Fertilizer Market Outlook

Michael R. Rahm Vice President Market and Economic Analysis

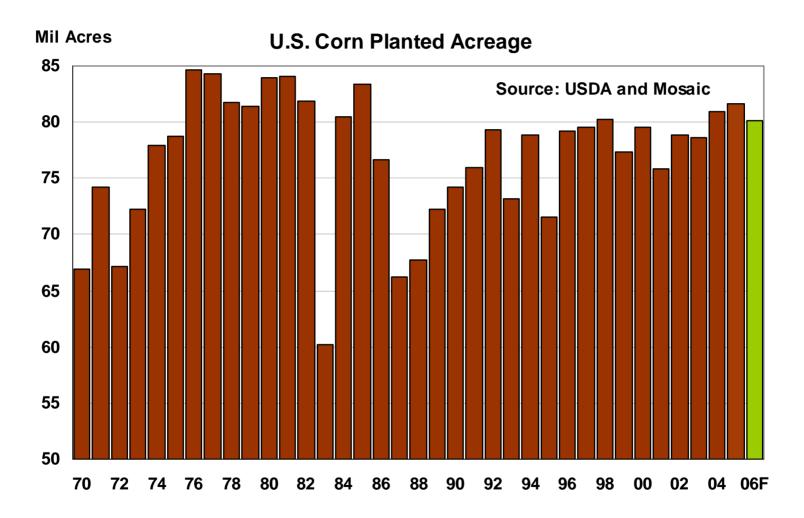
Wisconsin Fertilizer, Ag Lime and Pest Management Conference Madison, WI January 18, 2006



U.S. Nutrient Demand – Bracing for the Worst

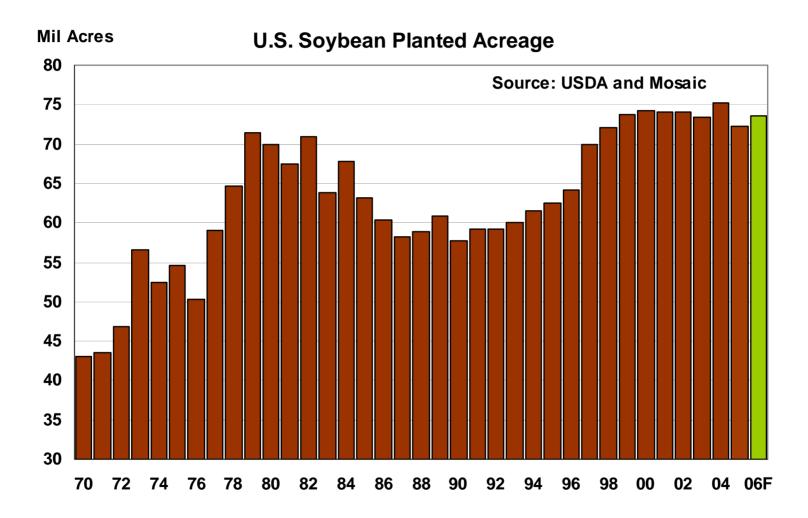


A modest switch from corn . . .



