agri benchmark *agri benchmark* **Cash Crop Conference 2009**

from June 7th to June 12th, 2009
in Cambridge/UK - Haycock Hotel, Wansford

Soybean Production:

USA versus BRAZIL

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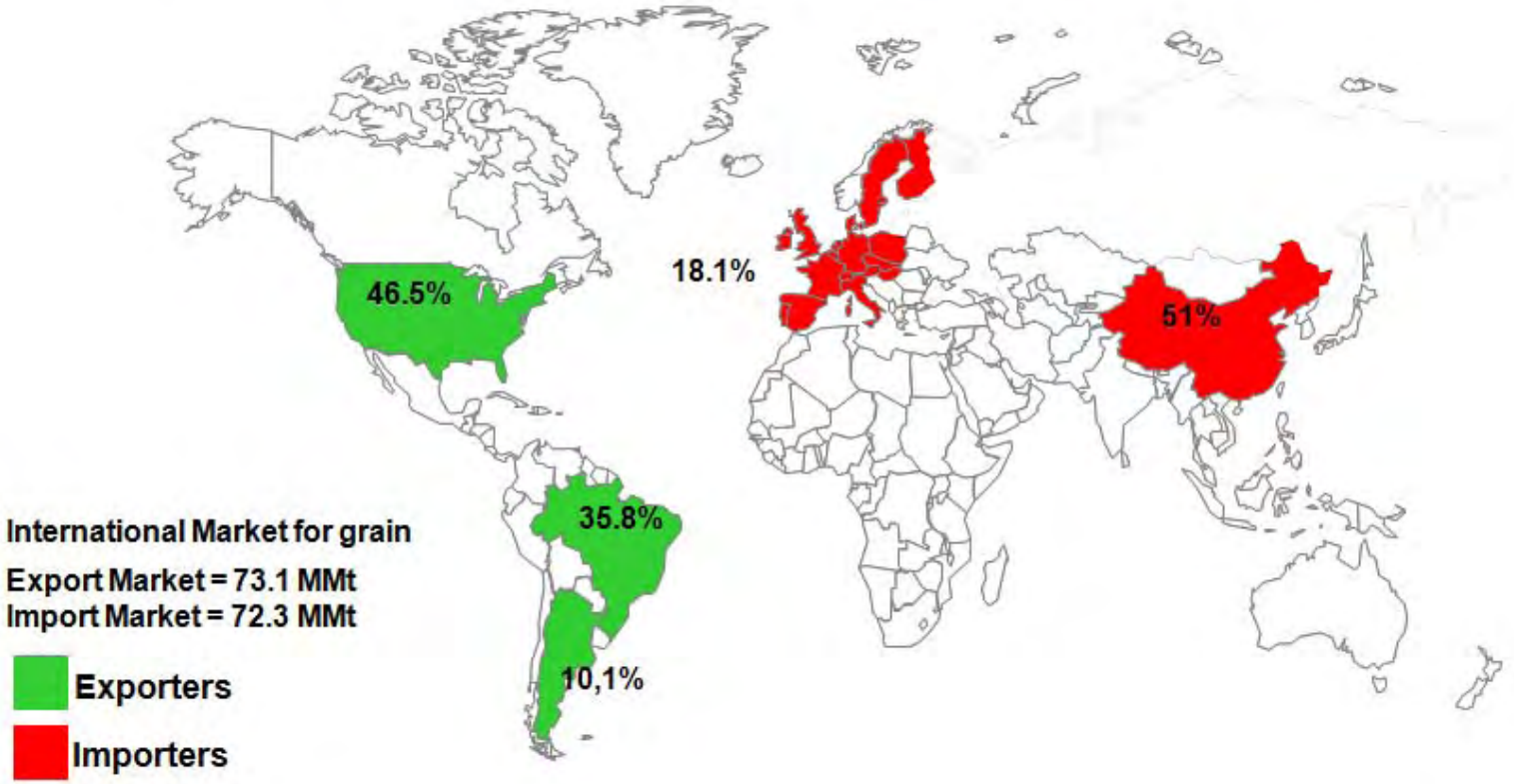
Presentation structure

- Introduction
- Subject of study
- Soybean production in the USA and in Brazil
- Results
- Remarks
- Future issues

World Soybean Production

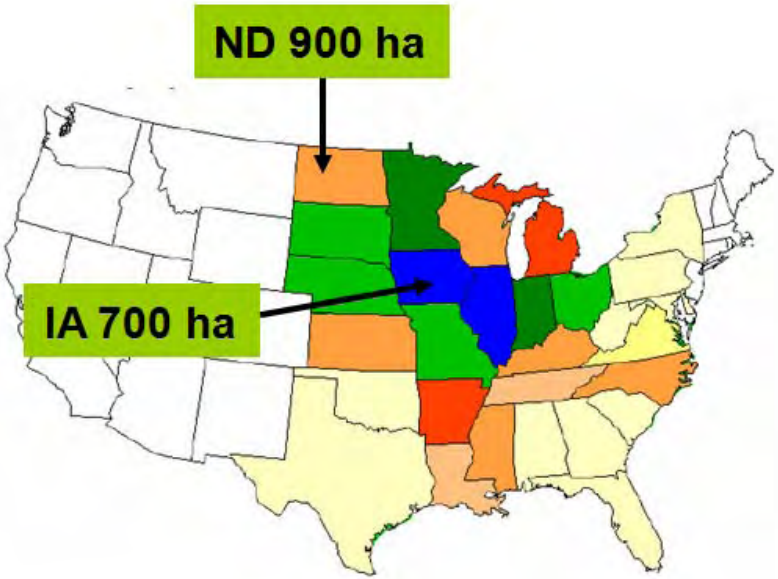
Soybean world production was 218,2 MM tones in 2008.
Three major producers account for 80% of world production.

