

**BLUE, JOHNSON & ASSOCIATES, INC.**

FERTILIZERS • CHEMICALS • MINERALS • ENERGY

**TFI FERTILIZER OUTLOOK &  
TECHNOLOGY CONFERENCE**

November 17, 2010

***NITROGEN OUTLOOK***

Presentation Visuals

by

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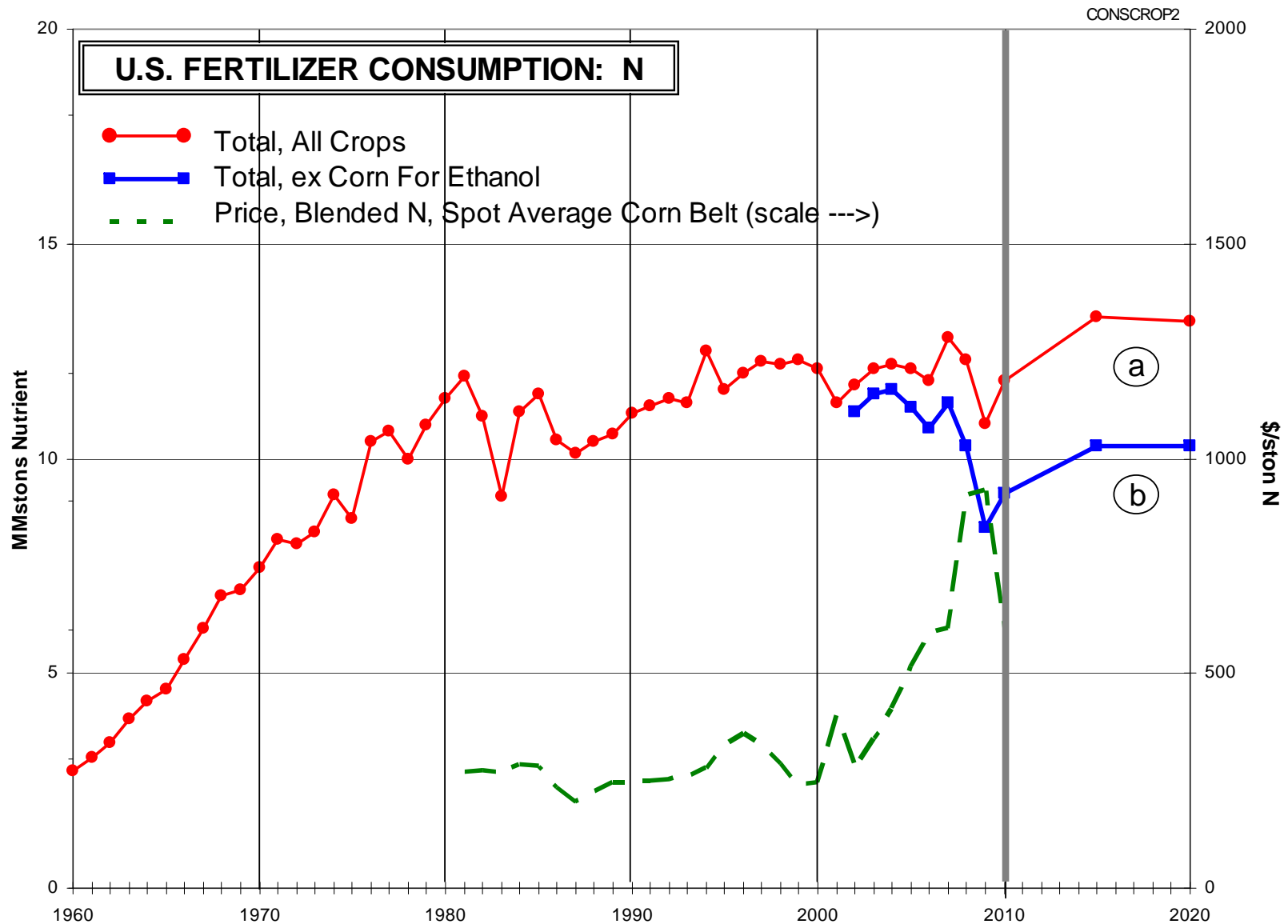
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**Blue, Johnson data file as of: 11/5/10**

**U.S. FERTILIZER DEMAND (MMstons)**

					BJA ESTIMATES		
TOTAL NUTREINTS	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
N	12.1	11.8	12.8	12.3	10.8	11.8	12.9
P2O5	4.6	4.5	4.6	4.2	2.4	3.0	4.6
K2O	5.2	4.7	5.1	4.7	2.7	3.9	5.3

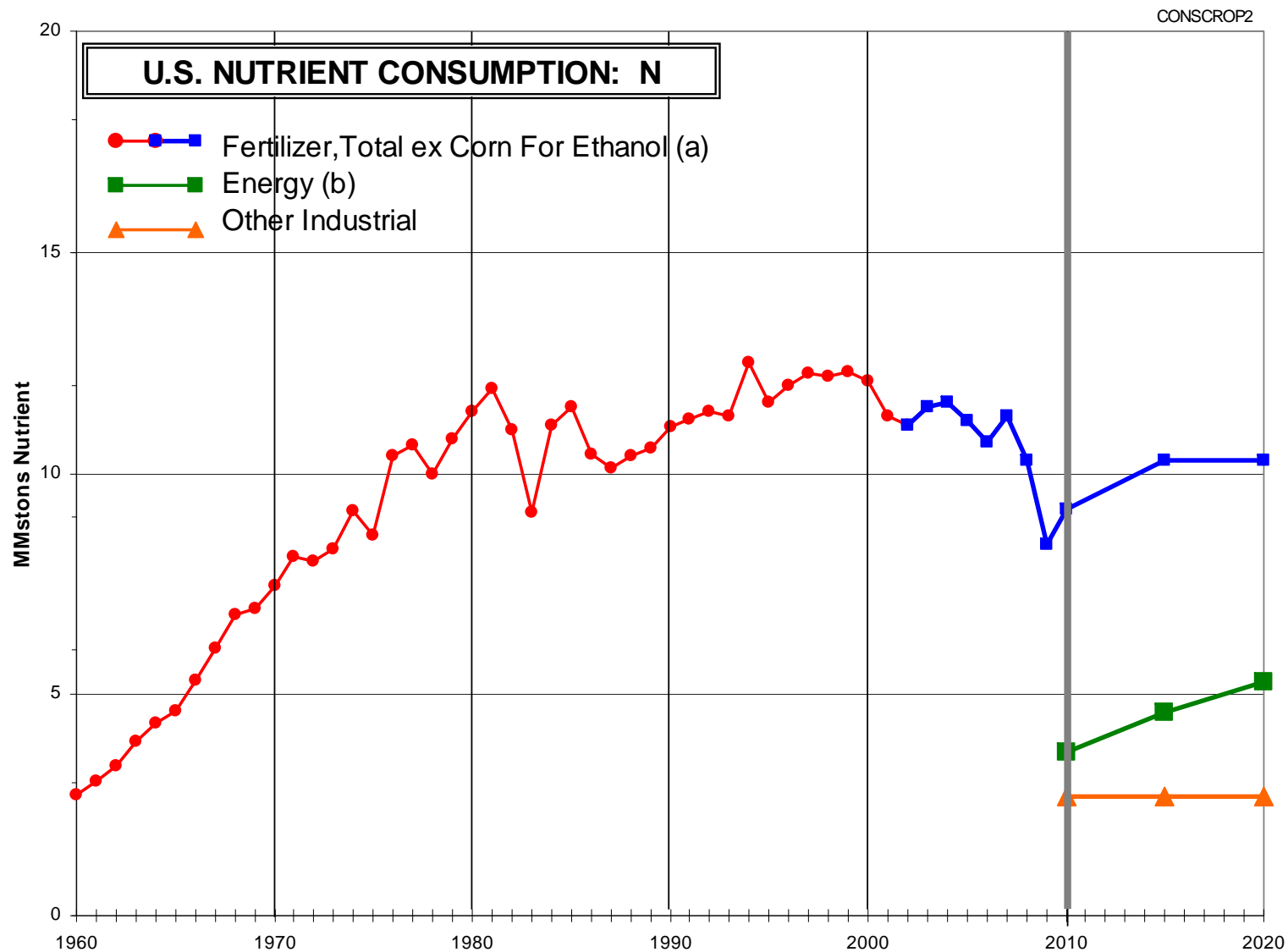
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(a) Forecast assumes conventional ethanol production ranging 16-17 B gal.

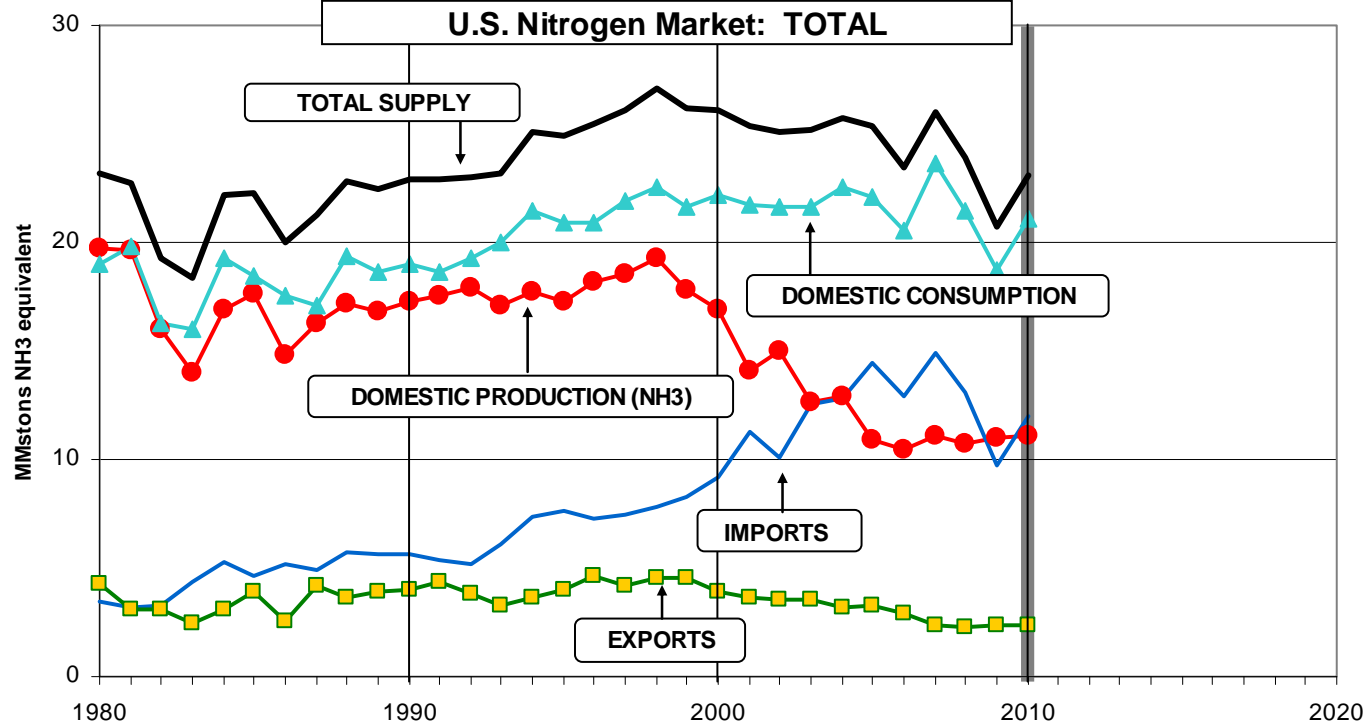
(b) Re fertilizer "Four Rs" -- right product, right rate, right time, right place -- USDA estimates current practice by ~ 15 % of farmers. Forecast assumes "significant" increases towards end of the decade.