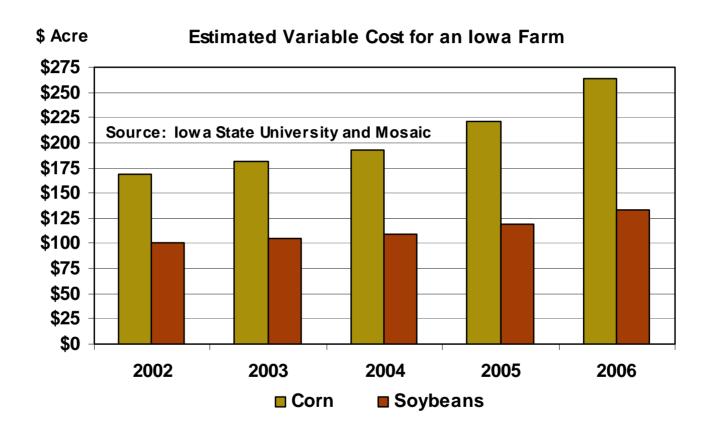


... to soybeans is expected





The impact of higher energy prices in Iowa - \$ acre





The impact of higher energy prices in Iowa - \$ bu

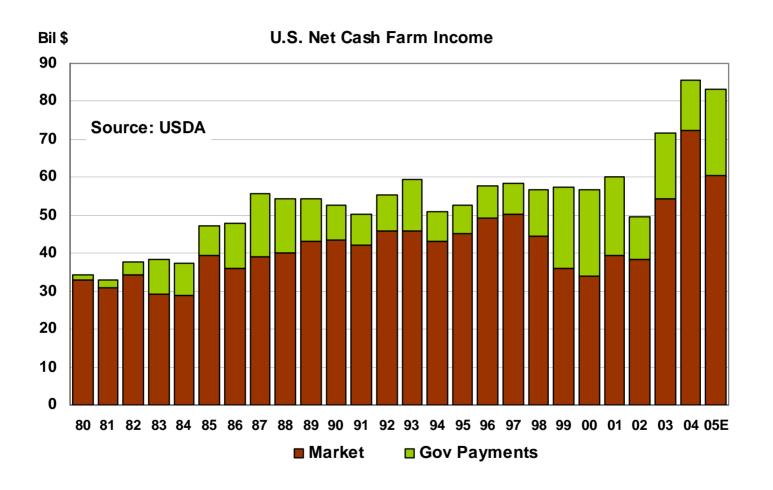
Estimated Fertilizer Cost for an Iowa Farm

		Corn foll	owing Soy	/beans		Herbicio	le Tolerant	Soybeans	following	Corn
\$ Acre Unless Noted	2002	2003	2004	2005	2006	2002	2003	2004	2005	2006
Fertilizer Cost	\$40.56	\$50.05	\$53.88	\$61.53	\$72.99	\$19.98	\$20.95	\$23.08	\$28.34	\$31.22
Fertilizer (\$ Bu)	\$0.24	\$0.29	\$0.32	\$0.36	\$0.43	\$0.40	\$0.42	\$0.46	\$0.57	\$0.62
Fertilizer Percent of Variable Cost	24%	27%	28%	28%	28%	20%	20%	21%	24%	23%
Fertilizer Percent of Total Cost	11%	13%	13%	14%	15%	7%	7%	8%	9%	9%
Application Rate (lbs N+P ₂ O ₅ +K ₂ O Acre)	255	255	255	255	255	131	131	131	131	131
Nitrogen (Ibs N)	140	140	140	140	140	16	16	16	16	16
from Ammonia	115	115	115	115	115	0	0	0	0	0
from DAP	25	25	25	25	25	16	16	16	16	16
Phosphate (lbs P 2 O 5 from DAP)	65	65	65	65	65	40	40	40	40	40
Potash (lbs K ₂ O from MOP)	50	50	50	50	50	<i>7</i> 5	<i>7</i> 5	<i>7</i> 5	75	75
Cost and Use by Product										
Ammonia Price (\$ Ton)	\$254	\$368	\$387	\$429	\$550	\$254	\$368	\$387	\$429	\$550
Ammonia Application (Tons Acre)	0.070	0.070	0.070	0.070	0.070	0.000	0.000	0.000	0.000	0.000
Ammonia Cost (\$ Acre)	\$17.74	\$25.71	\$27.03	\$29.97	\$38.42	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Ammonia Cost (\$ Bu)	\$0.10	\$0.15	\$0.16	\$0.18	\$0.23	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
DAP Price (\$ Ton)	\$228	\$249	\$275	\$304	\$330	\$228	\$249	\$275	\$304	\$330
DAP Application (Tons Acre)	0.071	0.071	0.071	0.071	0.071	0.043	0.043	0.043	0.043	0.043
DAP Cost (\$ Acre)	\$16.11	\$17.59	\$19.43	\$21.48	\$23.32	\$9.91	\$10.83	\$11.96	\$13.22	\$14.35
DAP Cost (\$ Bu)	\$0.09	\$0.10	\$0.11	\$0.13	\$0.14	\$0.20	\$0.22	\$0.24	\$0.26	\$0.29
MOP Price (\$ Ton)	\$161	\$162	\$178	\$242	\$270	\$161	\$162	\$178	\$242	\$270
MOP Application (Tons Acre)	0.042	0.042	0.042	0.042	0.042	0.063	0.063	0.063	0.063	0.063
MOP Cost (\$ Acre)	\$6.71	\$6.75	\$7.42	\$10.08	\$11.25	\$10.06	\$10.13	\$11.13	\$15.13	\$16.88
MOP Cost (\$ Bu)	\$0.04	\$0.04	\$0.04	\$0.06	\$0.07	\$0.20	\$0.20	\$0.22	\$0.30	\$0.34