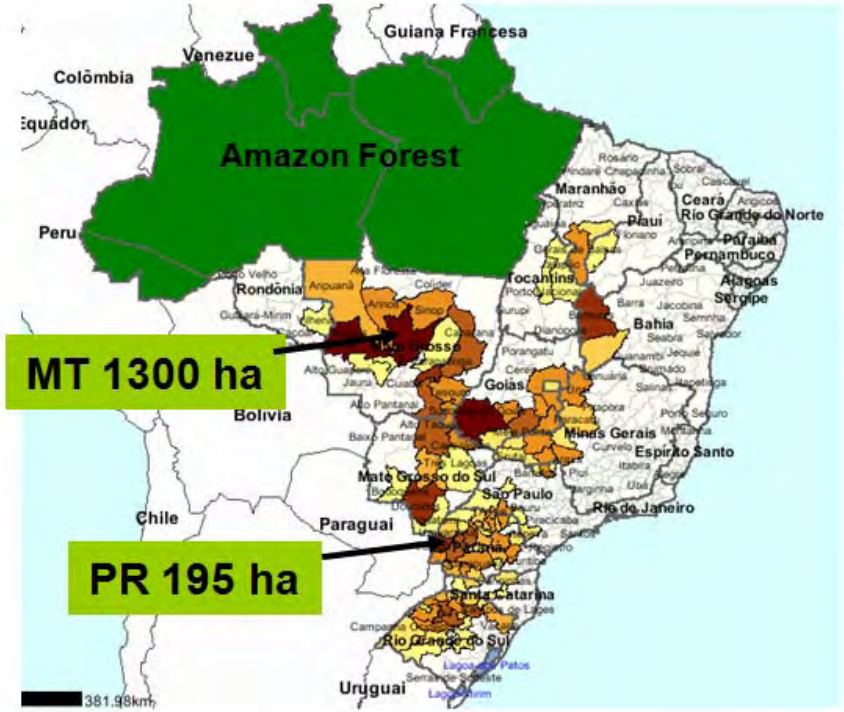


Fonte: USDA – organized from researchers

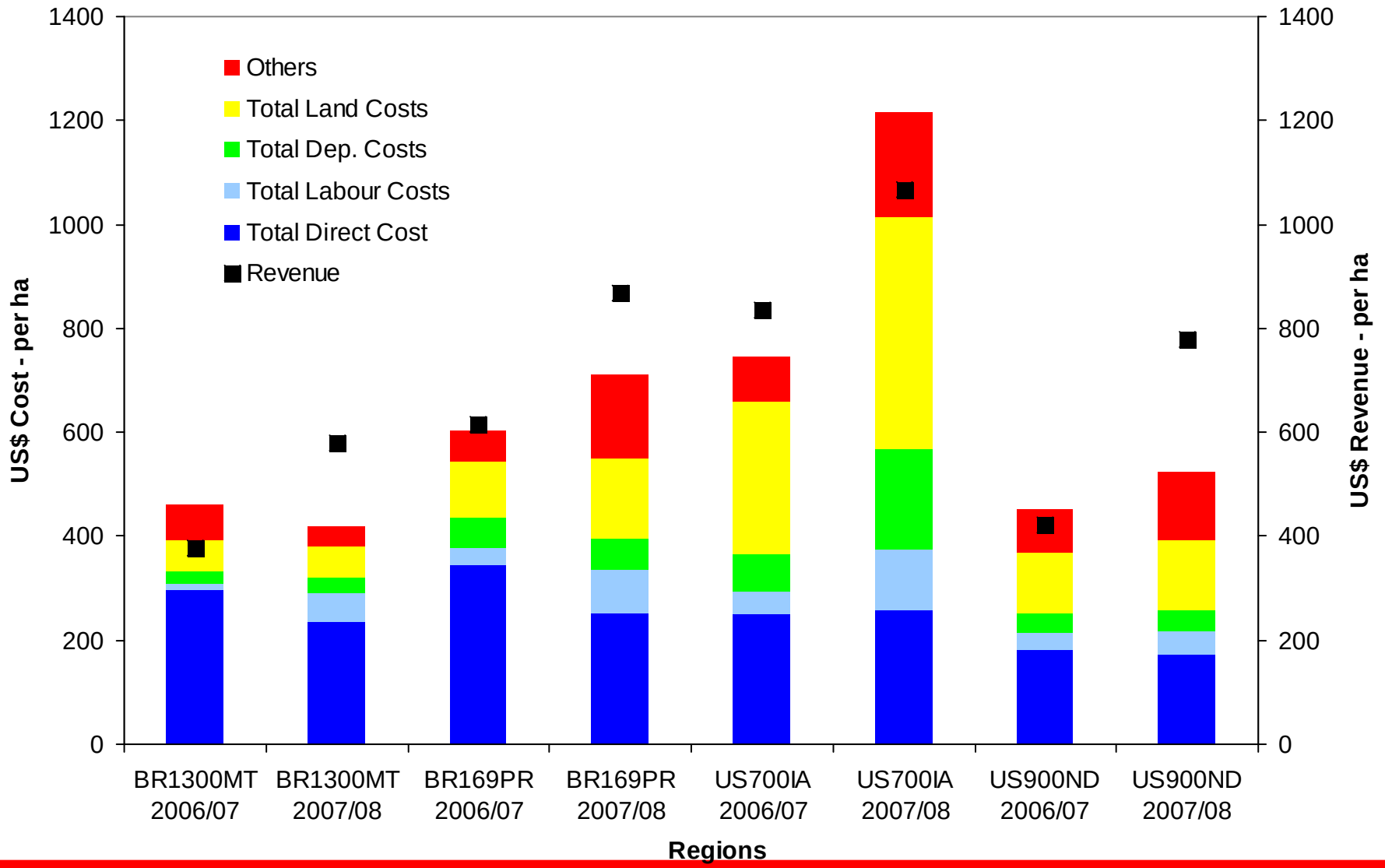
Typical farm researched

The typical farm information was collected by panel. Data for USA was obtained from Iowa University team and for Brazil from Cepea/USP.

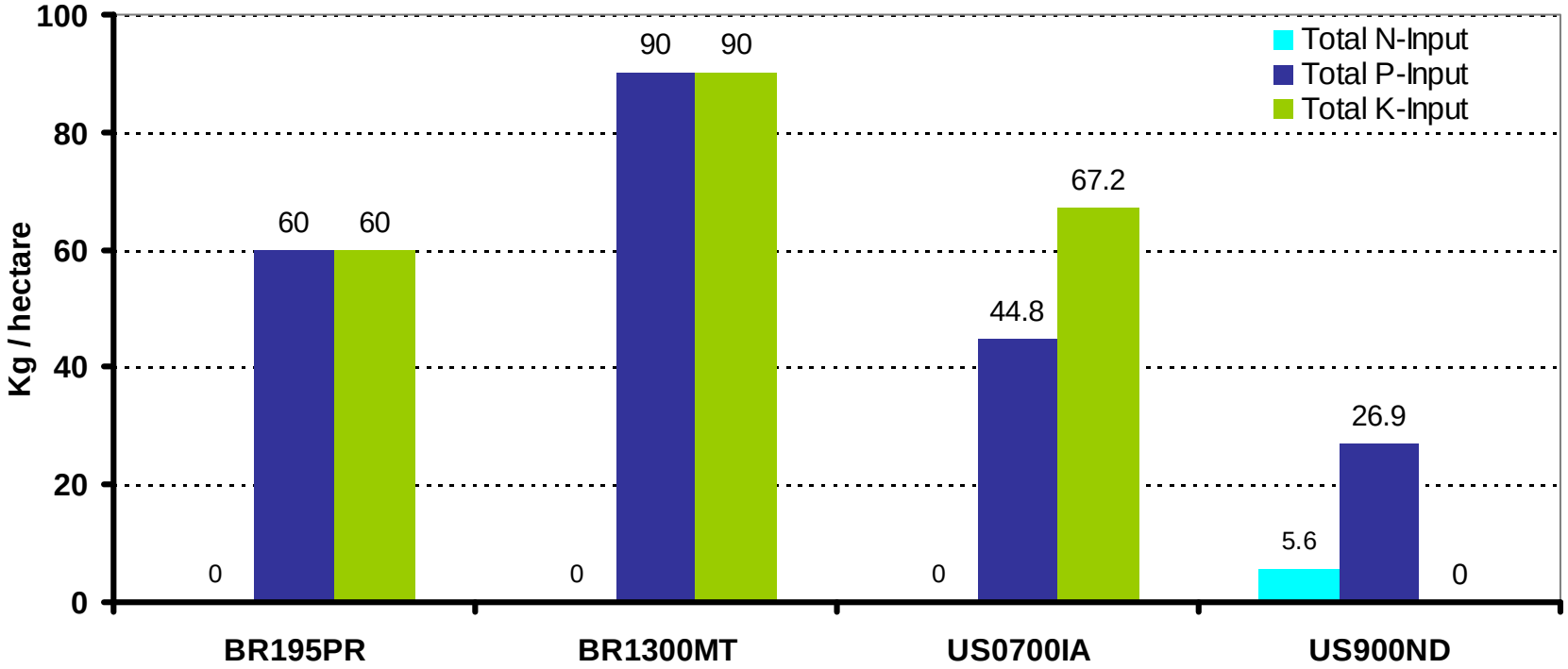




Soybean Production Costs vs. Revenue

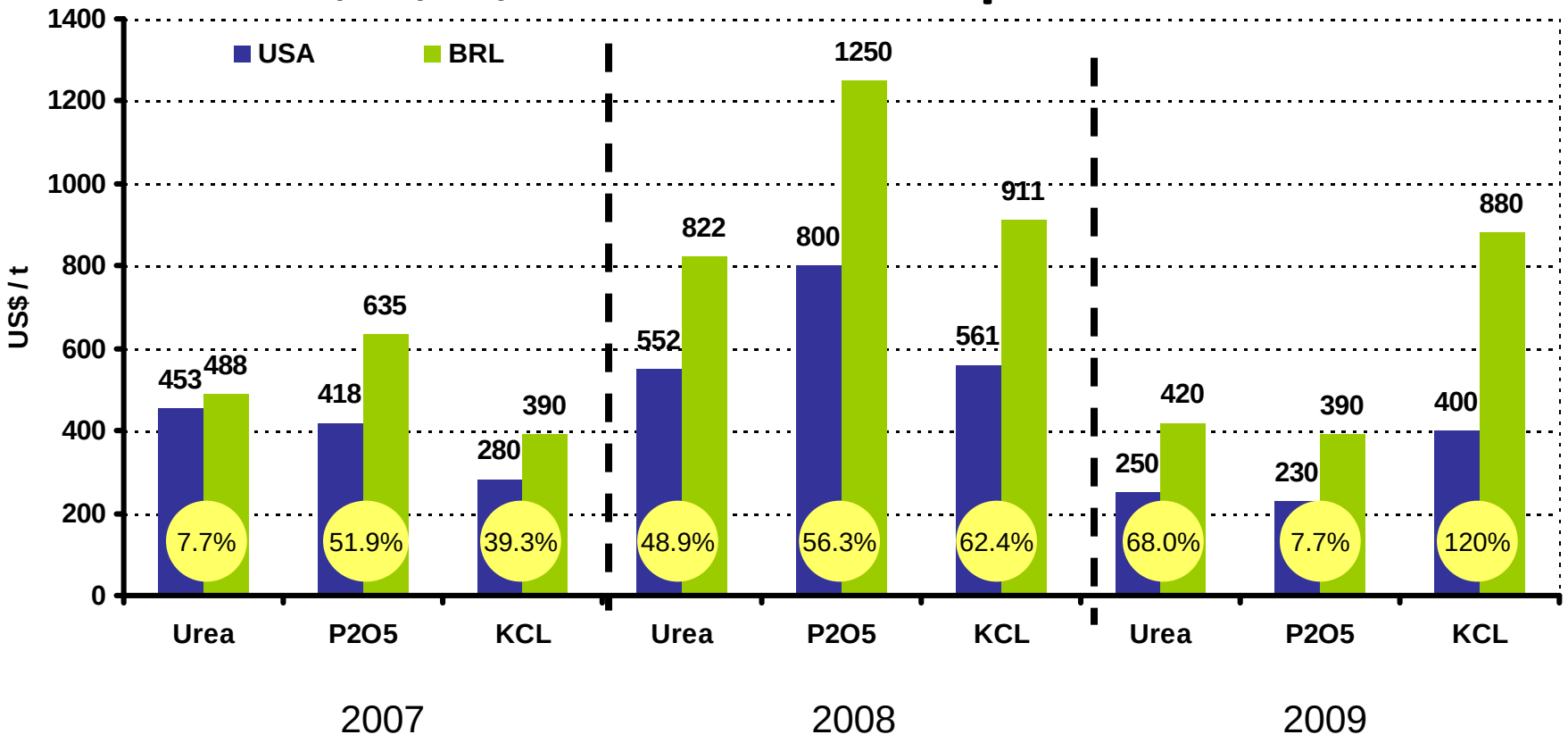


What is the quantity of fertilizer used to produce soybeans in 2007?