Blue, Johnson data file as of: 11/5/10



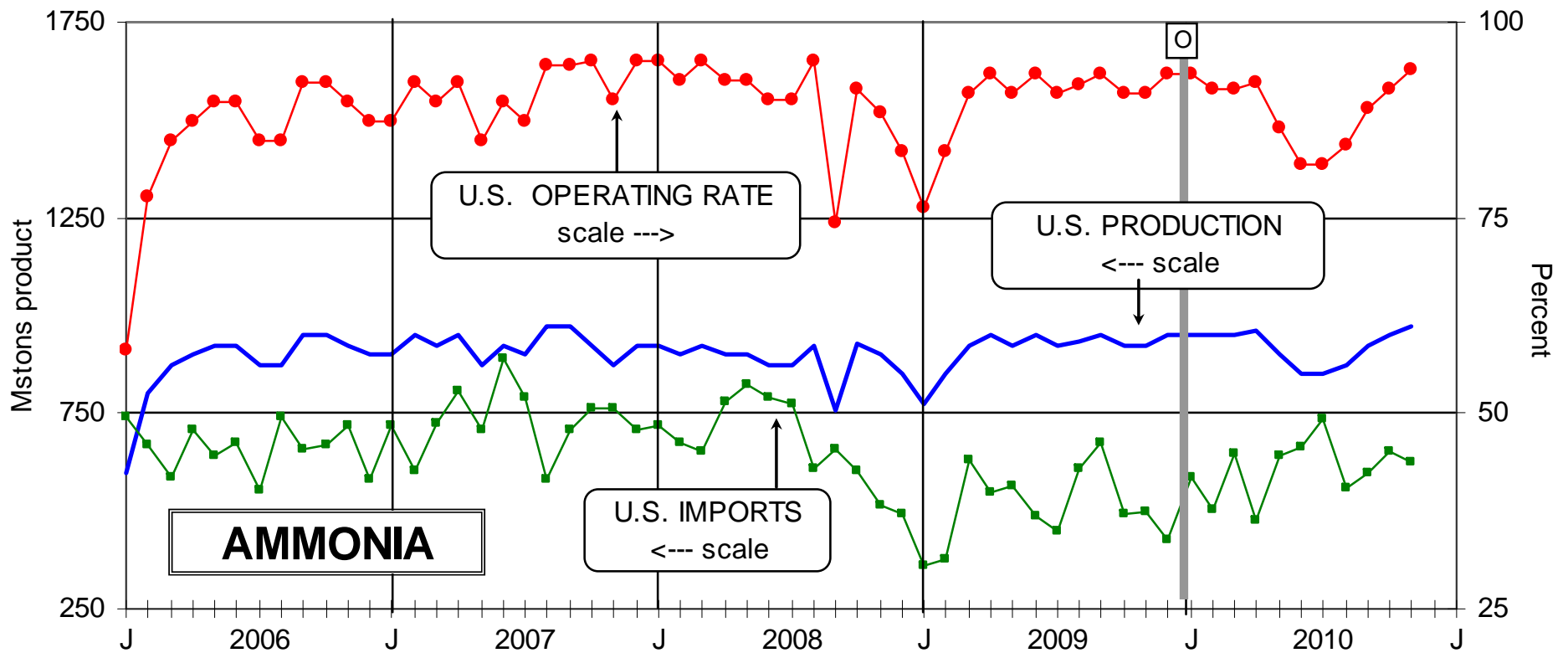
- (a) Re fertilizer "Four Rs" -- right product, right rate, right time, right place -- USDA estimates current practice by ~ 15 % of farmers. Forecast assumes "significant" increases towards end of the decade.
- (b) Energy includes corn for ethanol, AN for coal mining, and NH<sub>3</sub>-urea for emissions control (power plants, diesel engines).

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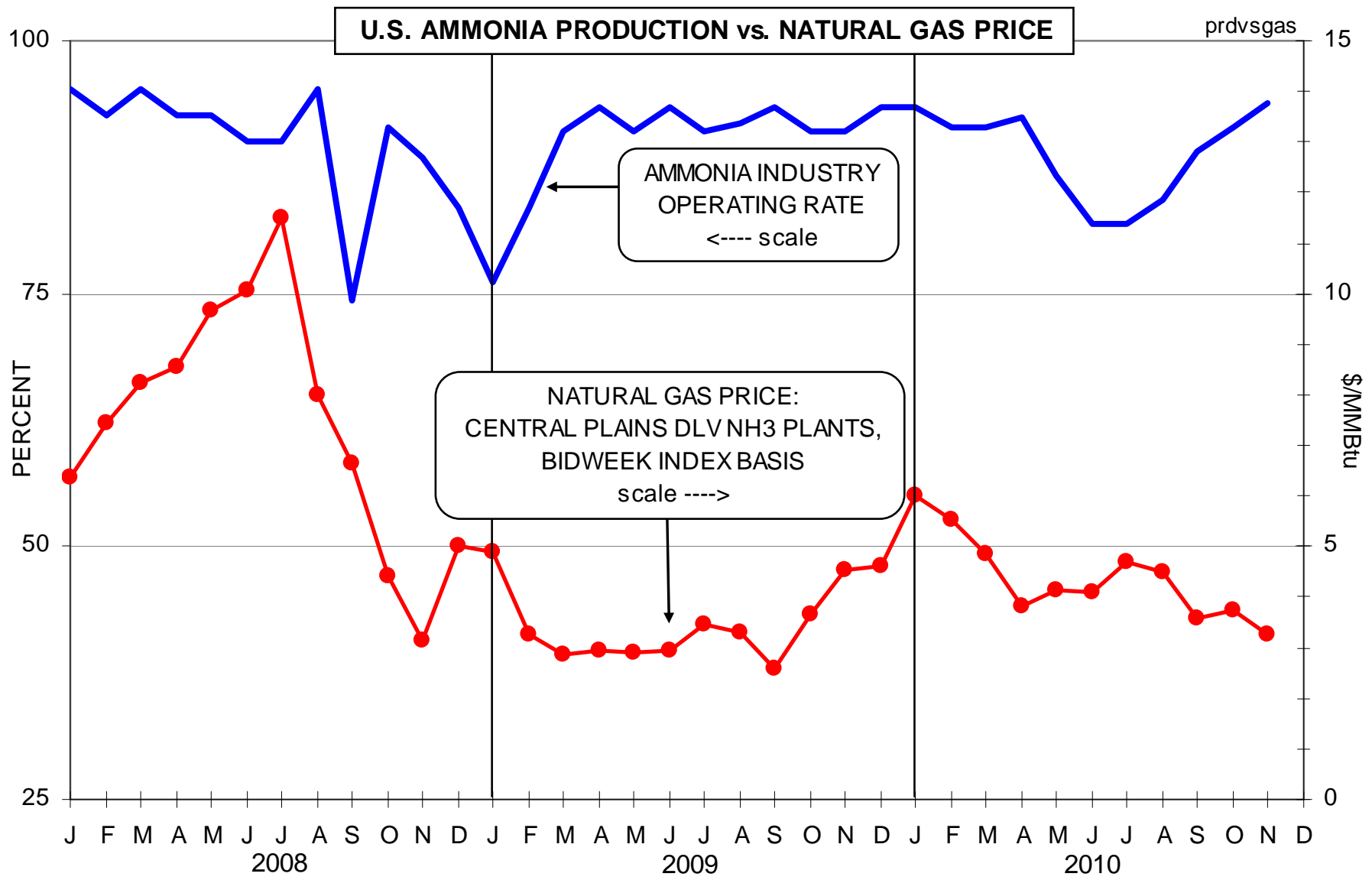


### U.S. NITROGEN SUPPLY SOURCING

	<u>Domestic</u>	<u>Imports</u>
<u>Total N</u>		
1980	85%	15%
1990-98	70-75%	25-30%
2009	52%	48%
<hr/>		
<u>2009</u>		
Ammonia	40%	60%
UAN	90%	10%
Urea	37%	63%
Ammonium Nitrate	81%	19%
Ammonium Sulfate	81%	19%