Source: Iowa State University Extension Service and Mosaic

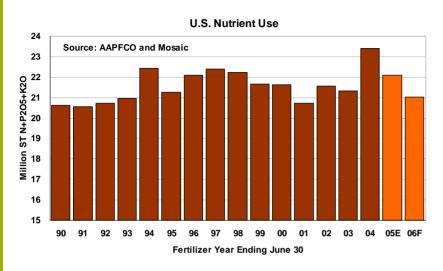


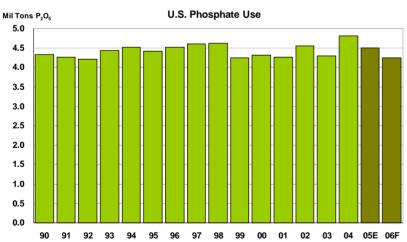
Gov payments offset the decline in market income

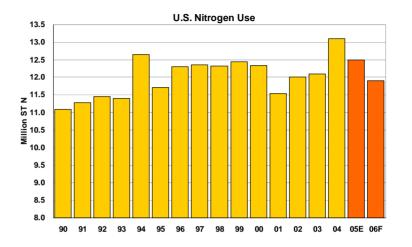


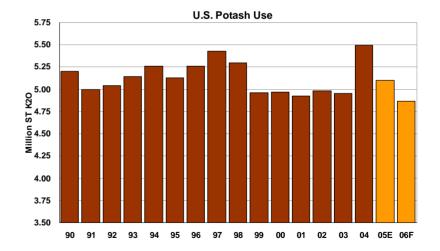


U.S. Nutrient Demand: Bracing for the worst?



