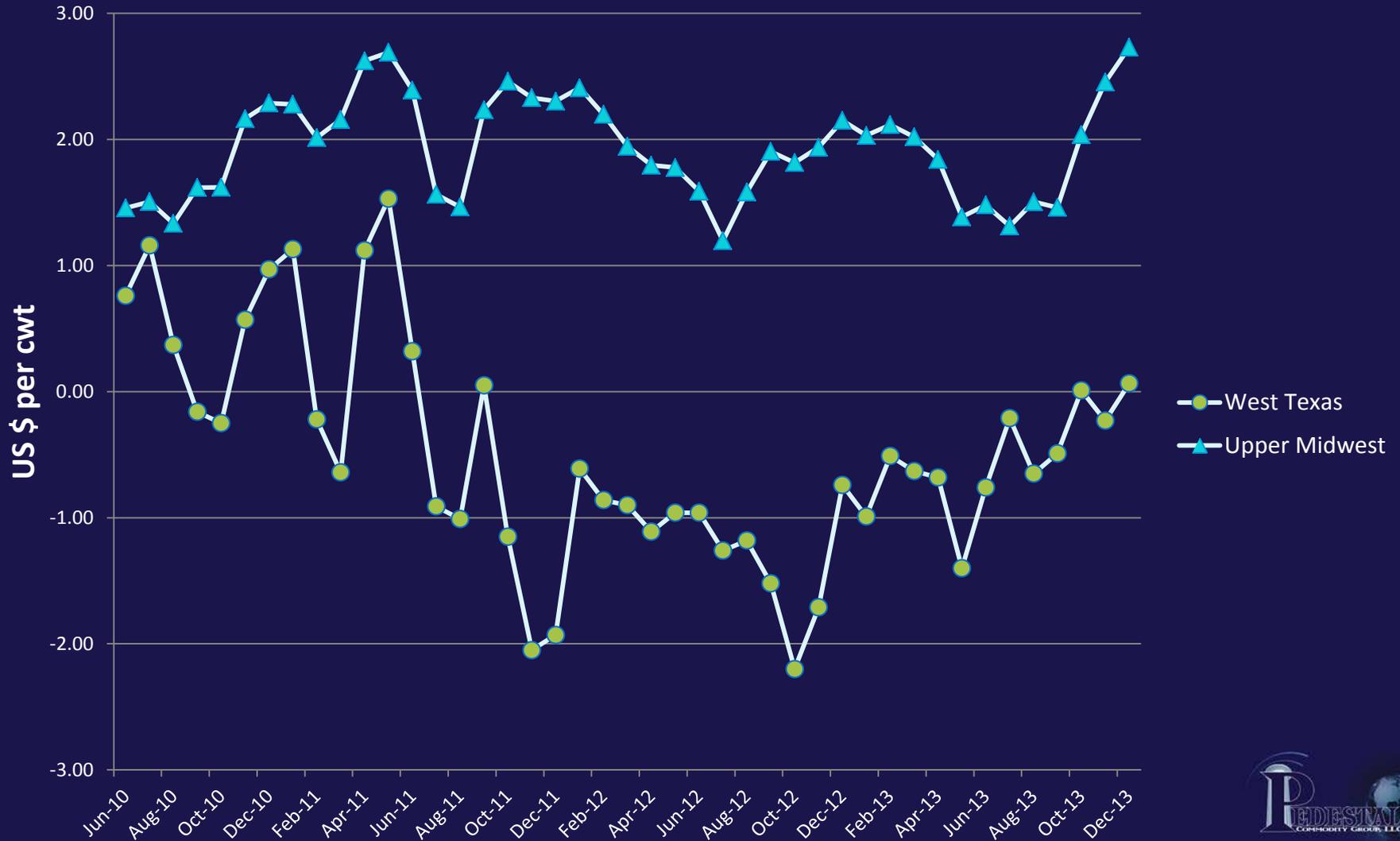
- Texas population will almost double to 40 million over the next 25 years....requires milk equivalent of 300,000 more cows