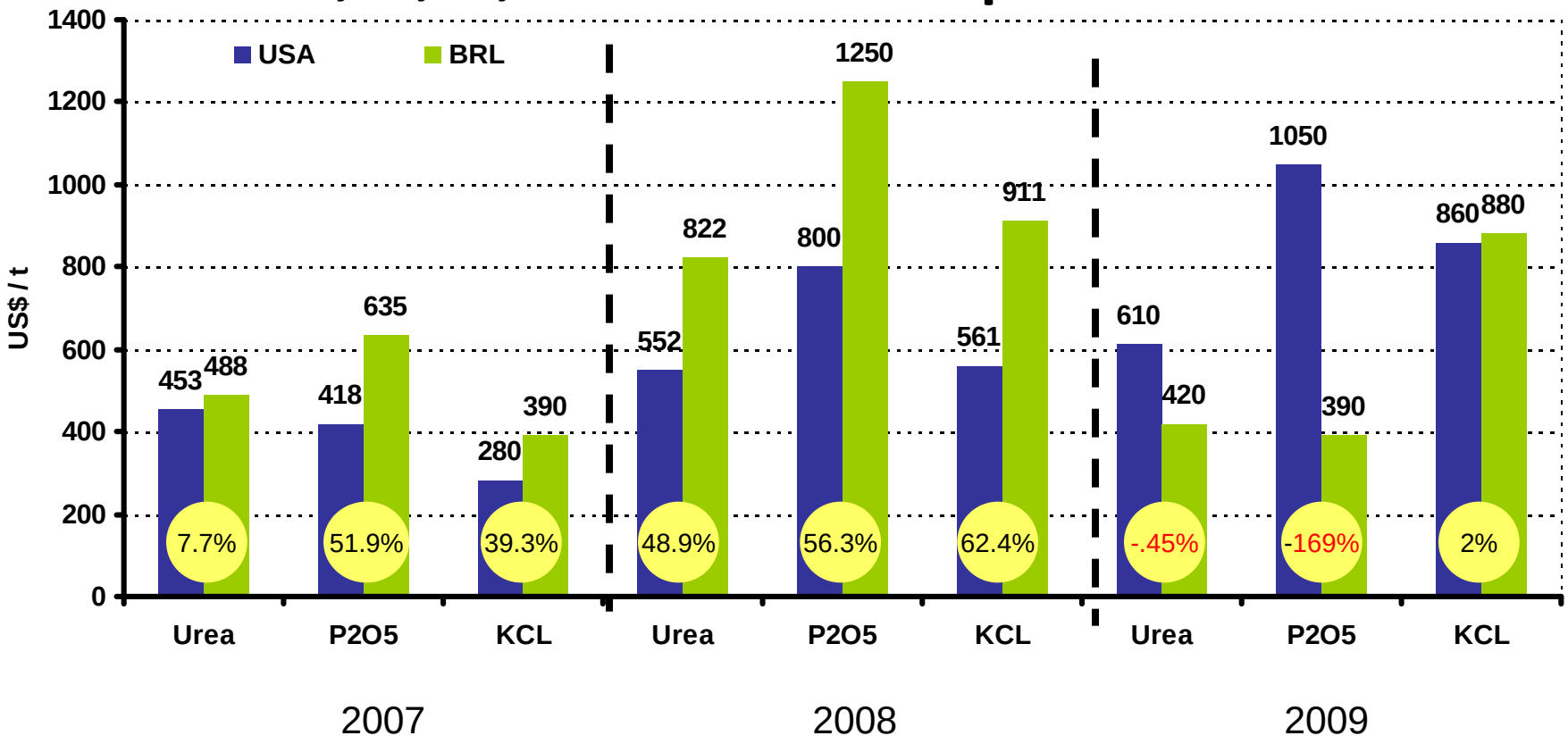
- BRL does not use Nitrogen (N) to produce Soybeans;
- BRL-MT uses 90 units of Potash (K) per hectare as compared to 0 units in US-ND and 2 or 3 times more Phosphorus (P);
- BRL-PR uses 2/3rds the amount of K and P as compared to MT; 1.23 times as much P compared to ND and 60 units of K per hectare compared to 0 for ND;

N,P,K, Price Comparison



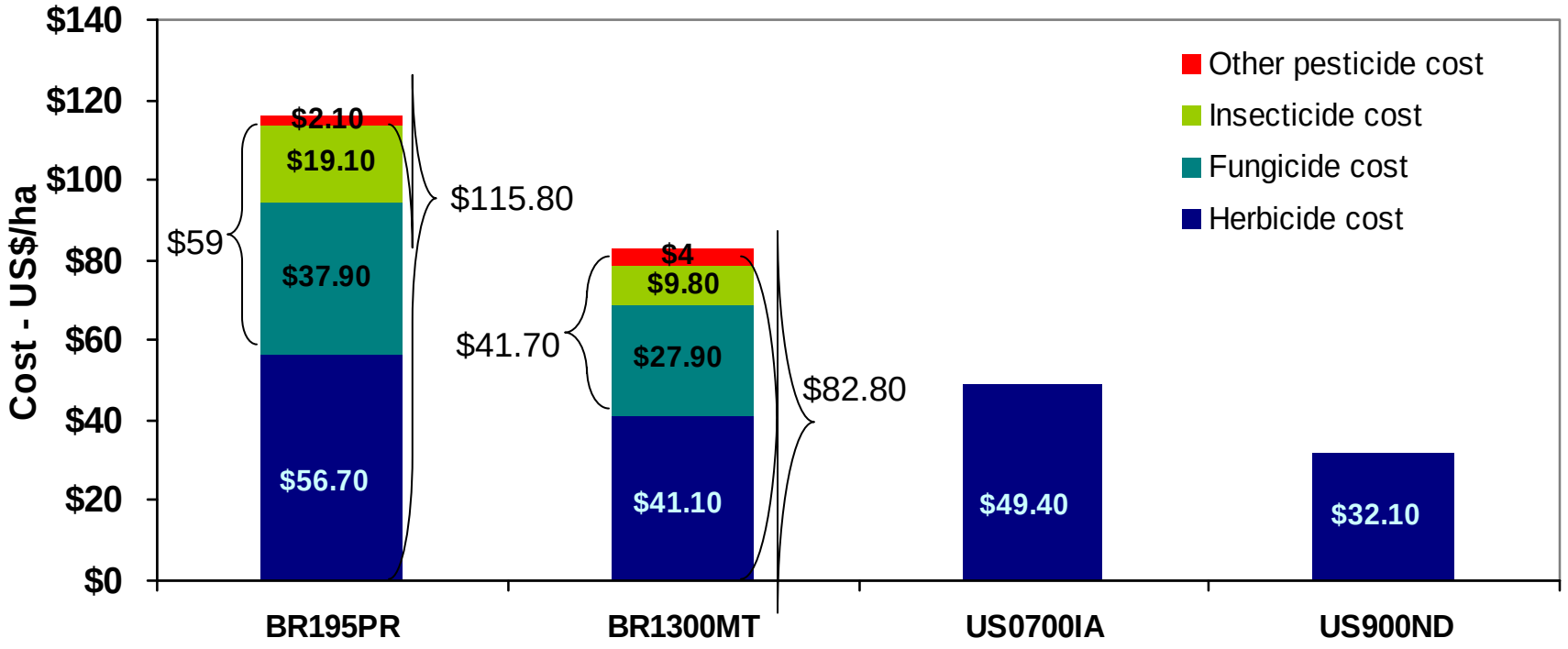
- The fertilizer prices for N,P and K are generally higher in Brazil than the USA.
- In 2008, N was 48.9%, Phosphorus 56.3%, and Potash 62.4% more expensive in Brazil than the USA.
- The average phosphorus price reached US$ 1,250/t in Brazil, while US$ 800 in USA in 2008, it's 1.56 time higher than the USA. Already, potash price was traded US$561 in the USA and US$ 911 in Brazil, it is1.62 time lower than Brazil.

N,P,K, Price Comparison



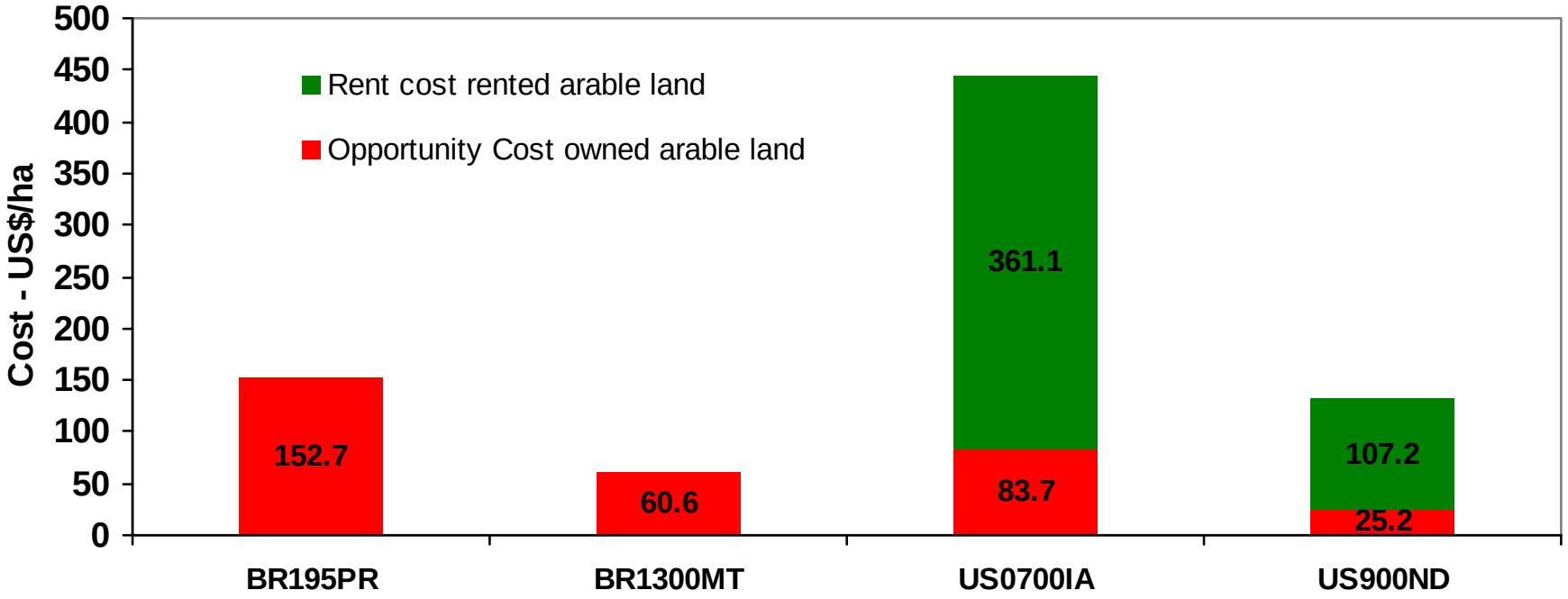
- The fertilizer prices for N,P and K are generally higher in Brazil than the USA.
- In 2008, N was 48.9%, Phosphorus 56.3%, and Potash 62.4% more expensive in Brazil than the USA.
- The average phosphorus price reached US$ 1,250/t in Brazil, while US$ 800 in USA in 2008, it's 1.56 times higher than the USA. Potash prices traded at US$561 in the USA and US$ 911 in Brazil, which is 38% lower than Brazil.

Cost of chemicals to produce soybeans?