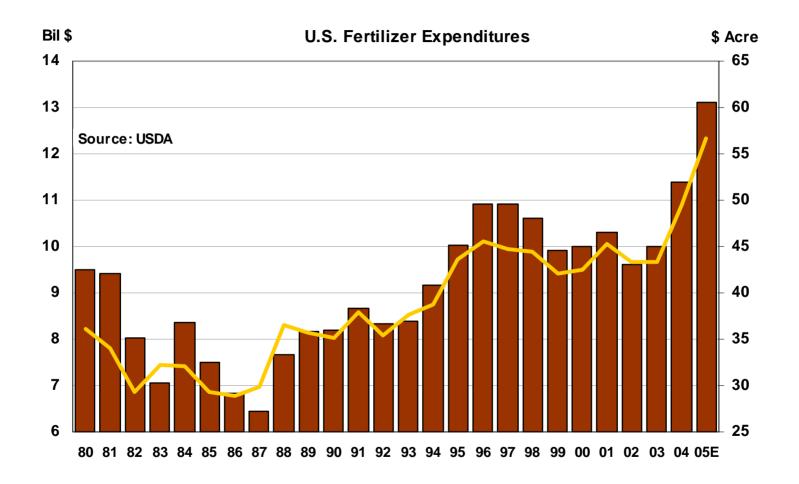






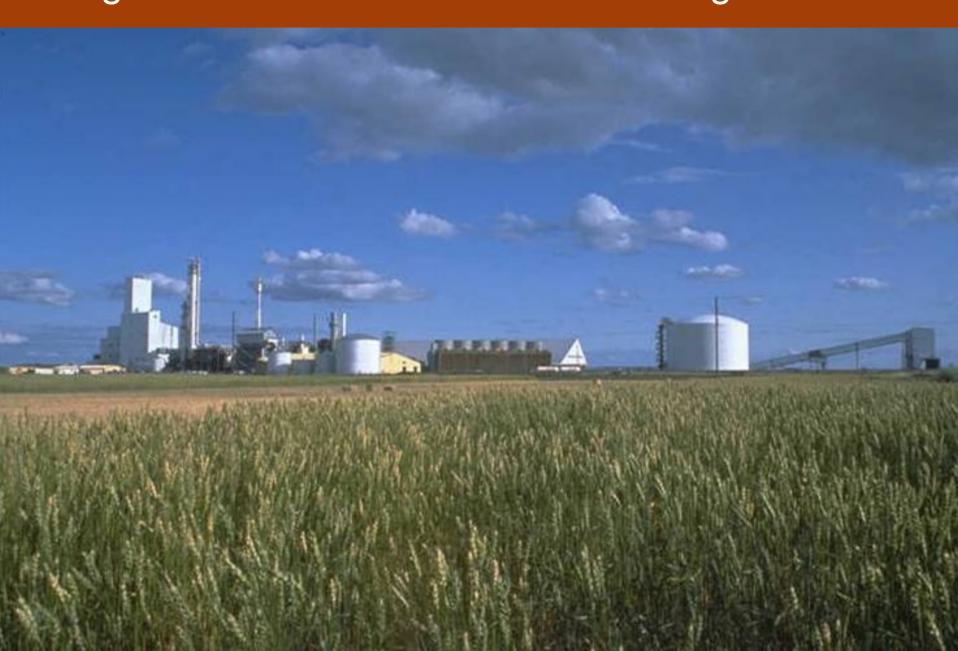


Record U.S. fertilizer expenditures

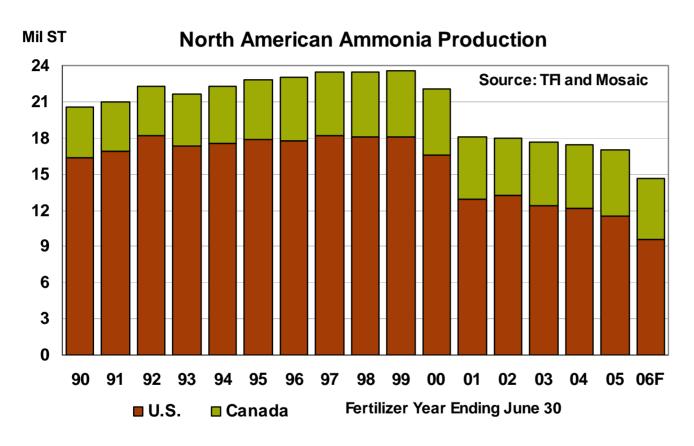




Nitrogen: Transition of the Global Nitrogen Market



U.S. production has shrunk by one-half



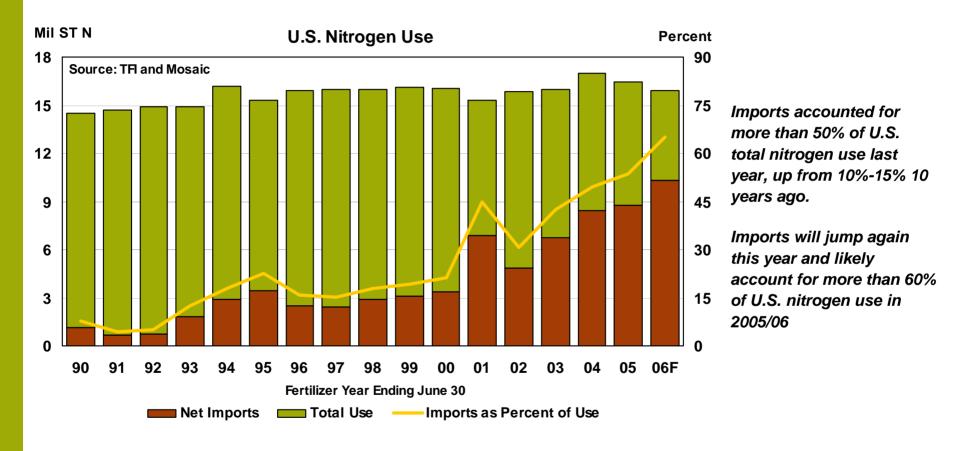
High gas costs have forced the closure of roughly one-half of the U.S. nitrogen industry.

Gross ammonia production peaked at 18 million tons in the late 1990s and is projected to drop to just more than 9 million tons in 2005/06.

The U.S. industry, however, still is the fourth largest producer of nitrogen in the world and U.S. supplies are needed to keep the global market in balance.