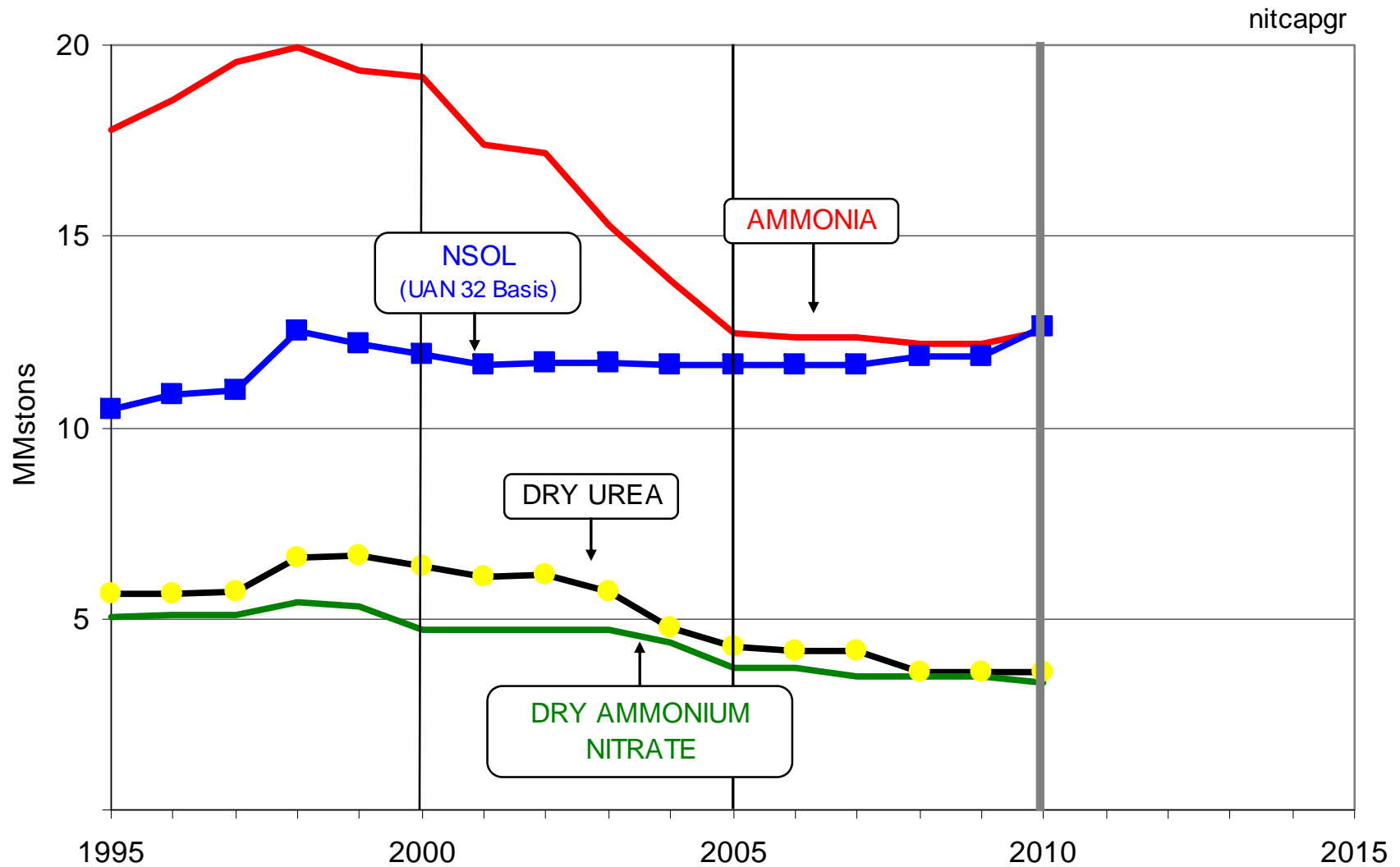


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## U.S. NITROGEN CAPACITY TRENDS





- New modern nitrogen capacity continues to be put in place:
  - Growth in world demand,
  - Replacement and/or revamp expansions of older, less efficient facilities.
  - Most new projects in areas with feedstock cost advantages (e.g., North Africa, West Asia), and in China.

- New projects considered outside China based on gasification technologies (coal, petcoke). In the U.S., at least ten specifically designed to produce ammonia and (mostly) urea. All were large, i.e., base capacities at or near 0.9-1 MMstpy  $\text{NH}_3$ . A few are still active but most are not, for one or more of the following reasons:
  - Drop in prices for nitrogen products.
  - Drop in prices for natural gas.
  - Tougher standards/costs for  $\text{CO}_2$  management/sequestering requirements, including issues about “ownership” of  $\text{CO}_2$  liabilities.
  - Overall high construction/capital costs.
  - Tighter investment climate.

- If any such projects get off the ground, none likely hit the market much before 2015.

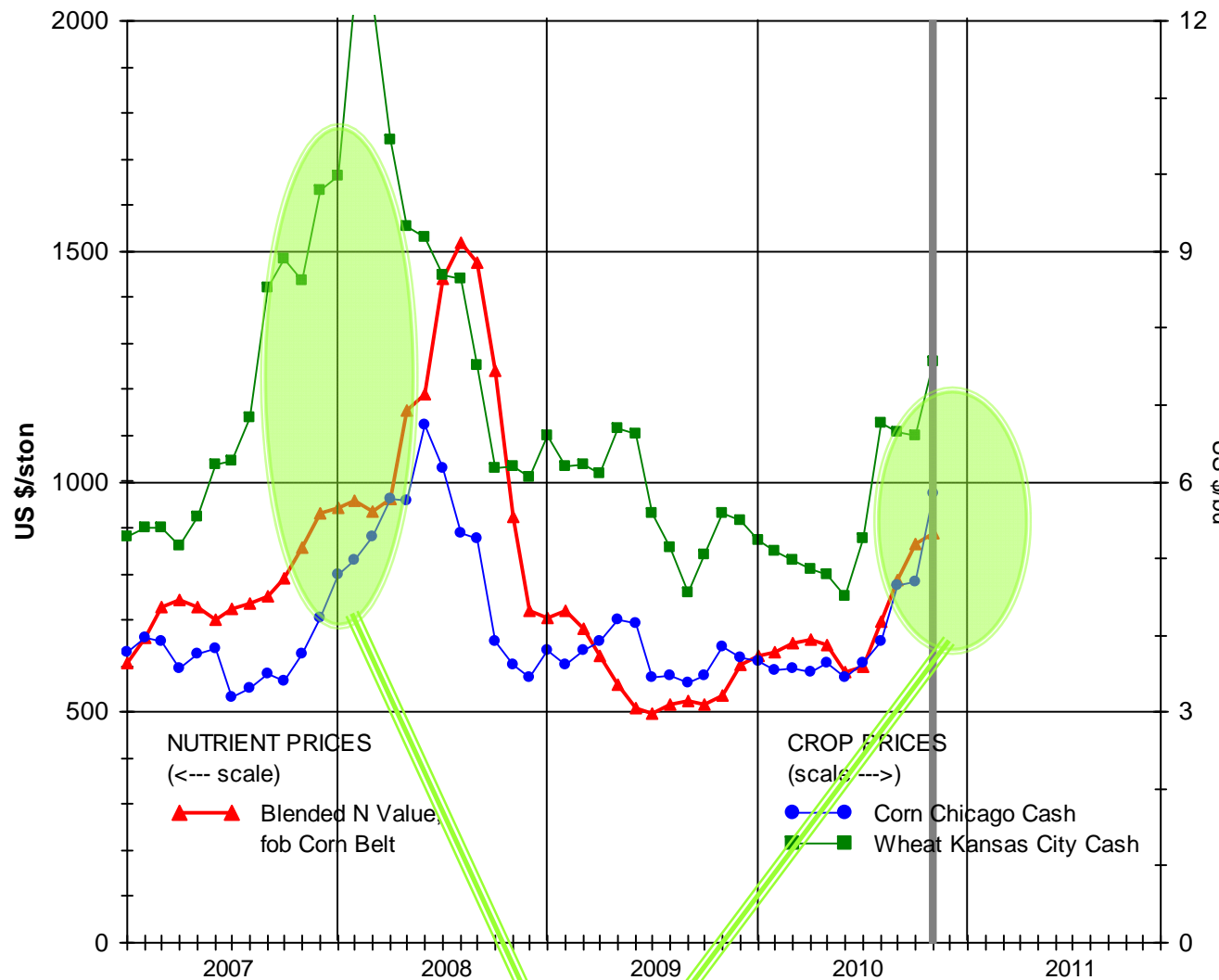
Blue, Johnson file as of: 11/10/10

**MAJOR N PRODUCTS:  
ESTIMATED DOMESTIC SUPPLY**

	H2 2010 (H1 FY 2011) VS.	
	<u>H2 2008</u>	<u>H2 2009</u>
AMMONIA	+ 7%	+ 14%
UREA	+ 4%	+ 15%
UAN	- 9%	- 3%
AN	- 26%	- 2%
AS	+ 8%	+ 16%
NET N	+ 1%	+ 9%

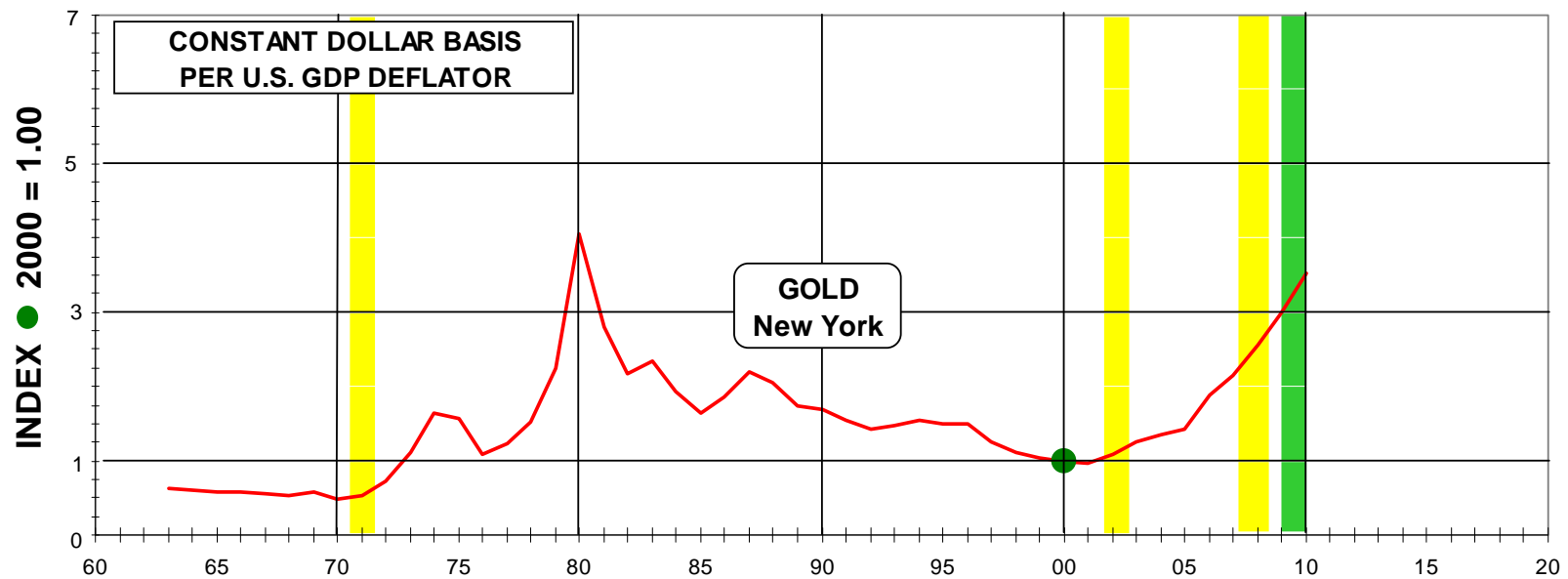
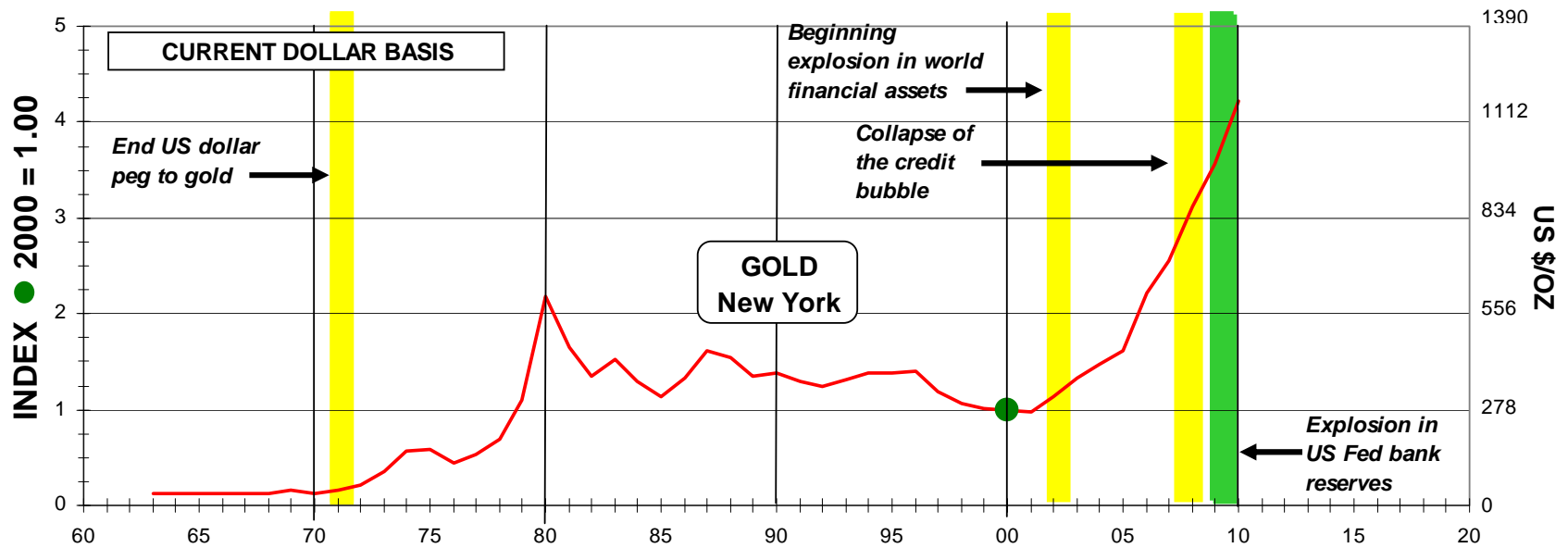
Blue, Johnson data file as of: 11/5/10