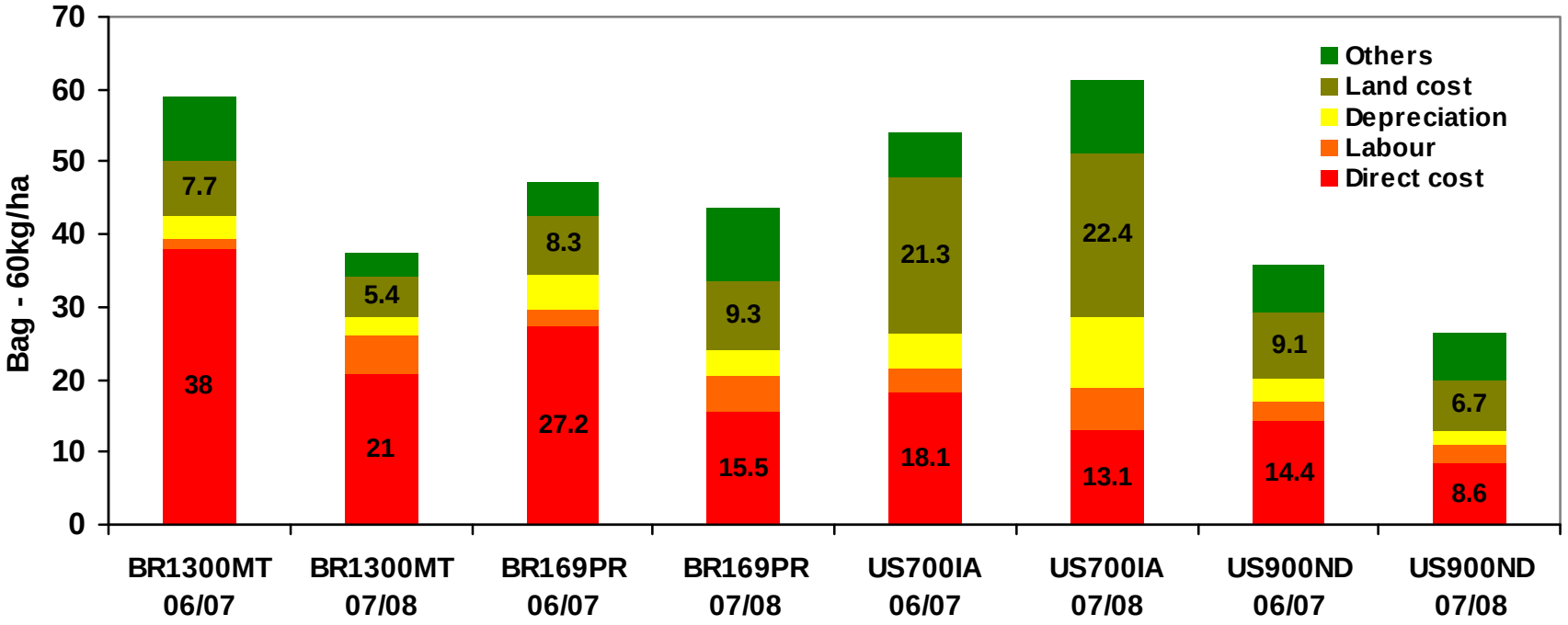
- After Asian Rust was introduced in Brazil, soybean chemical production costs rose around 32%.
- Soybeans production in US Usually just needs herbicides. As a consequence, chemical costs were lower in IA by 57% and 40% than PR and MT, respectively. ND was also lower by 72% and 61% respectively.

LAND charges to produce soybeans?



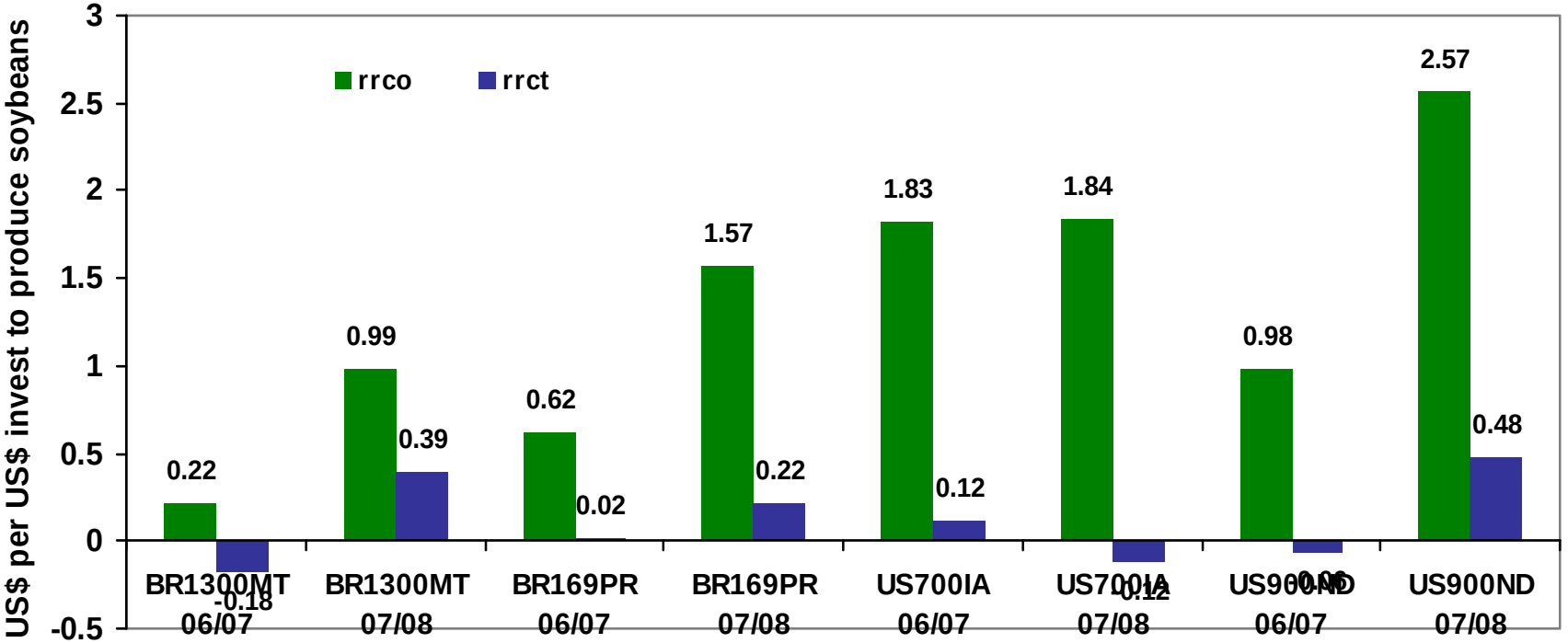
- US land's cost are higher than in Brazil, especially in Iowa when including rented arable land.

Yields needed to produce soybeans?



- MT needed to produce 38 bags per hectare to break even on direct costs in season 06/07, while ND 14.4 bags in same periods.