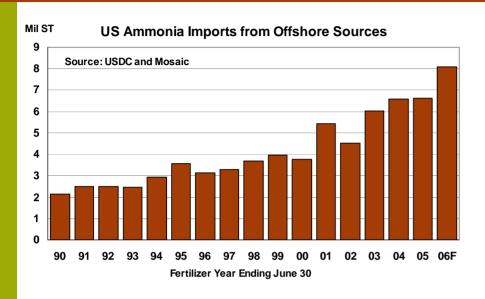


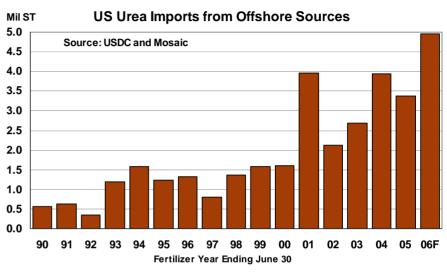
Imports have filled the gap

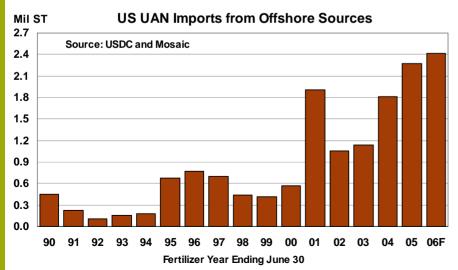




Imports of all three major products have increased





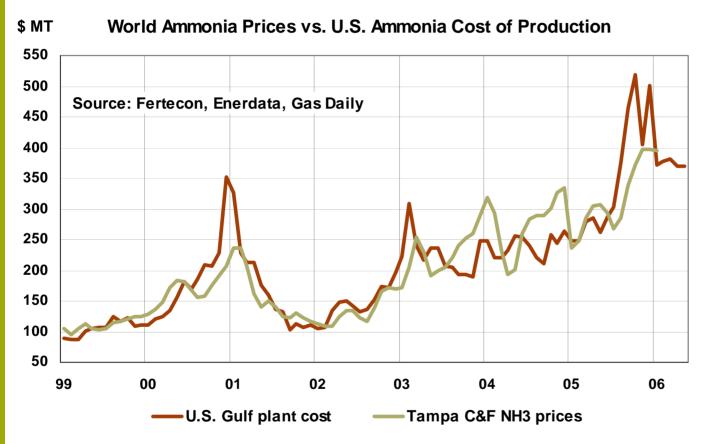


Despite concerns about logistical bottlenecks, imports of all three major nitrogen products have increased to record levels.

Imports are forecast to jump to record levels again this year due to the shut down of U.S. plants that have not forward priced natural gas at pre-Katrina levels or less.



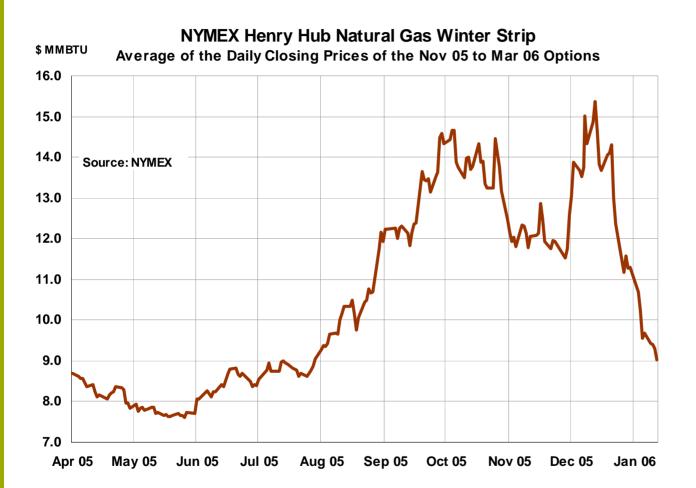
Will U.S. gas costs set a floor under world prices?



The cost of U.S. natural gas will set a floor under world nitrogen values until enough low-cost capacity is built to displace the domestic industry or until U.S. producers switch to a lower cost feedstock such as imported LNG or domestic coal.



U.S. gas prices remain high and extremely volatile



Hurricane-related production losses likely will total 700-725 BCF or about 4% of total U.S. gas production. Some rigs will remain out of production until mid-2006.

Recent above-normal temperatures throughout most of the nation has dropped prices more than \$6 MM Btu.

Gas markets remain extremely volatile and highly sensitive weather developments, weekly withdrawals and production issues.