## U.S. FERTILIZER-CROP PRICE RELATIONSHIPS

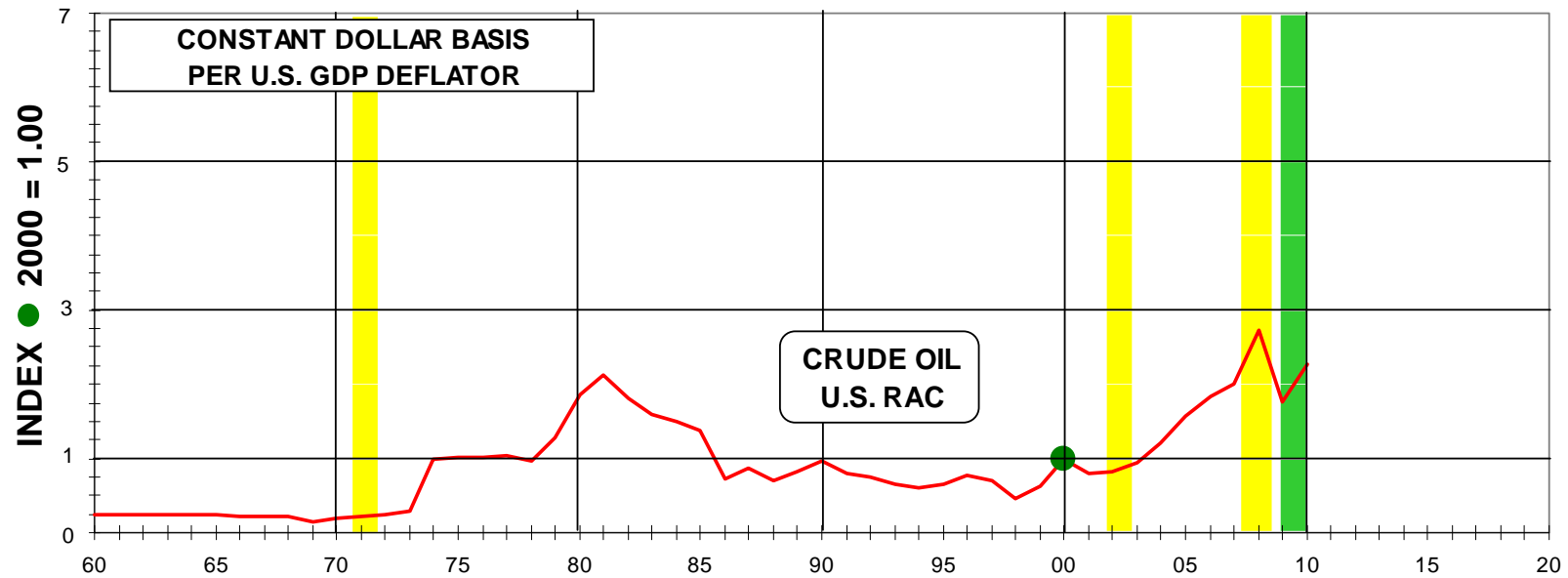
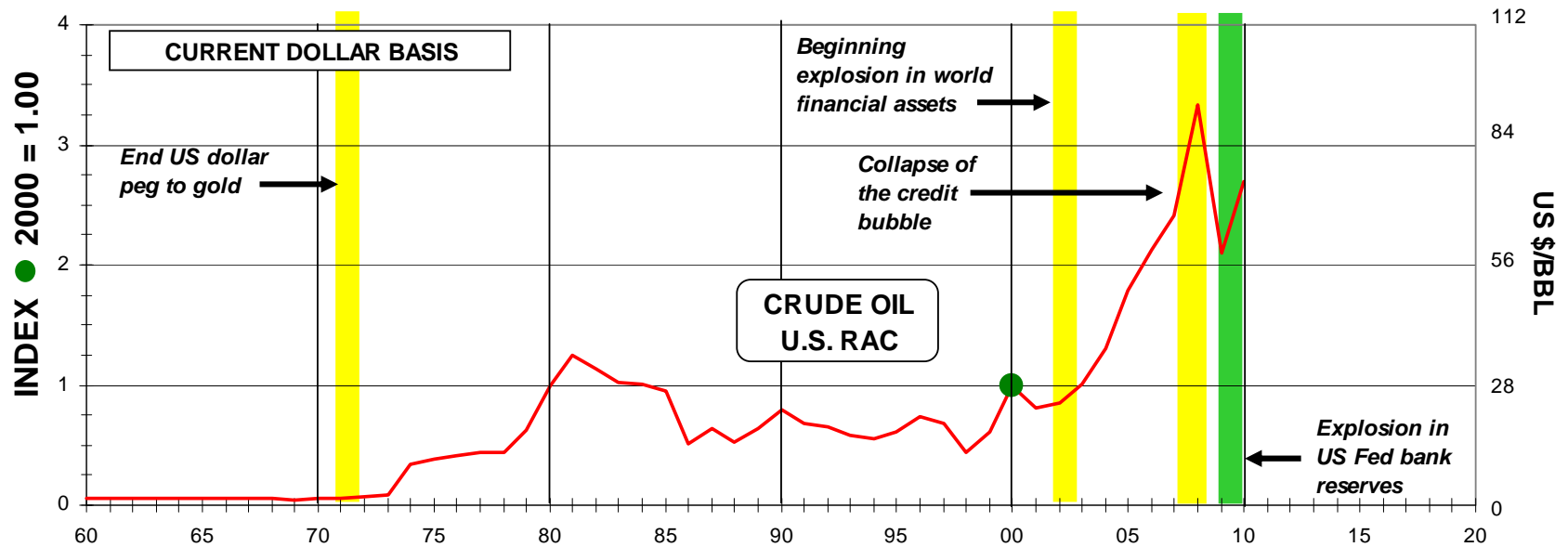


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## COMMODITY PRICES INDICES

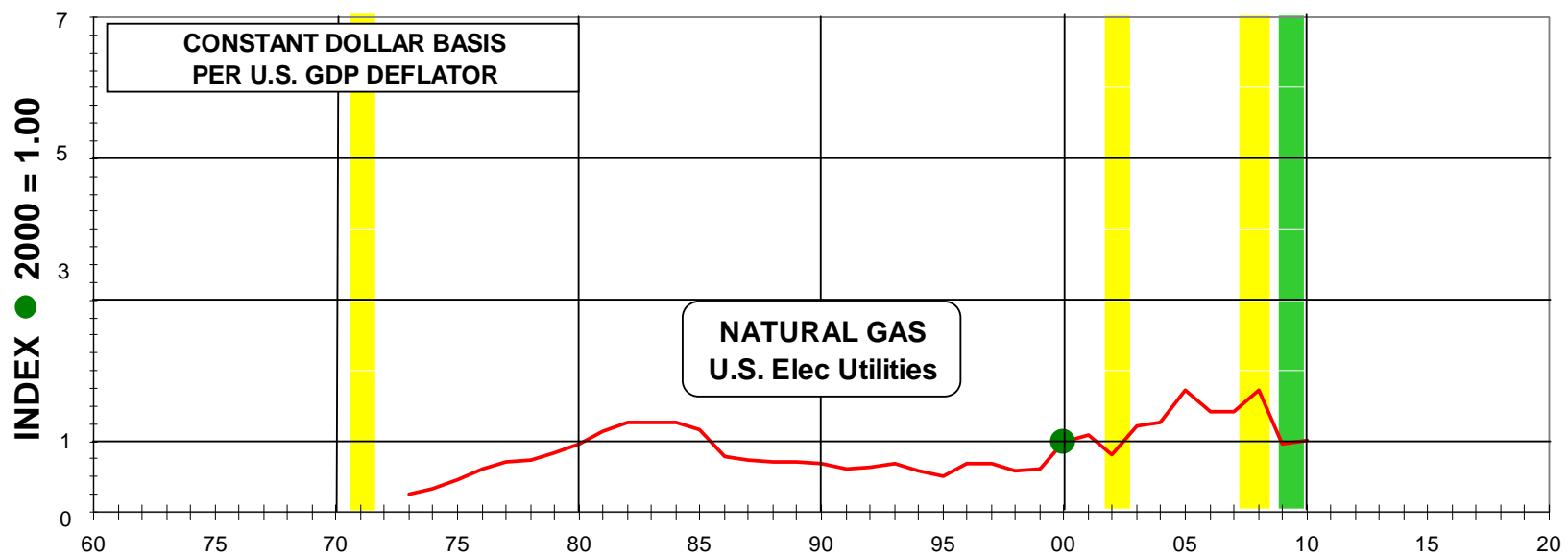
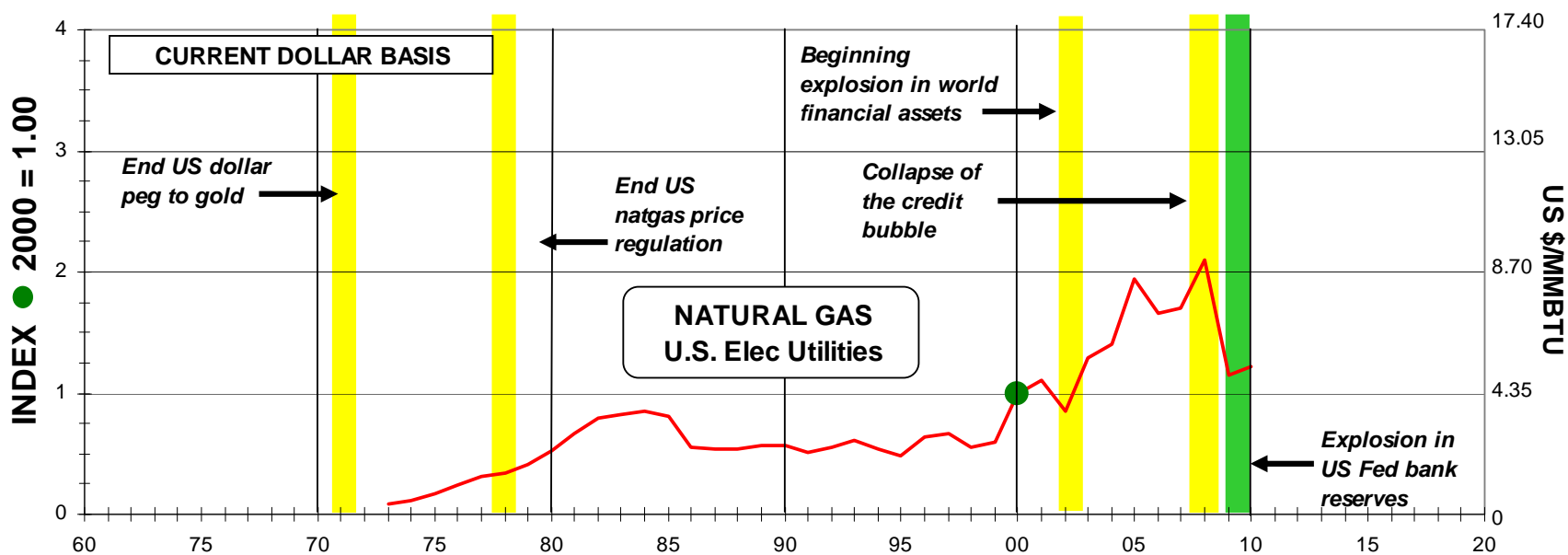