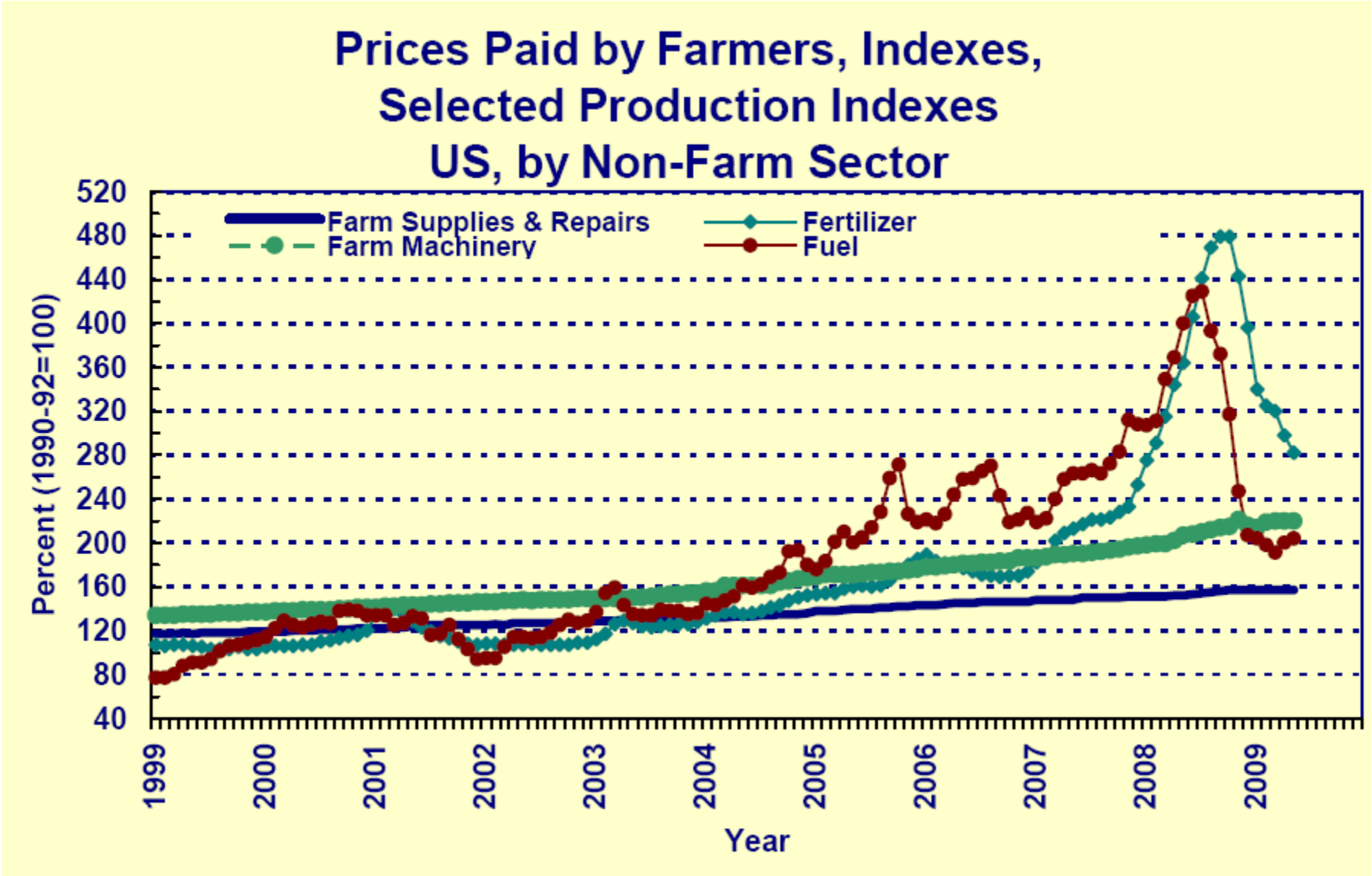
Returns to soybean production



Co= direct cost + Labour + others; CT= CO + Land cost + Depreciation

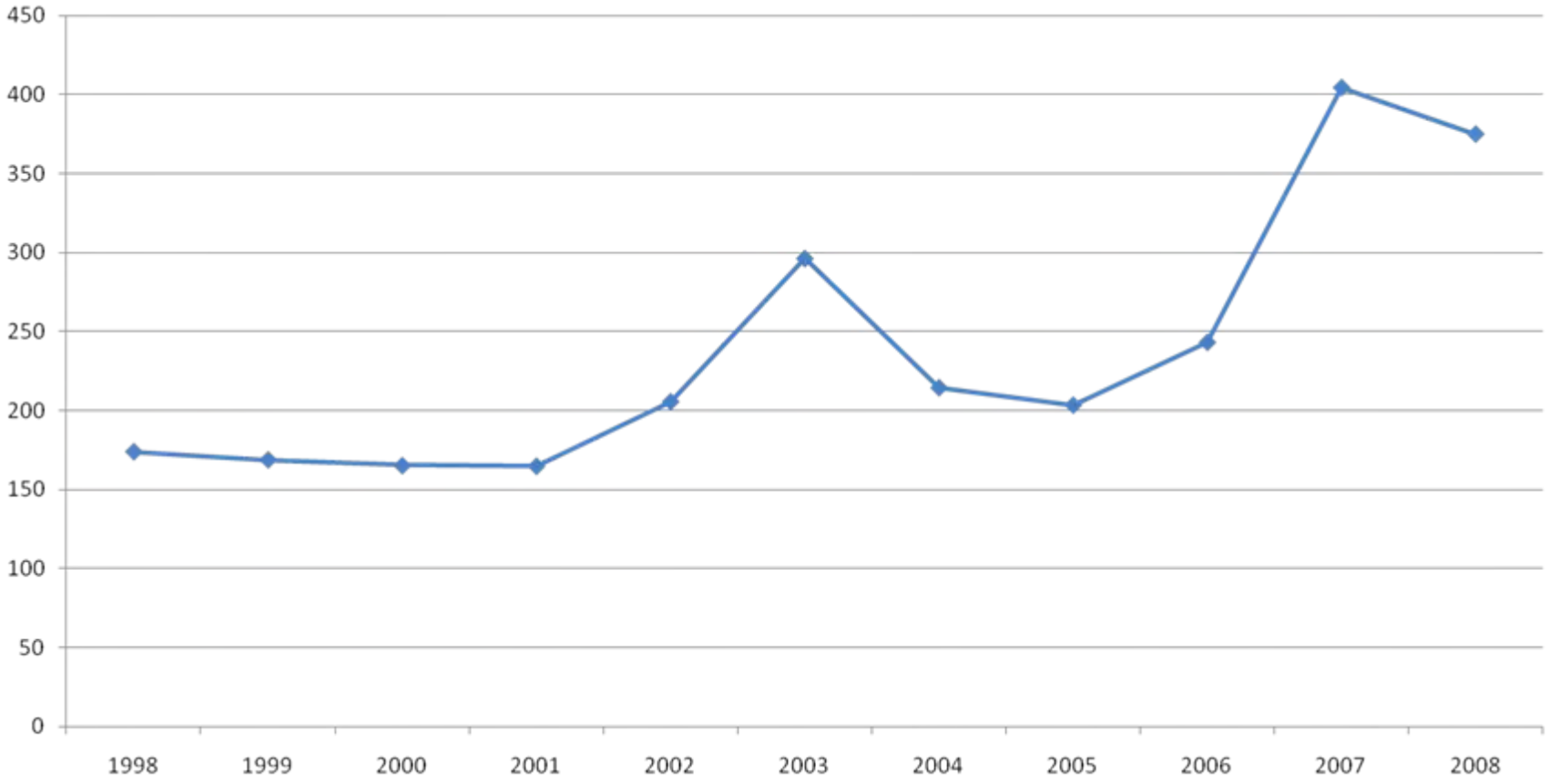
Total cost

- In USA, soybeans productions in North Dakota presented the best return in season 07/08, while Iowa negative 12 percent
- In Brazil, MT had better return than PR, when 1 US $ invested returned 39 cents in MT and 22 cents in PR.



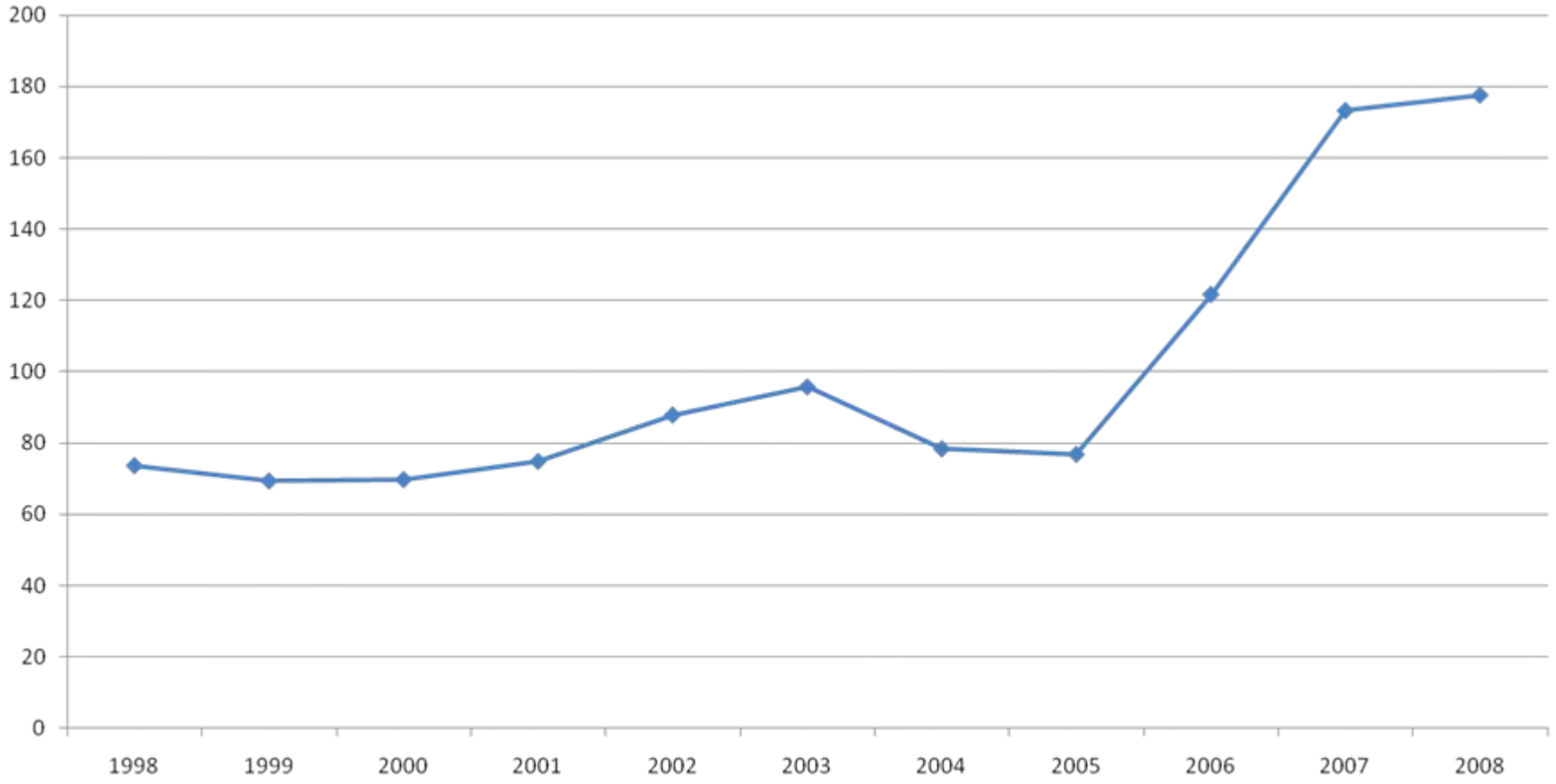
Agricultural Prices Agricultural Statistics Board
May 2009 NASS, USDA

Iowa crop year average soybean prices $/MT



Agricultural Prices Agricultural Statistics Board
May 2009 NASS, USDA

Iowa crop year average corn prices $/MT



Agricultural Prices Agricultural Statistics Board
May 2009 NASS, USDA

Table 7. Average U.S. farm prices of selected fertilizers

Year	Month	Anhydrous ammonia	Nitrogen solutions (30%)	Urea 45-46% nitrogen	Ammonium nitrate	Sulfate of ammonium	Super-phosphate 20% phosphate	Super-phosphate 44-46% phosphate	Diammonium phosphate (18-46-0)	Potassium chloride 60% potassium
						Dollars per ton				
1999	Apr.	211	128	176	181	171	NA	255	264	168
2000	Apr.	227	131	200	194	167	NA	233	240	165
2001	Apr.	399	189	280	260	192	NA	236	244	170
2002	Apr.	250	127	191	195	187	NA	221	227	164
2003	Apr.	373	161	261	243	195	NA	243	250	165
2004	Apr.	379	178	276	263	205	NA	266	276	181
2005	Apr.	416	215	332	292	244	NA	299	303	245
2006	Apr.	521	232	362	366	266	NA	324	337	273
2007	Apr.	523	277	453	382	288	NA	418	442	280
2008	Apr.	755	401	552	509	391	NA	800	850	561
Cash today		$575	$212						$500	$815

USA 2000 pound ton

NA = Not available.