Significant new capacity will come on line in 2006

World Scale Nitrogen Projects 2004-07

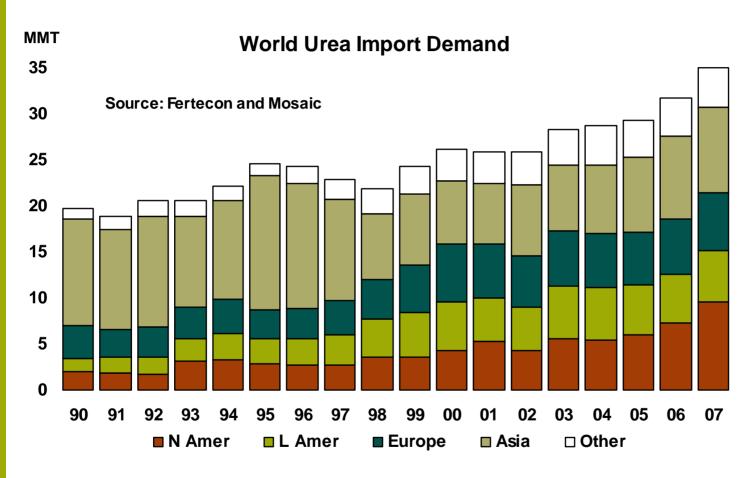
			Expected	Ammonia	Urea	Net
Country	Firm	Facility	Start-up	Capacity	Capacity	Ammonia
Qatar	Qafco	Umm Said (Qafco IV)	Jul-04	660	1,073	50
Trinidad	N-2000	North Pt Lisas	Sep-04	640	0	640
Vietnam	Petrovietnam	Phu My	Sep-04	445	785	0
Total 2004				1,745	1,858	690
Oman	OMIFCO	Al Ghalila	Apr-05	1,156	1,650	215
Indonesia	PT Pupuk Kujang	Cikampek	Dec-05	396	570	70
Total 2005				1,552	2,220	284
Iran	NPC - Pars I	Bandar Assaluyeh	Jan-06	677	1,073	65
Australia	Burrup Fertilizers	Burrup Peninsular	Mar-06	725	0	725
Iran	NPC - Razi II	Bandar Khomeini	Apr-06	677	0	677
Saudi Arabia	SAFCO IV	Al Jubail	Jul-06	1,089	1,073	475
Egypt	EFC 2	Ain Sukhna	Sep-06	396	635	0
Egypt	Alexandria Fertilizers	Abu Qir	Sep-06	396	635	0
Iran	KPIC	Kermanshah	Oct-06	396	660	0
Total 2006				4,356	4,076	1,942
Iran	NPC - Pars II	Bandar Assaluyeh	Jan-07	677	1,073	65
Lithuania	Achema	Ionava	Apr-07	545	335	355
Egypt	Helwan Fertilizers	Helwan	Apr-07	396	635	0
Total 2007				1,618	2,043	420
Total 2004-07				9,271	10,197	3,336

Source: Fertecon Ammonia Outlook December 2005 and Mosaic

Units: 1000 MT



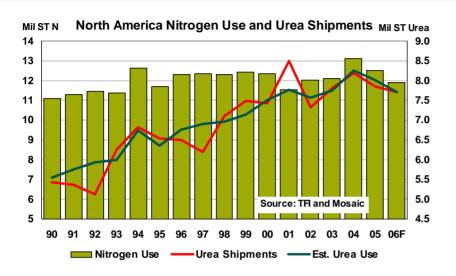
Urea surplus available for the U.S. market surges

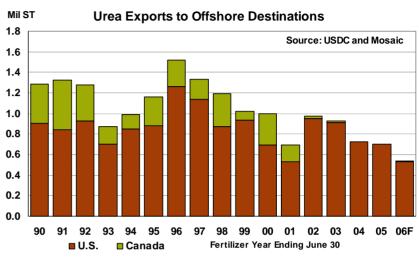


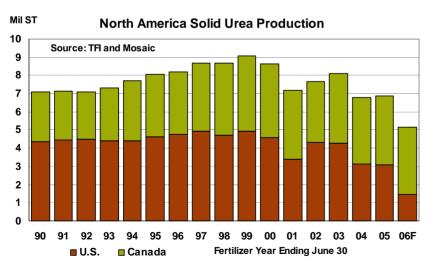
Residual export supply to come to the U.S. is expected to increase to 5.5, 6.6 and more than 9.0 million tonnes in 2005, 2006 and 2007, respectively.