## COMMODITY PRICES INDICES



Blue, Johnson data file as of: 11/5/10

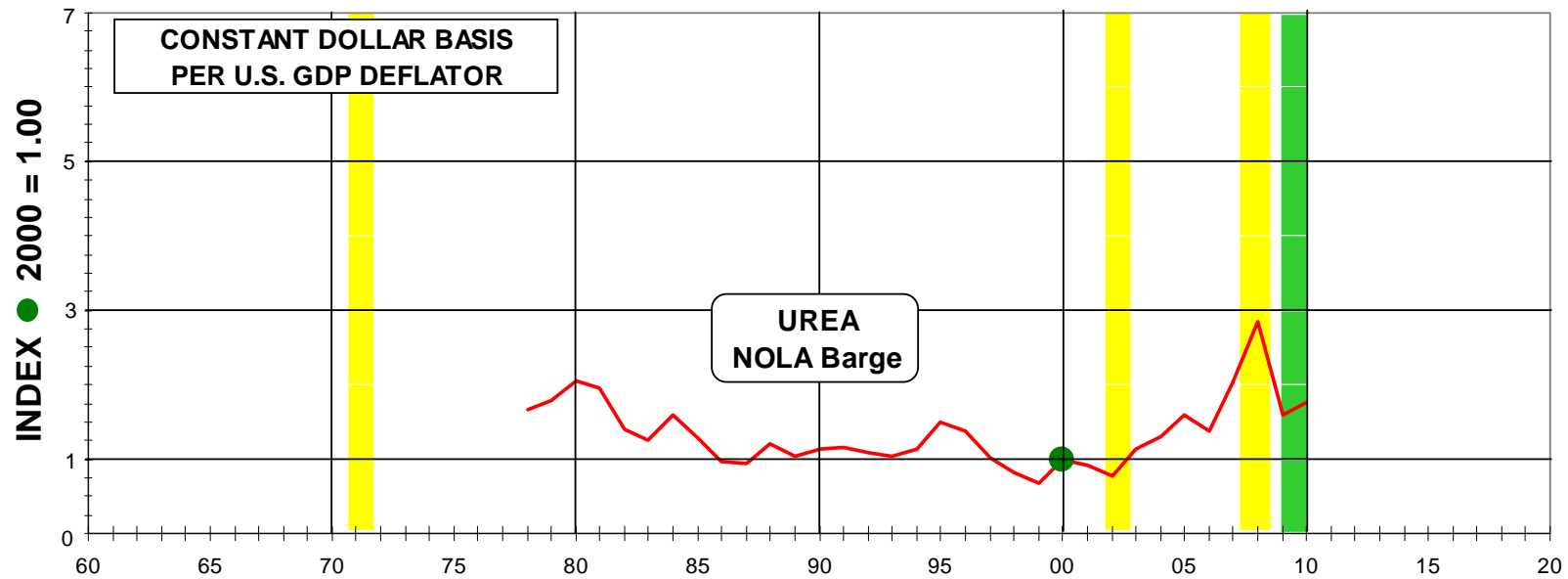
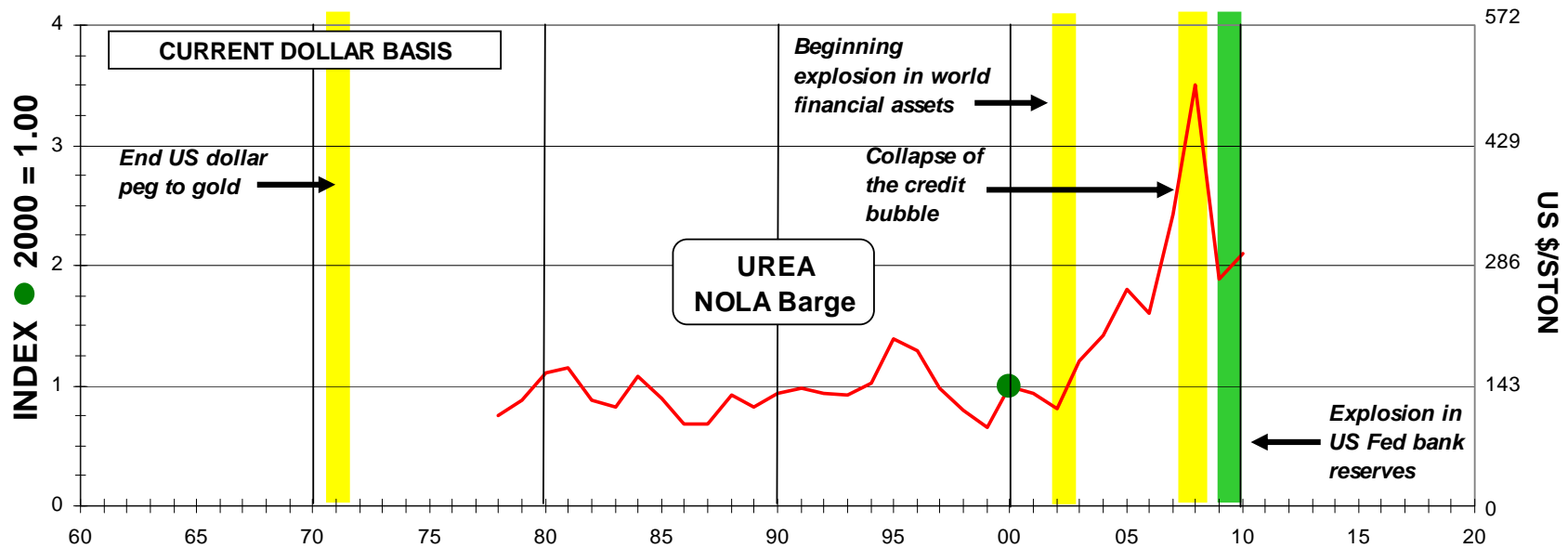
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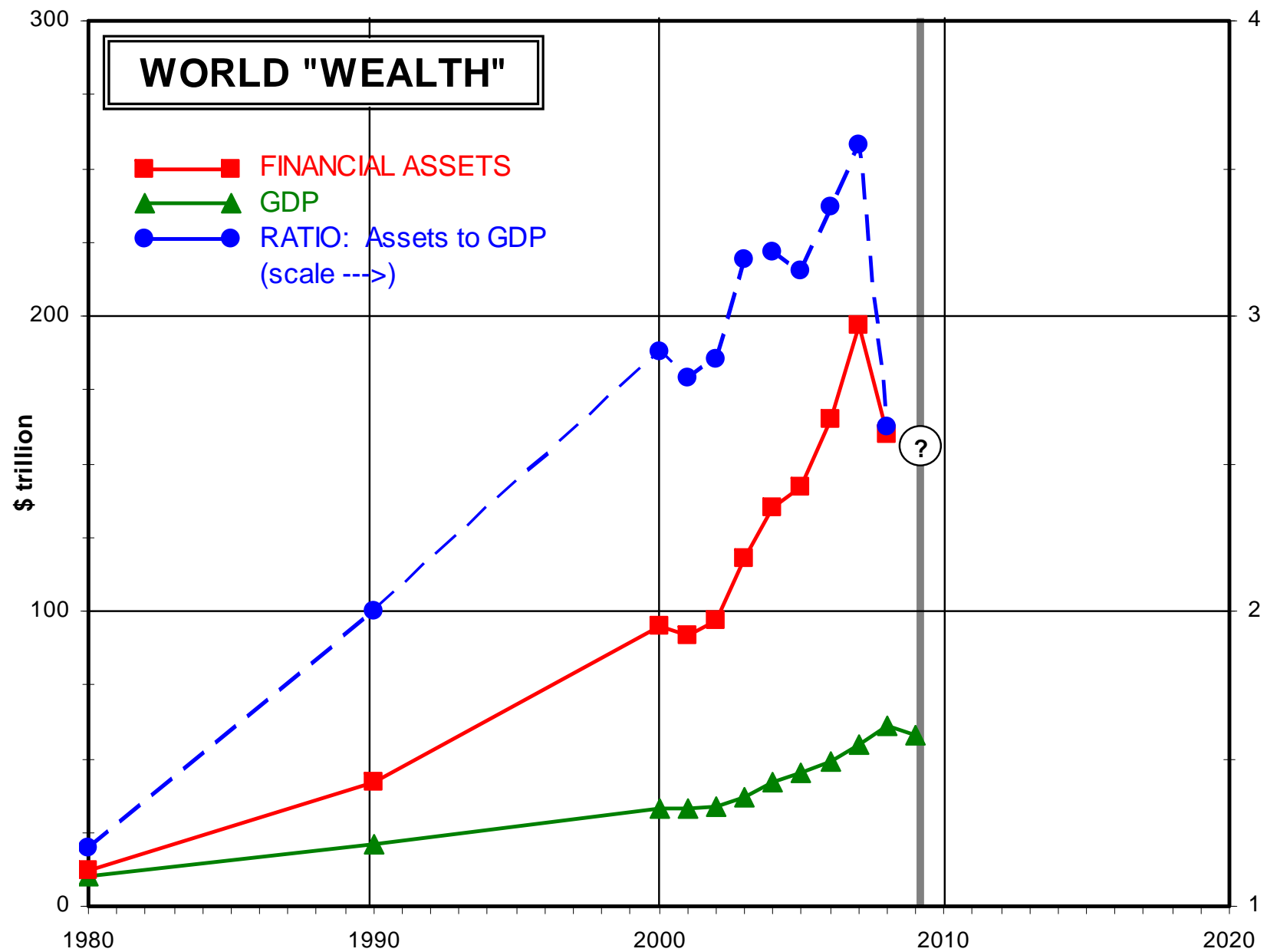