Source: National Agricultural Statistics Service, USDA.

http://www.ers.usda.gov/Data/FertilizerUse/

Current Fertilizer Prices

fertilizer-index.com

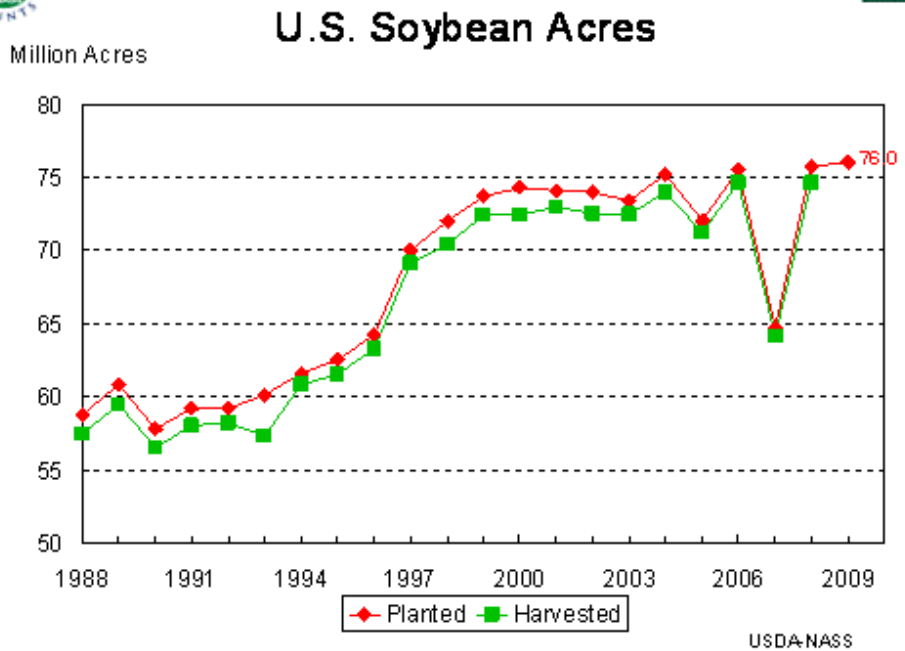
This Week's Prices

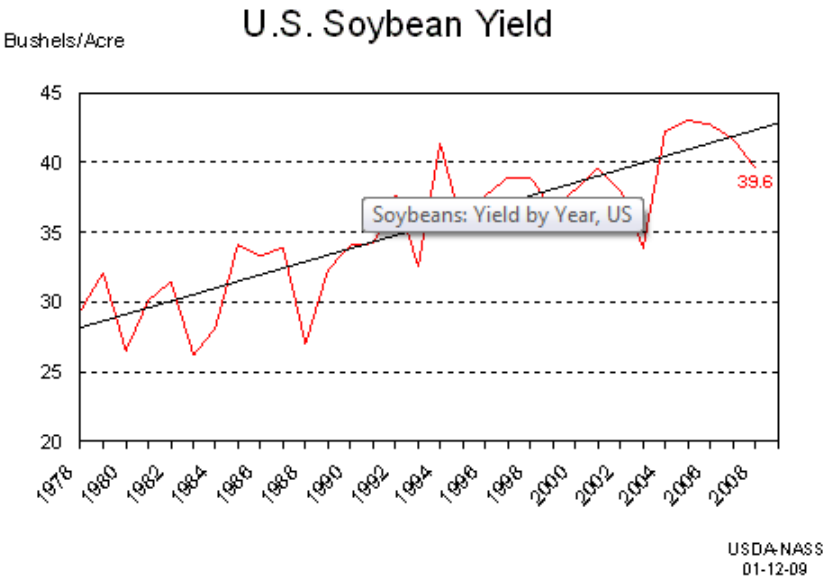
for the week beginning thursday 28/05/2009

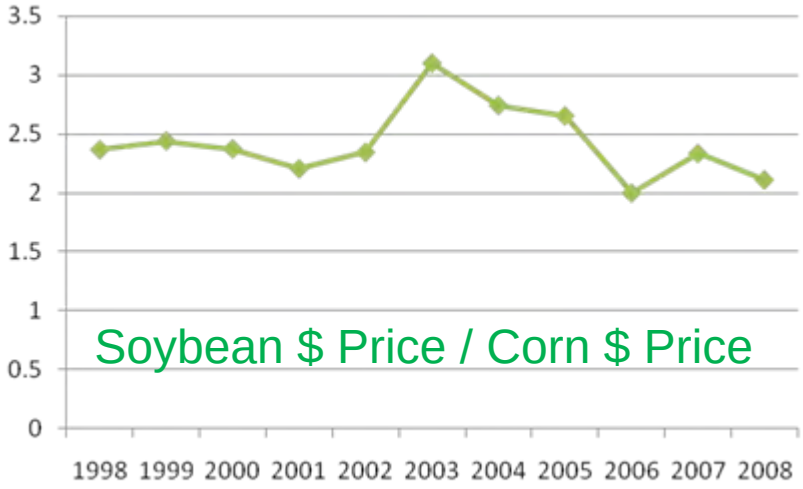
DAP fob Tampa (metric tonne)	$272.00
DAP fob Central Florida (short ton)	$268.75
DAP fob NOLA (short ton)	$255.00
Urea (Prill) fob Yuzhnyy (metric tonne)	$240.00
Urea (Prill) fob Baltic (metric tonne)	$234.00
Urea (prill) fob China bulk/bagged (metric tonne)	No Market
Urea (gran) fob barge NOLA (short ton)	$241.00
Urea (gran) fob Middle East (metric tonne)	$247.50
Ammonia fob Yuzhnyy (metric tonne)	$202.50
Ammonia cfr Tampa (metric tonne)	$267.00
Ammonium nitrate fob NOLA (short ton)	$218.75
UAN (32% N) fob NOLA (short ton)	$151.25
molten sulphur cfr Tampa/delivered C.Florida ($/long ton)	$5.00
solid sulphur - Adnoc monthly lifting price at Ruwais ($/tonne)	$50.00

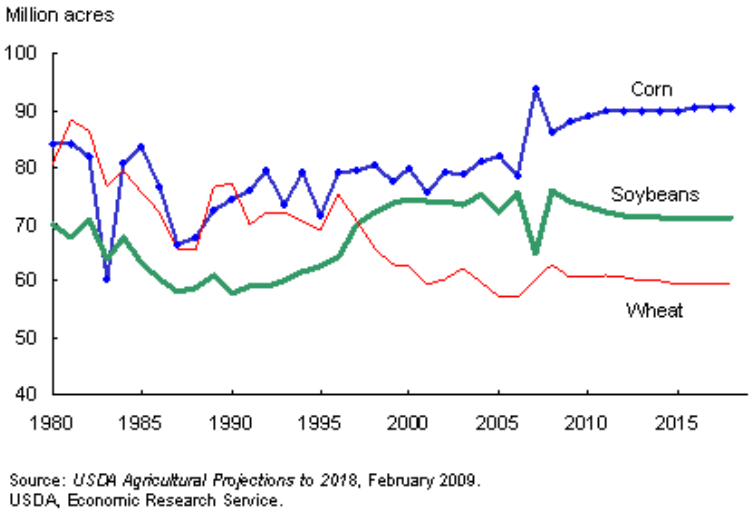
prices will be next updated on 04/06/2009

http://www.fertecon.com/ie4/index.htm



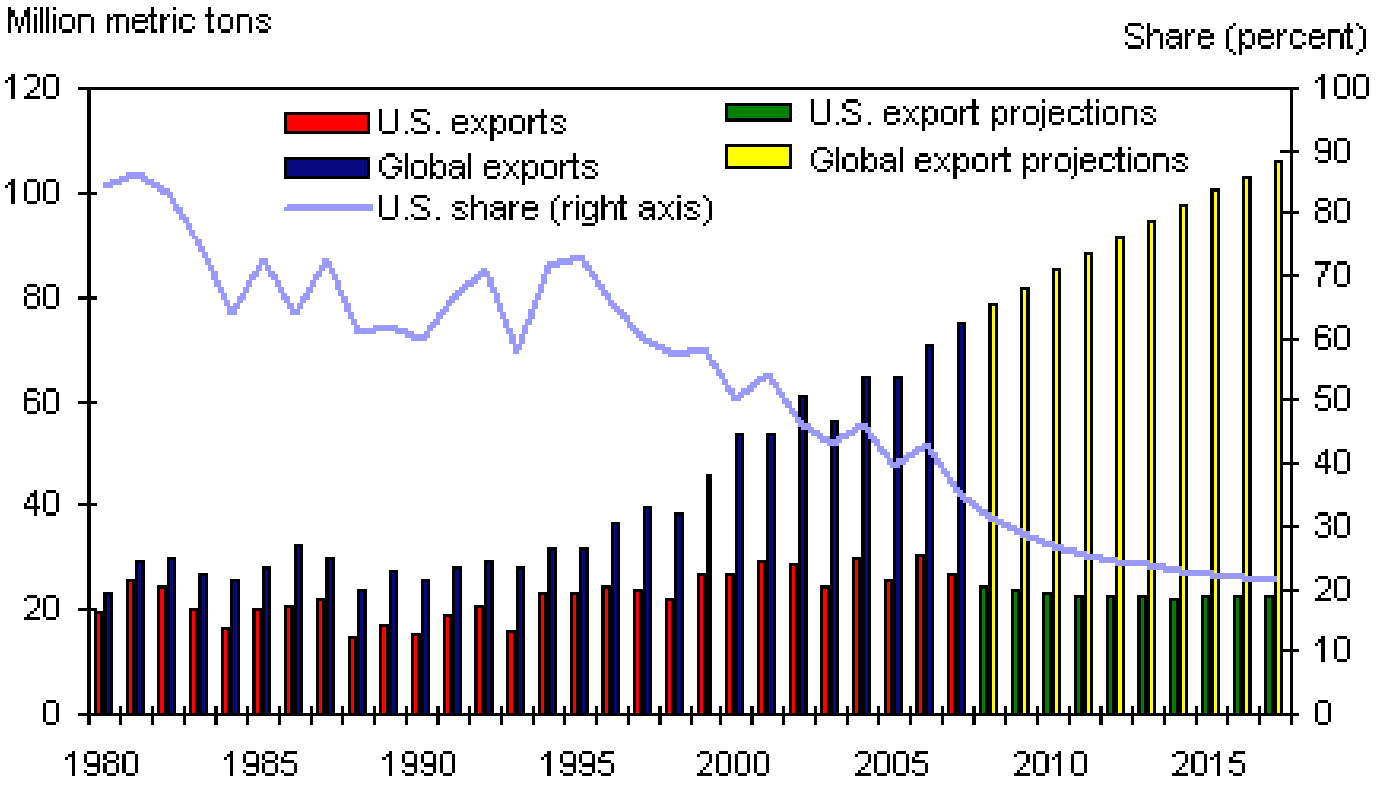






Source: *USDA Agricultural Projections to 2018*, February 2009.
USDA, Economic Research Service.