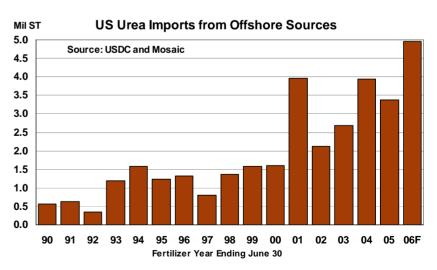


North American Annual Urea S&D



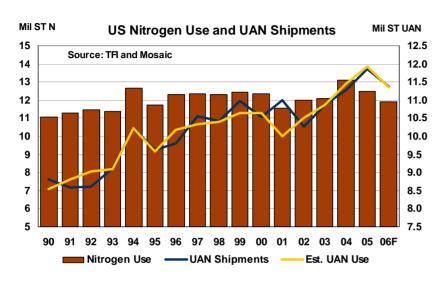


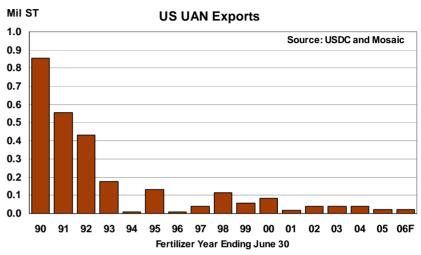


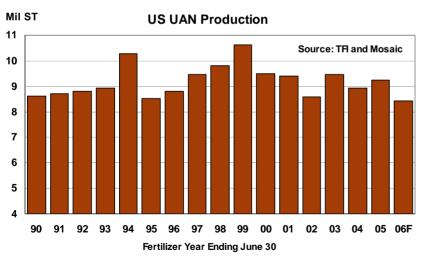


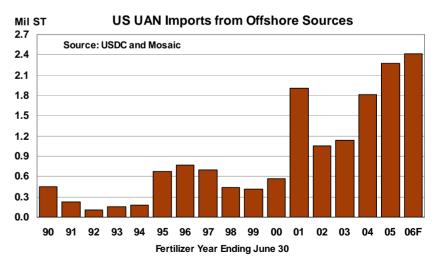


U.S. nitrogen solution S&D



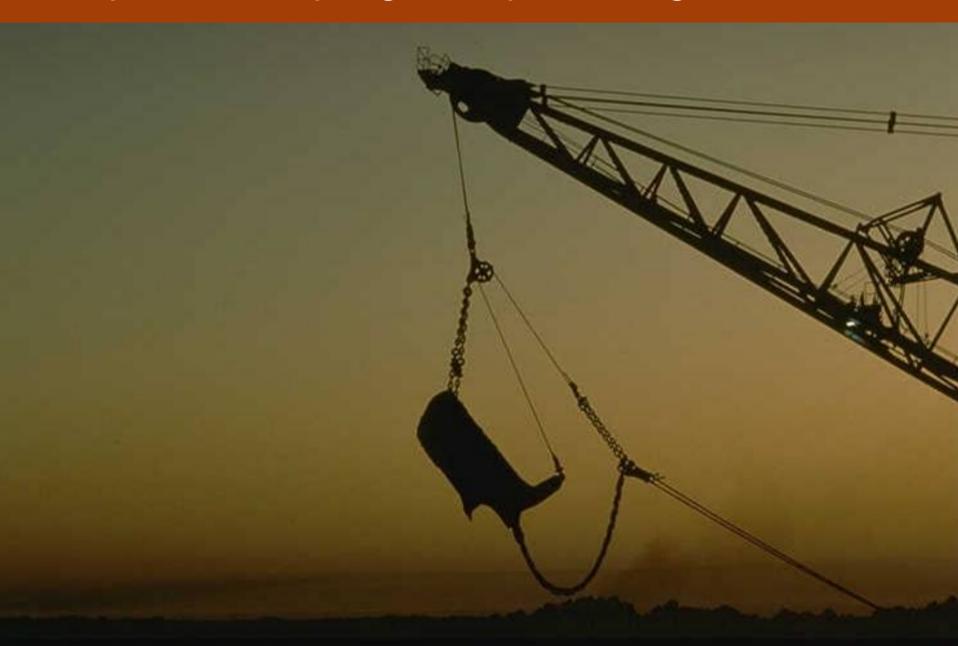




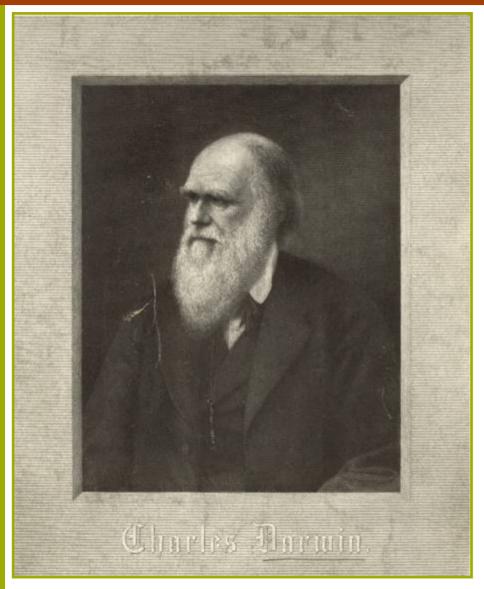




Phosphate: Adapting to Rapid Change



A lesson from Darwin



It is not the strongest of the species that survive, nor the most intelligent; it is the one that is most adaptable to change

Charles Darwin Theory of Evolution 1859