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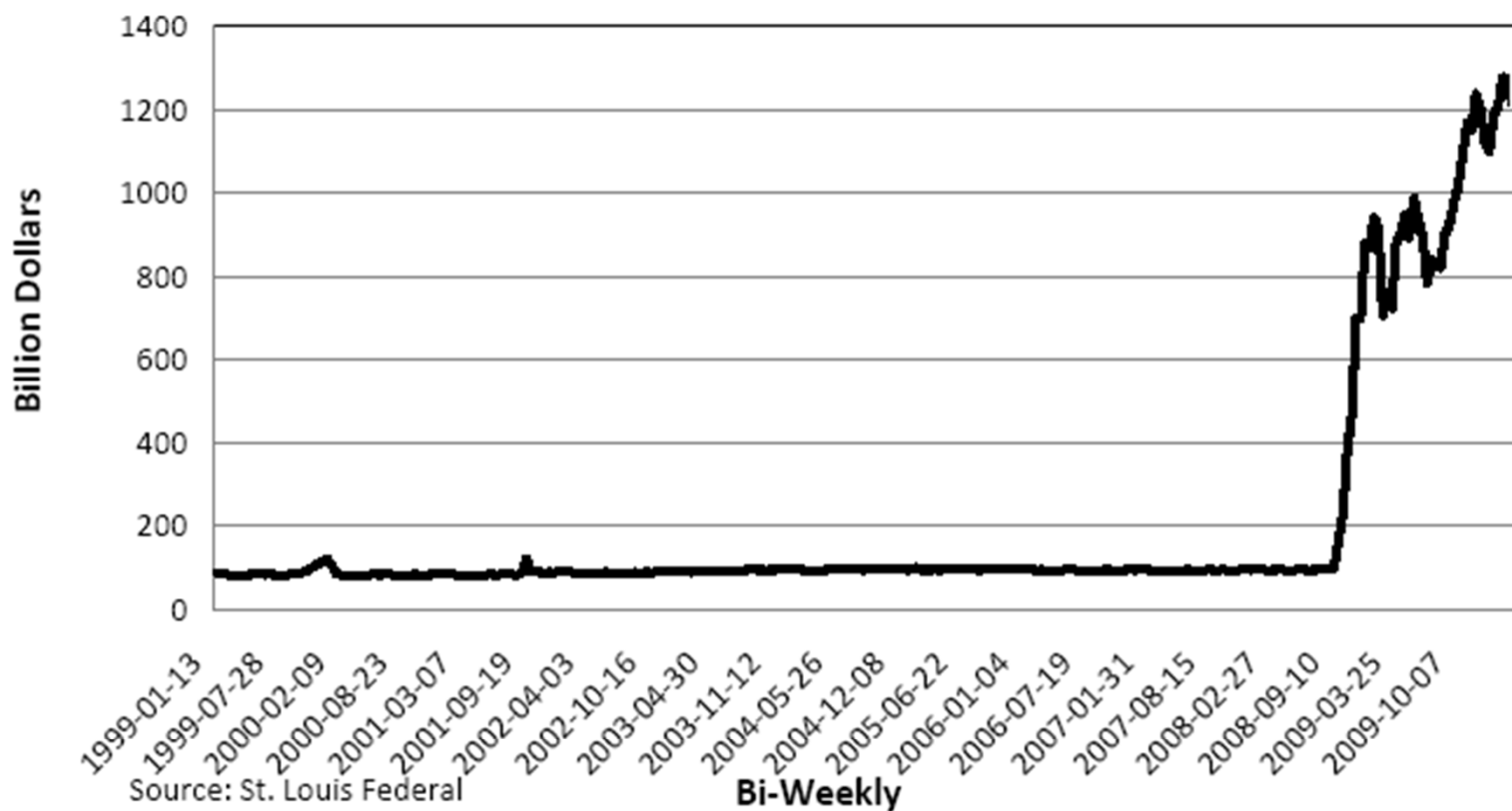
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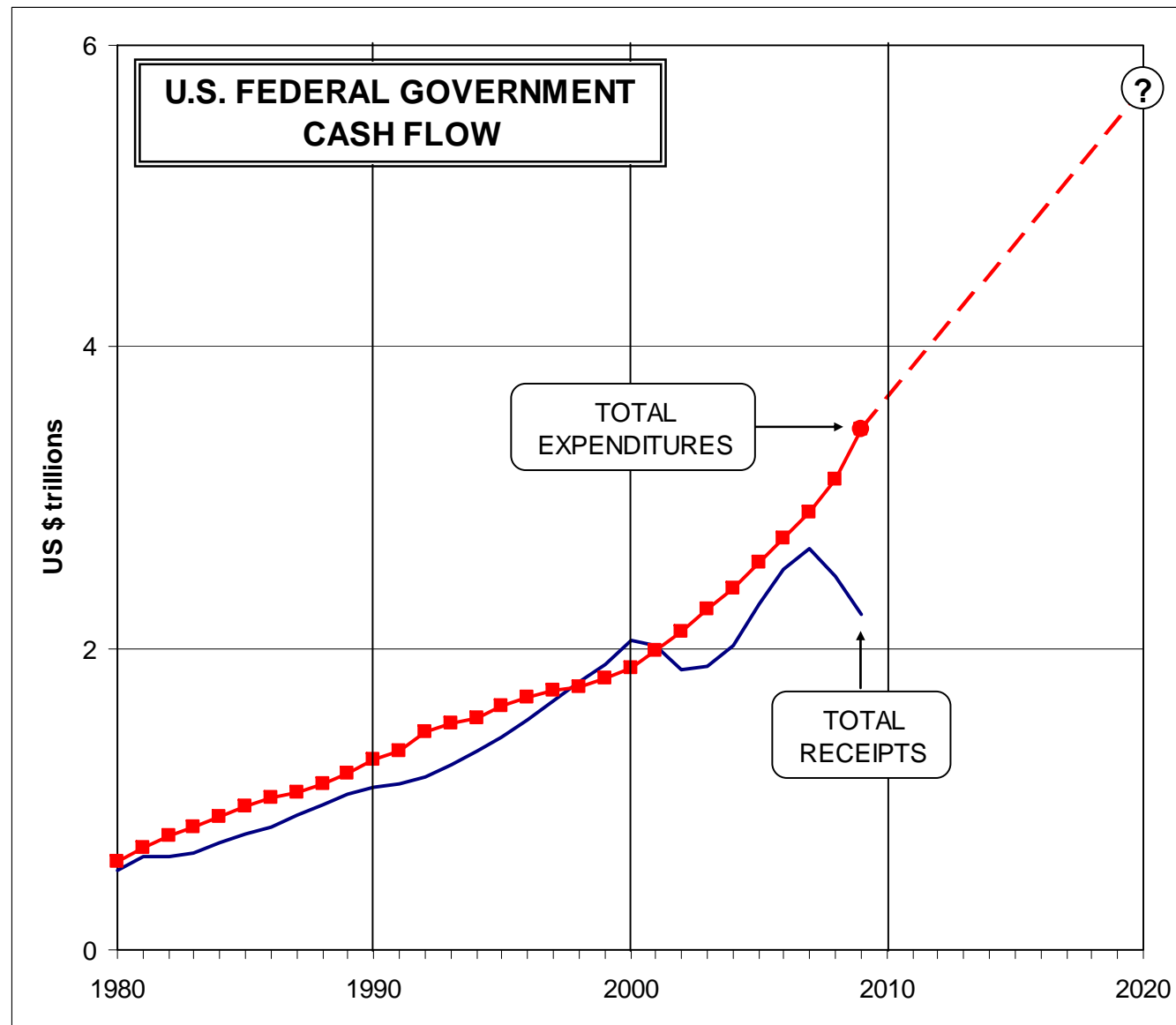
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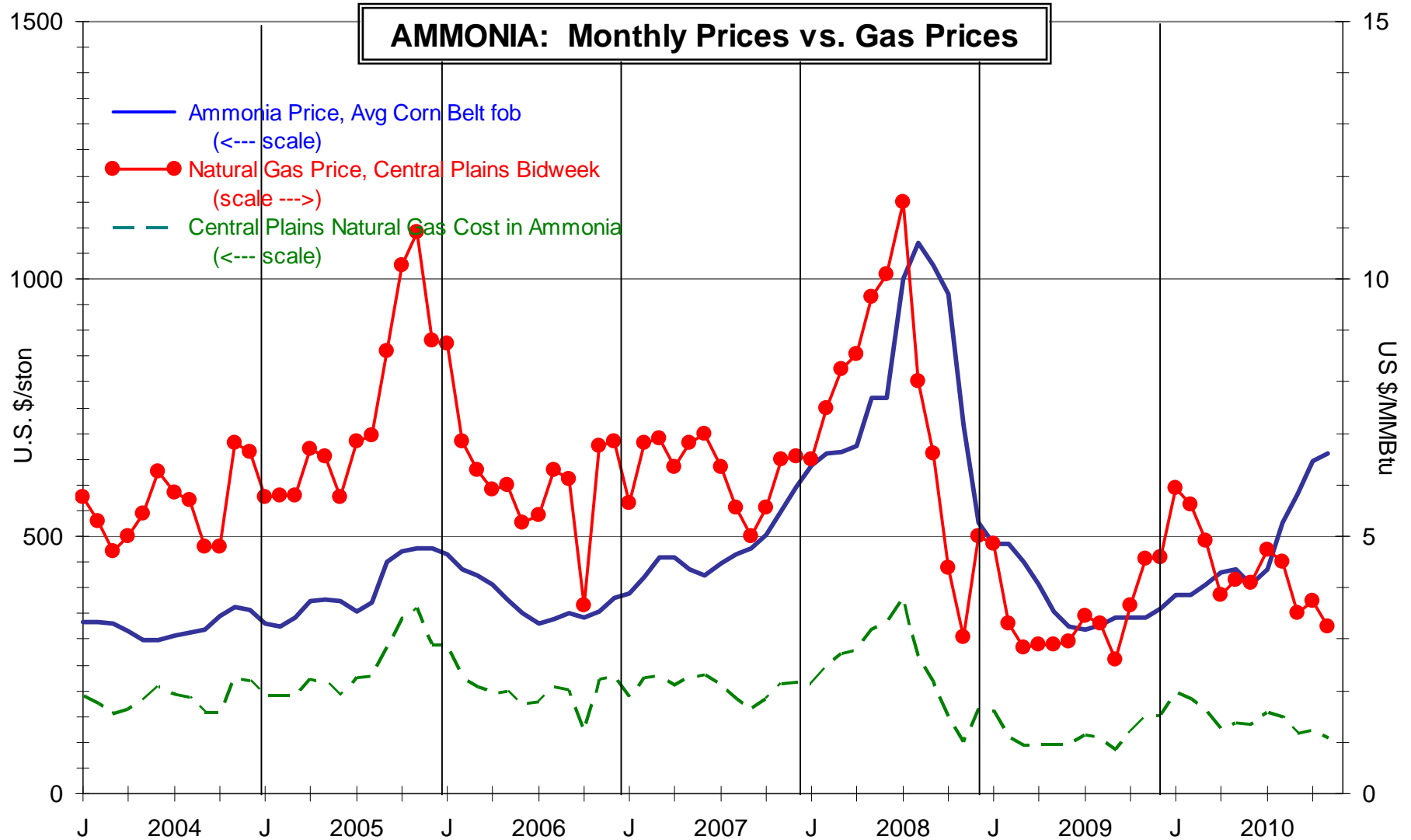
## Adjusted Bank Reserves 1999-April 7, 2010