Dairy Cows Required to Support Texas Population Growth



competitive product pricing

Milk Check Basis vs Class III

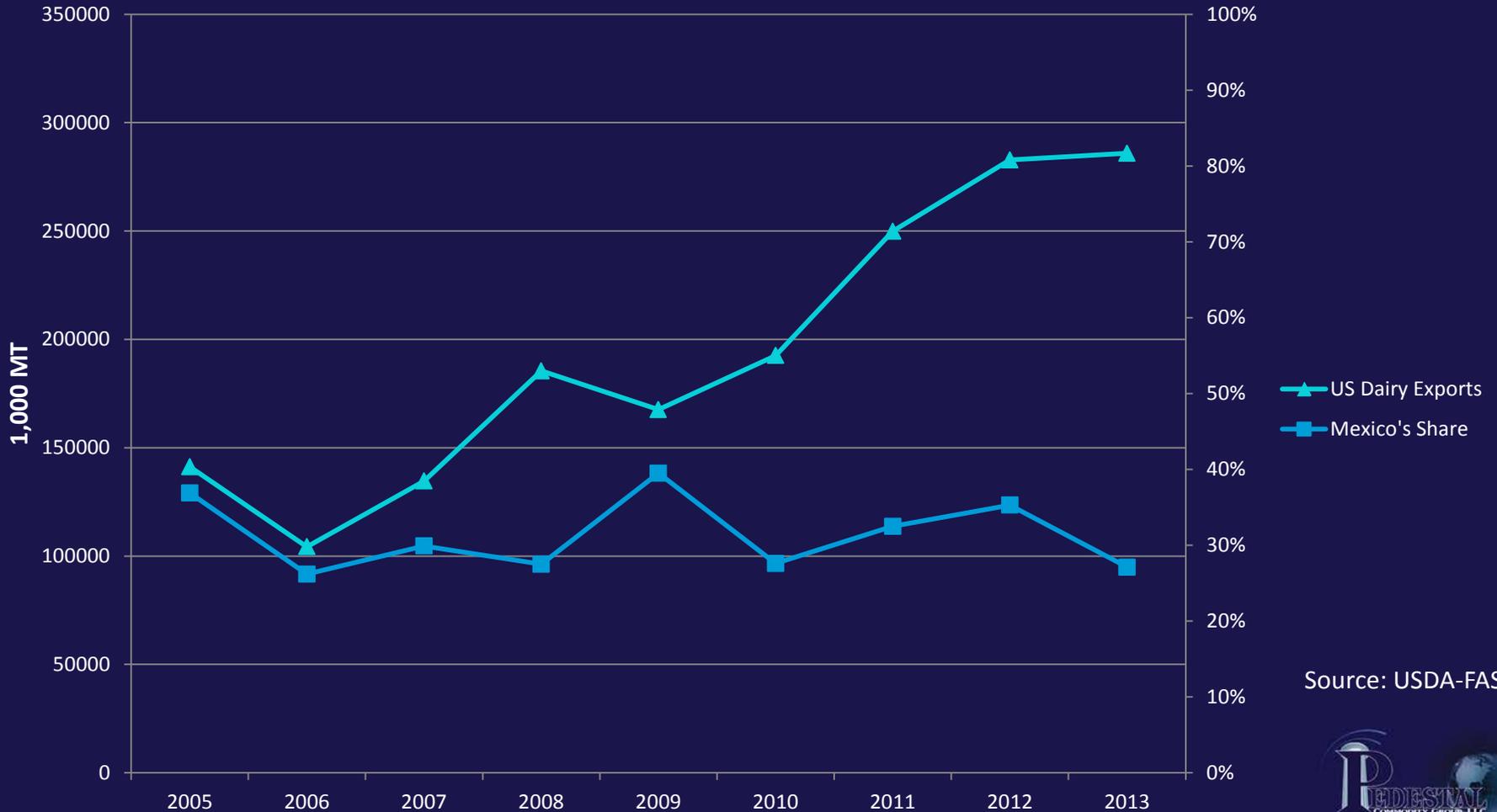


Competitive product pricing

- **Forward considerations for southwest milk check basis**
 - **Today:**
 - **Product freight to Wisconsin = ~75c/cwt milk equivalent**
 - **Implies Southwest dairy product is competitive into the Upper Midwest**
 - **Markets will normalize over time**
 - **Given Southwest supply constraints this likely means higher milk check basis**

proximity to a great dairy customer...mexico

US Dairy Exports (HS 0401-0406)



Source: USDA-FAS



conclusion

- **Water Supply**
 - Ongoing concern of which dairy producers are only one player
- **Producer Economics**
 - Costs are rising due largely to limited water
 - Poor revenues have left producer balance sheets damaged
- **Geographics of Population Growth**
 - The Southwest is well-positioned



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