Global and U.S. soybean exports



Source: *USDA Agricultural Projections to 2017*, February 2008.
USDA, Economic Research Service.

2007 Estimated Returns

Costs Per Acre	1. Corn after Corn		2. Corn after Soybeans		3. Soybeans after Corn		4. Soybeans after 2 years of Corn	
	Corn-Corn		Corn-Sb		Sb-Corn		Soybeans-C-C	
	Variable	Total	Variable	Total	Variable	Total	Variable	Total
Preharvest machinery	$24.67	$53.57	$15.29	$34.22	$16.00	$36.94	$16.00	$36.94
Seed, chemicals,etc	$223.25	$223.25	$200.85	$200.85	$192.81	$192.81	$196.47	$196.47
Harvest machinery	$59.73	$76.93	$63.78	$80.98	$12.25	$28.33	$12.25	$28.33
Labor	$16.50	$16.50	$15.00	$15.00	$13.50	$13.50	$13.50	$13.50
Land	$175.00	$175.00	$175.00	$175.00	$300.00	$300.00	$300.00	$300.00
Total per acre	**$499.15**	**$545.25**	**$469.92**	**$506.05**	**$534.56**	**$571.58**	**$538.22**	**$575.24**
Total per bushel	$3.12	$3.41	$2.69	$2.89	$11.14	$11.91	$10.76	$11.50
Gross returns	**$665.00**	**$665.00**	**$725.00**	**$725.00**	**$553.00**	**$553.00**	**$620.00**	**$620.00**
Net Return over Total Costs		**$119.75**		**$218.95**		**-$18.58**		**$44.76**
Net Returns over Variable Costs	**$165.85**		**$255.08**		**$18.44**		**$81.78**	

Compare Crop Rotations

Enter the number (1.Corn-Corn, 2.Corn-Sb, 3.Sb-Corn, 4.Soybeans-C-C) for each crop from the above table to find rotation totals and average revenue.

Rotation 1:	2	3	2	3	2	3		
	Corn-Sb	**Sb-Corn**	**Corn-Sb**	**Sb-Corn**	**Corn-Sb**	**Sb-Corn**	**Six Year Total**	**Average Revenue**
Net Return over Total Costs	$218.95	-$18.58	$218.95	-$18.58	$218.95	-$18.58	**$601.10**	**$100.18**
Net Returns over Variable Costs	$255.08	$18.44	$255.08	$18.44	$255.08	$18.44	**$820.55**	**$136.76**

Rotation 2:	1	1	1	1	1	1		
	Corn-Corn	**Corn-Corn**	**Corn-Corn**	**Corn-Corn**	**Corn-Corn**	**Corn-Corn**	**Six Year Total**	**Average Revenue**
Net Return over Total Costs	$119.75	$119.75	$119.75	$119.75	$119.75	$119.75	**$718.48**	**$119.75**
Net Returns over Variable Costs	$165.85	$165.85	$165.85	$165.85	$165.85	$165.85	**$995.08**	**$165.85**

Why are we still raising soybeans?

2008 estimated returns

Costs Per Acre	1. Corn after Corn		2. Corn after Soybeans		3. Soybeans after Corn		4. Soybeans after 2 years of Corn	
	Corn-Corn		Corn-Sb		Sb-Corn		Soybeans-C-C	
	Variable	Total	Variable	Total	Variable	Total	Variable	Total
Preharvest machinery	$24.67	$53.57	$15.29	$34.22	$16.00	$36.94	$16.00	$36.94
Seed, chemicals,etc	$364.76	$364.76	$357.73	$357.73	$192.81	$192.81	$196.47	$196.47
Harvest machinery	$64.53	$81.73	$69.03	$86.23	$12.25	$28.33	$12.25	$28.33
Labor	$16.50	$16.50	$15.00	$15.00	$13.50	$13.50	$13.50	$13.50
Land	$300.00	$300.00	$300.00	$300.00	$300.00	$300.00	$300.00	$300.00
Total per acre	**$770.46**	**$816.56**	**$757.05**	**$793.18**	**$534.56**	**$571.58**	**$538.22**	**$575.24**
Total per bushel	$4.82	$5.10	$4.33	$4.53	$11.14	$11.91	$10.76	$11.50
Gross returns	**$822.00**	**$822.00**	**$895.00**	**$895.00**	**$596.00**	**$596.00**	**$620.00**	**$620.00**
Net Return over Total Costs		**$5.44**		**$101.82**		**$24.42**		**$44.76**
Net Returns over Variable Costs	**$51.54**		**$137.95**		**$61.44**		**$81.78**	

Compare Crop Rotations

Enter the number (1.Corn-Corn, 2.Corn-Sb, 3.Sb-Corn, 4.Soybeans-C-C) for each crop from the above table to find rotation totals and average revenue.

Rotation 1:	2	3	2	3	2	3		
	Corn-Sb	Sb-Corn	Corn-Sb	Sb-Corn	Corn-Sb	Sb-Corn	Six Year Total	Average Revenue
Net Return over Total Costs	$101.82	$24.42	$101.82	$24.42	$101.82	$24.42	$378.72	$63.12
Net Returns over Variable Costs	$137.95	$61.44	$137.95	$61.44	$137.95	$61.44	$598.17	$99.69

Rotation 2:	1	1	1	1	1	1		
	Corn-Corn	Corn-Corn	Corn-Corn	Corn-Corn	Corn-Corn	Corn-Corn	Six Year Total	Average Revenue
Net Return over Total Costs	$5.44	$5.44	$5.44	$5.44	$5.44	$5.44	$32.62	$5.44
Net Returns over Variable Costs	$51.54	$51.54	$51.54	$51.54	$51.54	$51.54	$309.22	$51.54

We will raise soybeans at a loss!

2009 estimates

Costs Per Acre	1. Corn after Corn		2. Corn after Soybeans		3. Soybeans after Corn		4. Soybeans after 2 years of Corn	
	Corn-Corn		Corn-Sb		Sb-Corn		Soybeans-C-C	
	Variable	Total	Variable	Total	Variable	Total	Variable	Total
Preharvest machinery	$24.67	$53.57	$15.29	$34.22	$16.00	$36.94	$16.00	$36.94
Seed, chemicals,etc	$396.79	$396.79	$393.03	$393.03	$228.76	$228.76	$204.48	$204.48
Harvest machinery	$66.93	$84.13	$70.53	$87.73	$12.25	$28.33	$12.25	$28.33
Labor	$16.50	$16.50	$15.00	$15.00	$13.50	$13.50	$15.00	$15.00
Land	$250.00	$250.00	$250.00	$250.00	$250.00	$250.00	$300.00	$300.00
Total per acre	**$754.89**	**$800.99**	**$743.85**	**$779.98**	**$520.51**	**$557.53**	**$547.73**	**$584.75**
Total per bushel	$4.49	$4.77	$4.13	$4.33	$10.84	$11.62	$10.95	$11.70
Gross returns	**$694.00**	**$694.00**	**$740.00**	**$740.00**	**$404.00**	**$404.00**	**$570.00**	**$570.00**
Net Return over Total Costs		**-$106.99**		**-$39.98**		**-$153.53**		**-$14.75**
Net Returns over Variable Costs	**-$60.89**		**-$3.85**		**-$116.51**		**$22.27**	

Compare Crop Rotations

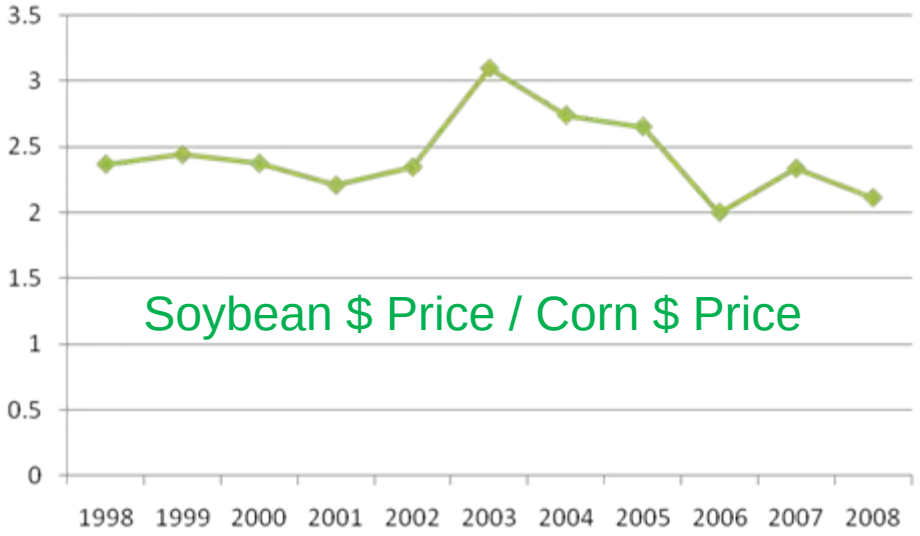
Enter the number (1.Corn-Corn, 2.Corn-Sb, 3.Sb-Corn, 4.Soybeans-C-C) for each crop from the above table to find rotation totals and average revenue.