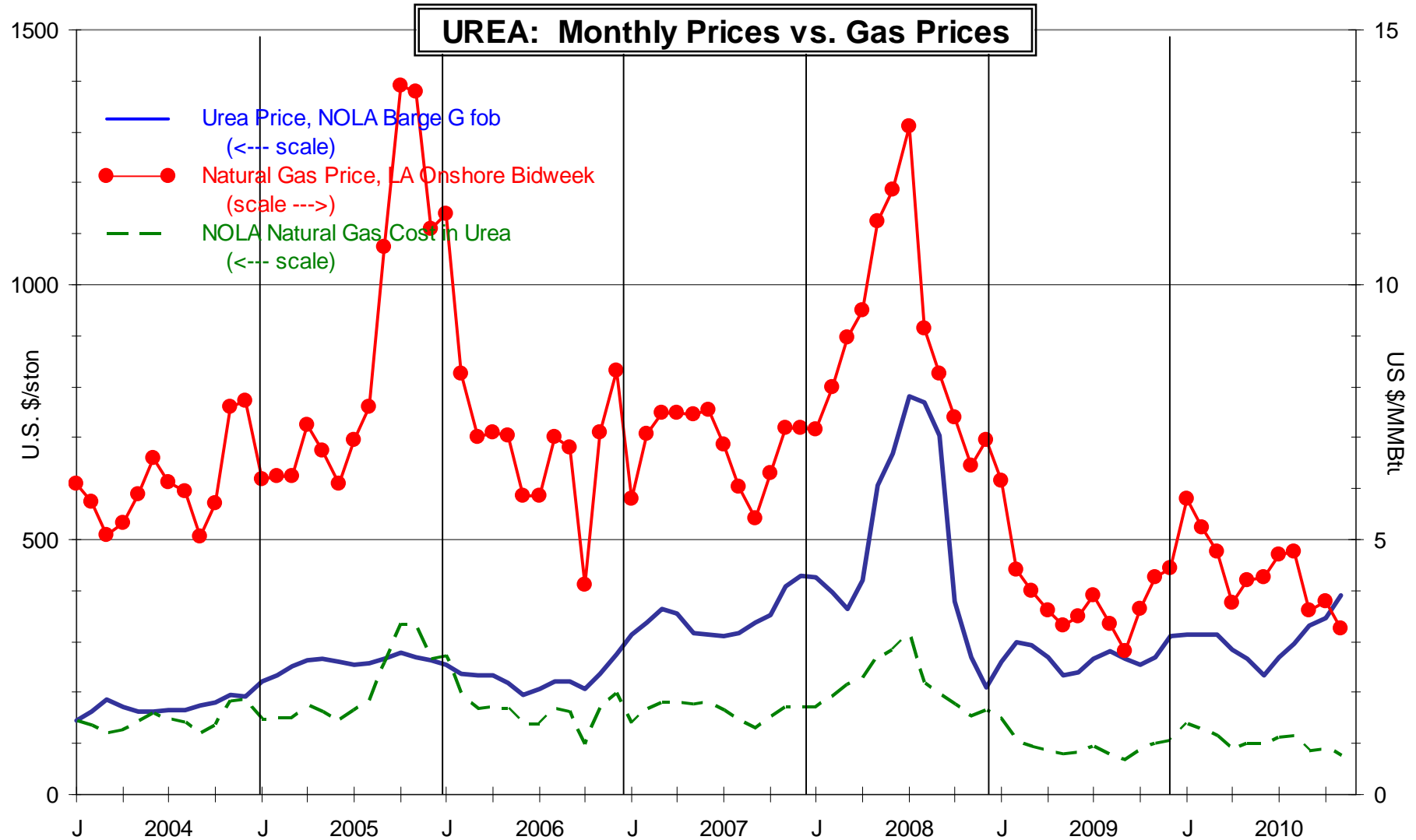
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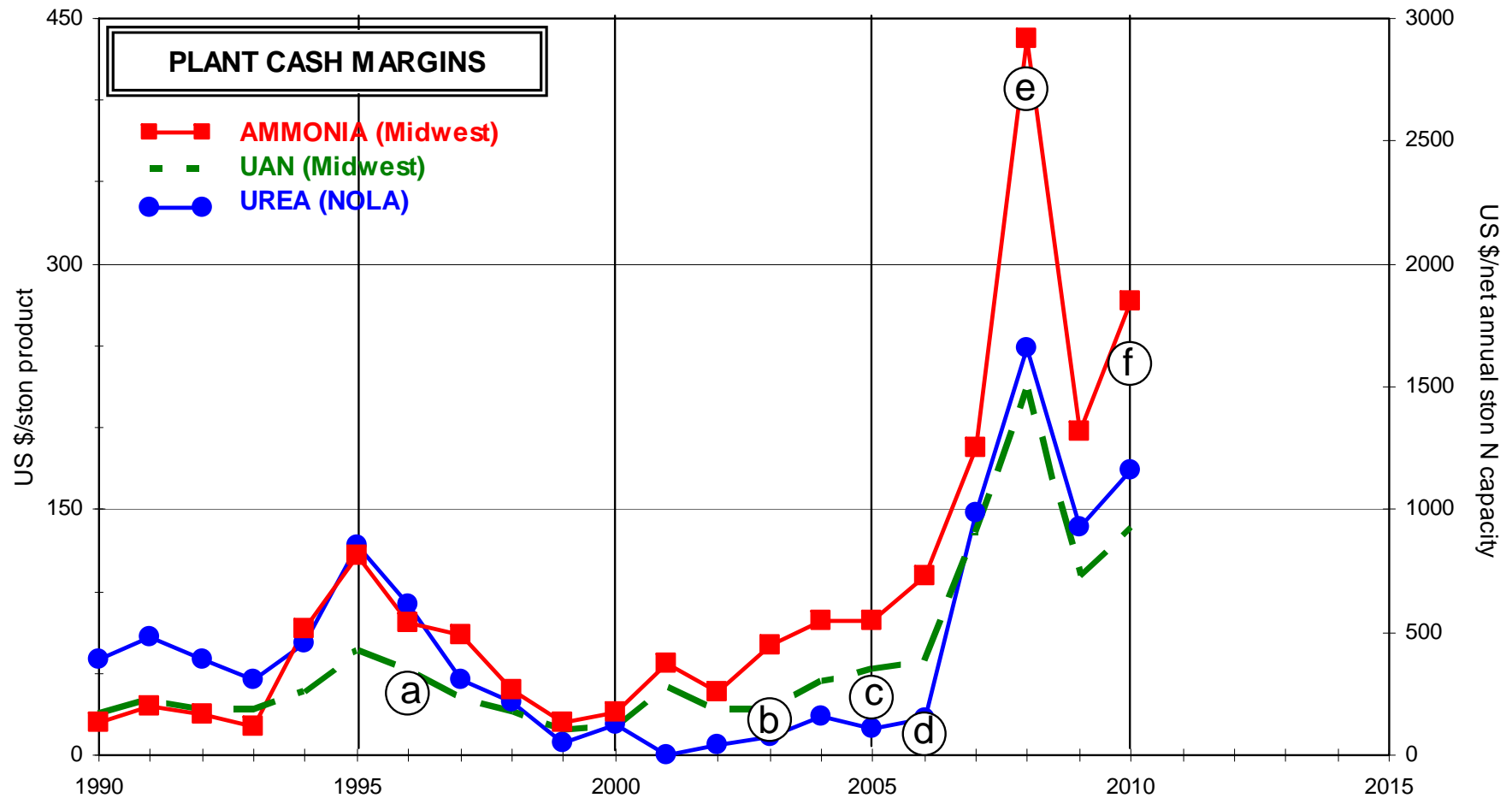


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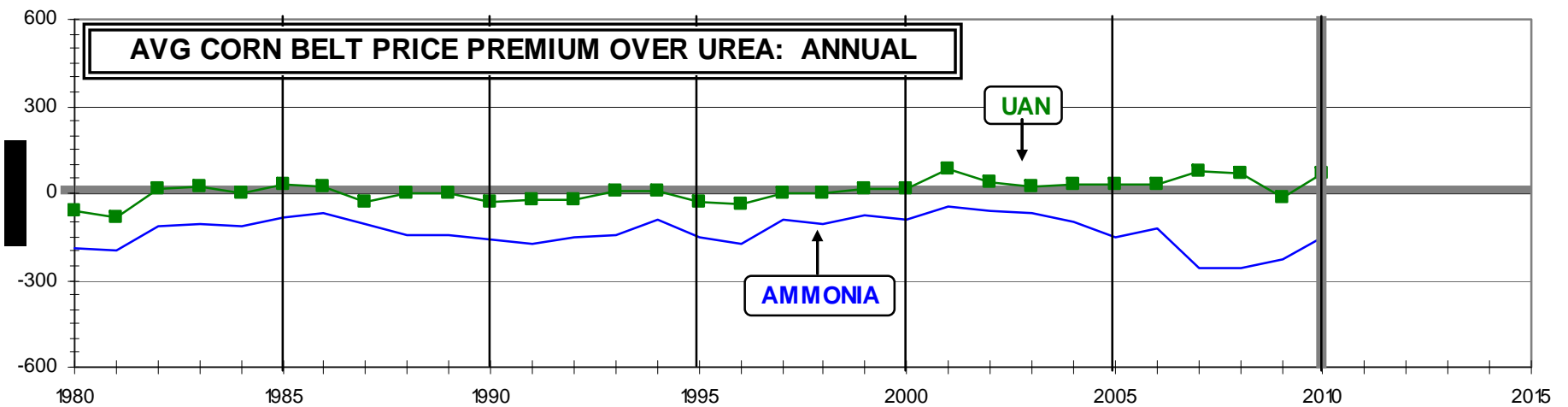
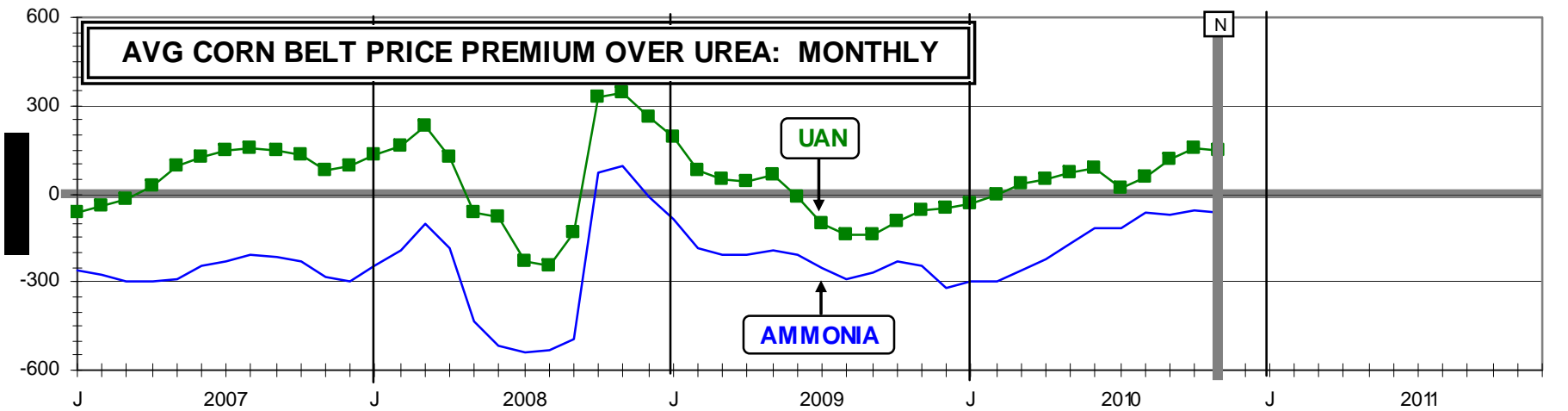
## BLUE, JOHNSON PROXY PLANT TRENDS: NITROGEN



Letter plots reflect transaction year, and approximate transaction value (right scale)  
per net annual ston N of sold assets, total effective ammonia capacity basis.

- |                                    |                                         |                            |
|------------------------------------|-----------------------------------------|----------------------------|
| (a) First Miss sold to MissChem    | (c) MissChem N assets sold to Terra     | (e) Saskferco sold to Yara |
| (b) Farmland N assets sold to Koch | (d) Simplot Brandon assets sold to Koch | (f) Terra sold to CF       |

Blue, Johnson data file as of: 11/5/10



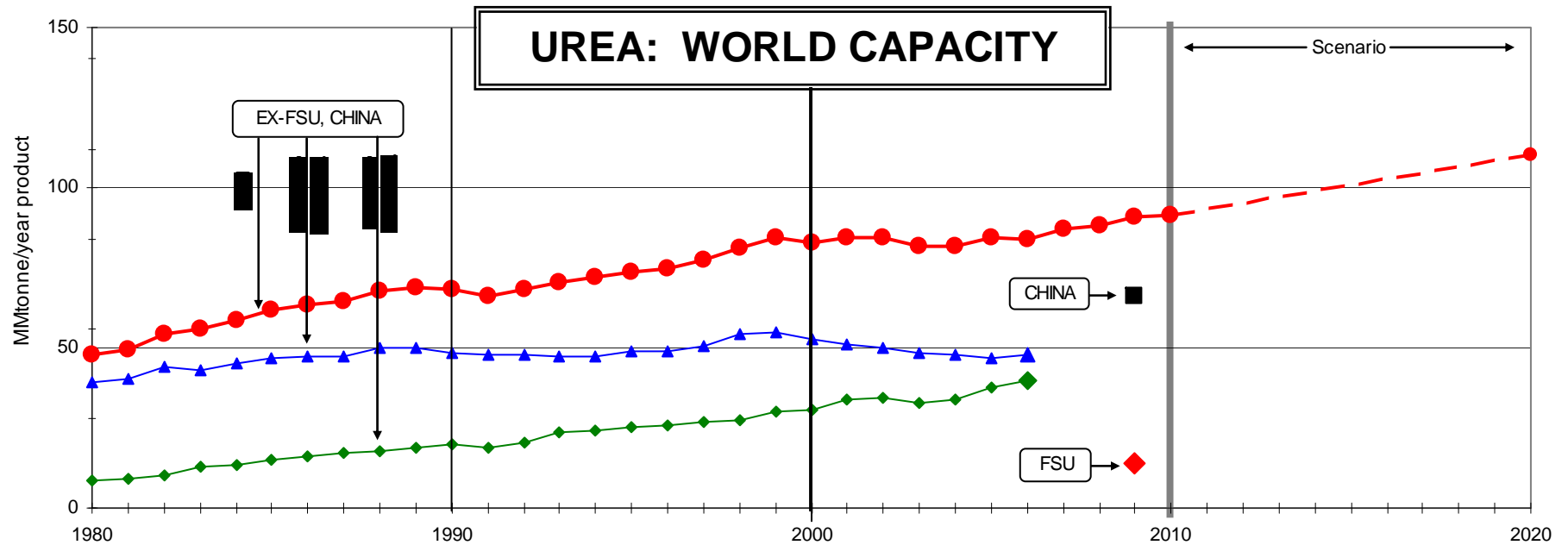
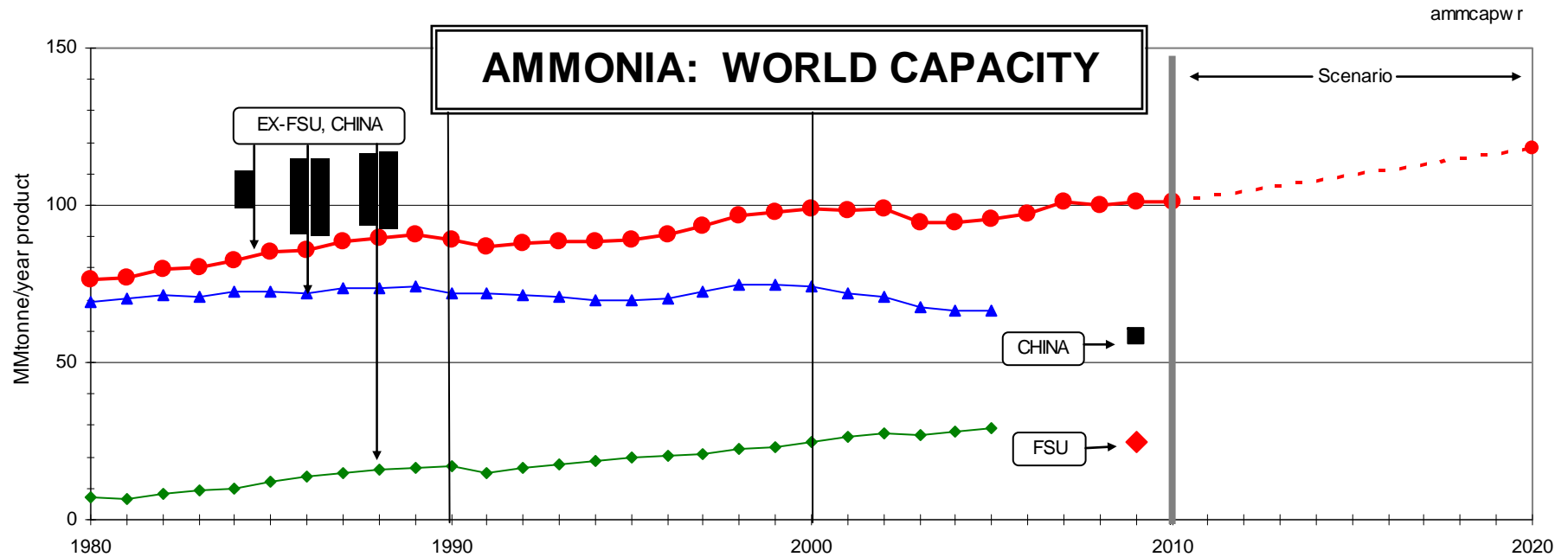


**Blue, Johnson data file as of: 11/10/10**

**WORLD CAPACITY GROWTH SUMMARY  
(MMtpy product, metric)**

	<u>AMMONIA</u>	<u>UREA</u>	<u>UAN 32</u>
<b>TOTAL WORLD CAPACITY, 2009</b>	<b>186</b>	<b>168</b>	<b>22.0</b>
<hr/>			
	<b>NEW PROJECTS (ex-China)</b>		
<b>2010</b>	<b>1.9</b>	<b>2.1</b>	<b>ne</b>
<b>2011-14 Possible</b>	<b>15.6</b>	<b>15.9</b>	<b>ne</b>

Blue, Johnson data file as of: 12/9/09



## IN CONCLUSION . . . .

- U.S. fertilizer use will be up in FY 2011, with N approaching 13 MMstons.
- All fertilizer prices are up, significantly correlated to crop prices. Major suppliers appear to be sticking with a strategy of supplying/taking orders for one or two months only at a given price, seems more prevalent than in past marketing programs.

- So, in a scenario where crop prices (especially corn) keep ramping up, suppliers will have not “oversold” at “current” prices (below opportunity). Or, if crop prices (corn) seriously retreat for some reason, suppliers have the option to drop prices so as to continue to move product. Lessons were actually learned in 2007, 08, 09.
- With corn harvest occurring relatively early, demand for P, K, and ammonia for Fall application is/has been pretty strong. Re P&K, though, the uncertainty becomes: if a lot

- goes down now, to what degree will that impinge on Spring demand?
- In absolute terms, we see no basic, inherent shortage of N, P & K supply capability for both the domestic and international market. The principle issues are, as always, supply at what price, and is it/will it be in the right place at the right time?