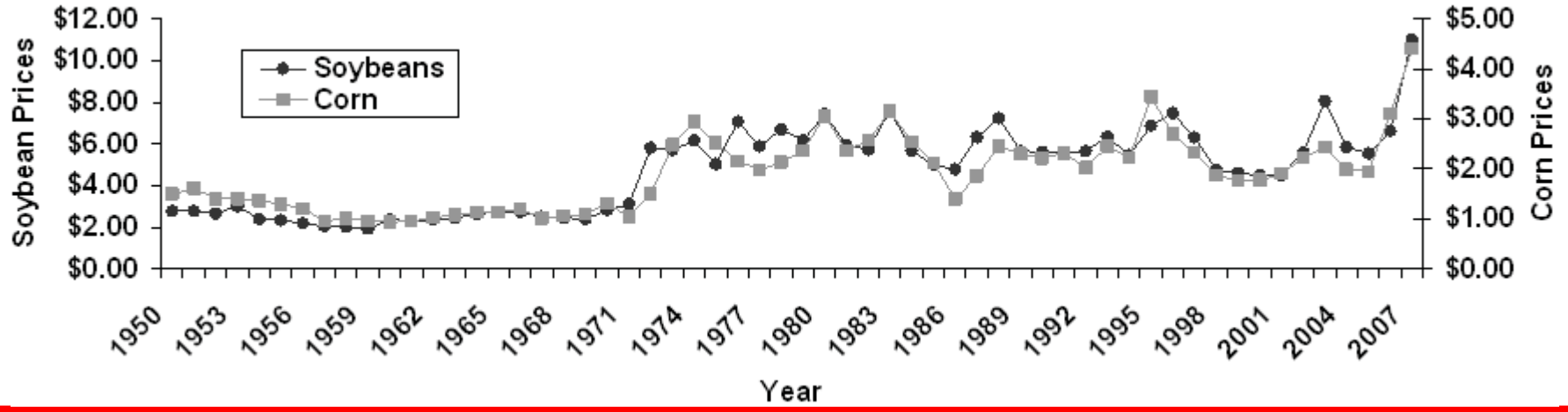
Rotation 1:	2	3	2	3	2	3		
	Corn-Sb	Sb-Corn	Corn-Sb	Sb-Corn	Corn-Sb	Sb-Corn	Six Year Total	Average Revenue
Net Return over Total Costs	-$39.98	-$153.53	-$39.98	-$153.53	-$39.98	-$153.53	**-$580.52**	**-$96.75**
Net Returns over Variable Costs	-$3.85	-$116.51	-$3.85	-$116.51	-$3.85	-$116.51	**-$361.07**	**-$60.18**

Rotation 2:	1	1	1	1	1	1		
	Corn-Corn	Corn-Corn	Corn-Corn	Corn-Corn	Corn-Corn	Corn-Corn	Six Year Total	Average Revenue
Net Return over Total Costs	-$106.99	-$106.99	-$106.99	-$106.99	-$106.99	-$106.99	**-$641.95**	**-$106.99**
Net Returns over Variable Costs	-$60.89	-$60.89	-$60.89	-$60.89	-$60.89	-$60.89	**-$365.35**	**-$60.89**

Iowa Corn Farmers say

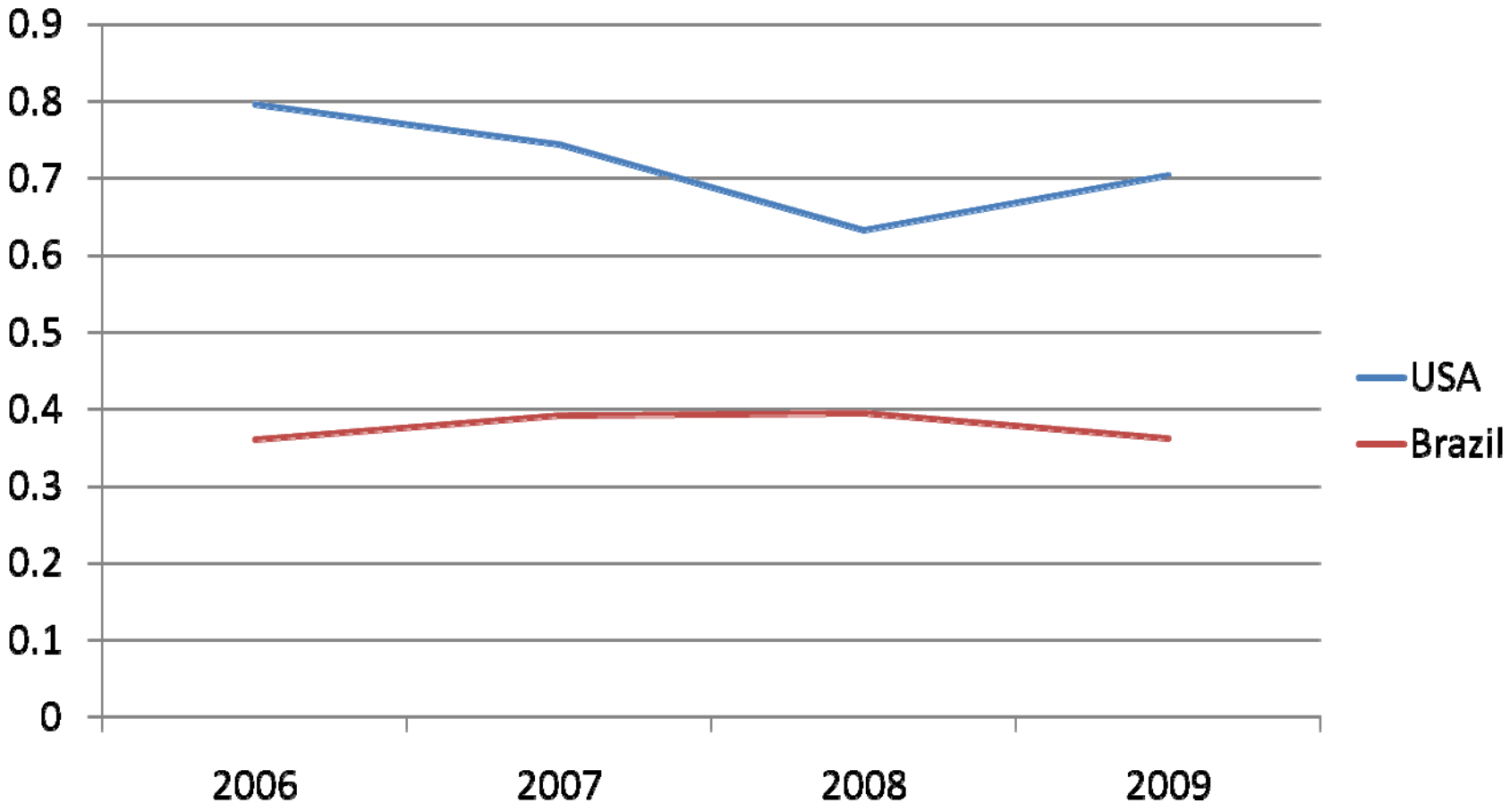
When you find me a crop that looses less money than soybeans I will raise it!





Real, $ versus Euro

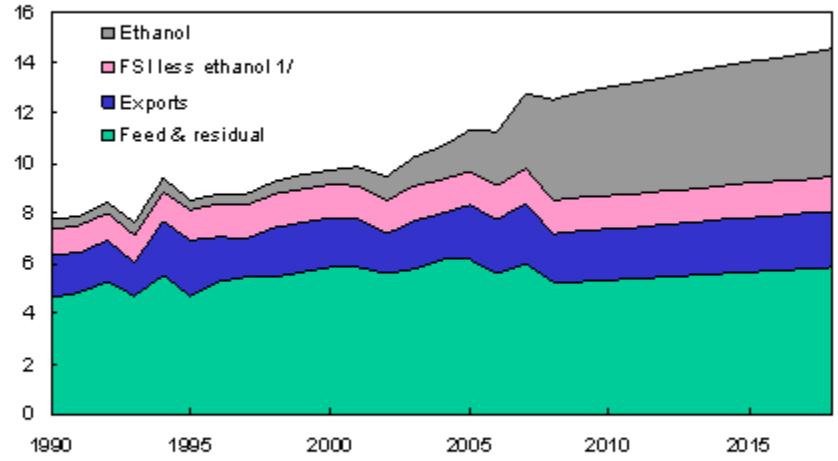
June 3rd



Corn is King in Iowa

U.S. corn use

Billion bushels

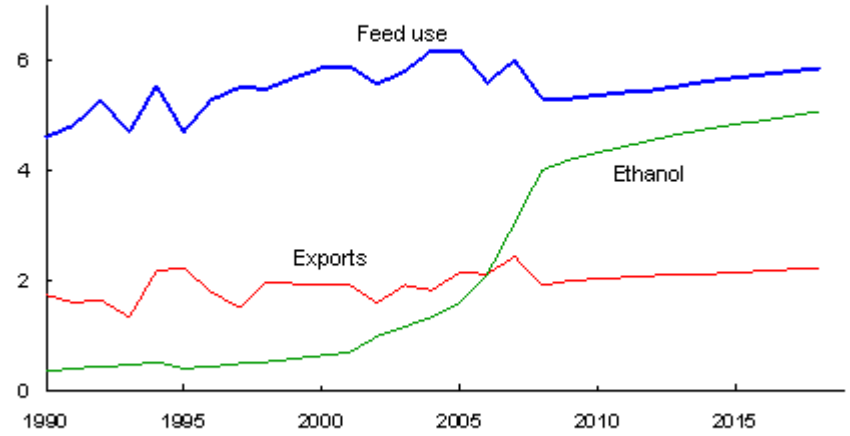


1/ Food, seed, and industrial use less ethanol.

Source: *USDA Agricultural Projections to 2018*, February 2009.
USDA, Economic Research Service.

U.S. corn: Feed use, ethanol, and exports

Billion bushels



Source: *USDA Agricultural Projections to 2018*, February 2009.
USDA, Economic Research Service.

Future Issues

- Government programs – energy, trade, subsidies
- Costs of production – disease, insects, weather
- Technology – seed costs, new uses, new crops
- Infrastructure – transportation costs, storing, handling, processing
- Land costs – not an issue – residual of profits and it adjusts – “residual claimant”

Thank You
&
Questions Please