It is not the oldest or biggest or most revered players in the crop nutrition industry who will survive. Only those who correctly analyze, boldly embrace and quickly adapt to change will survive and prosper.

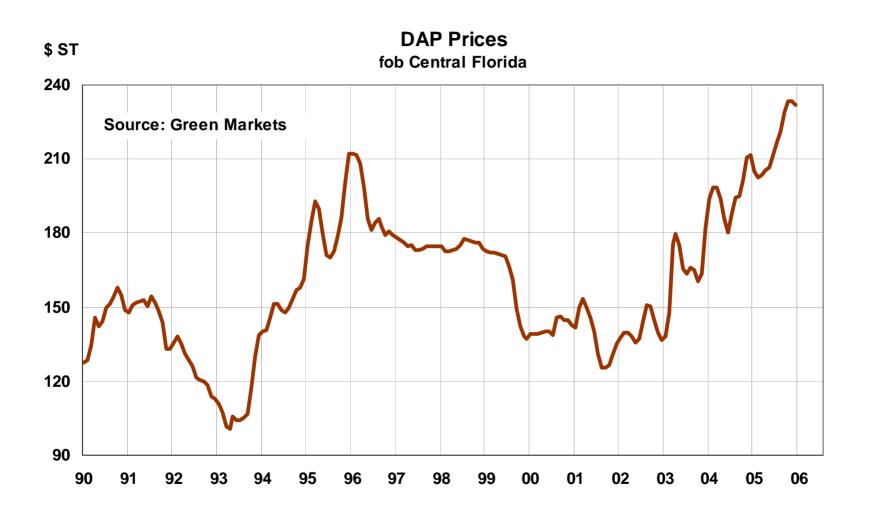


Phosphate: Adapting to Rapid Change

- Surging raw materials costs
- Declining trade
- Growing demand seasonality and volatility
- Rising competition from government producers
- Increasing environmental and regulatory requirements

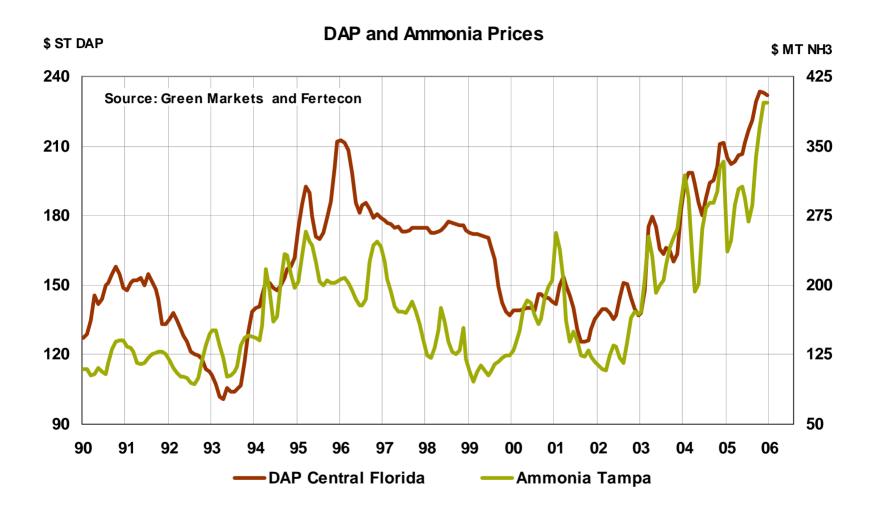


DAP prices have climbed to record highs this year



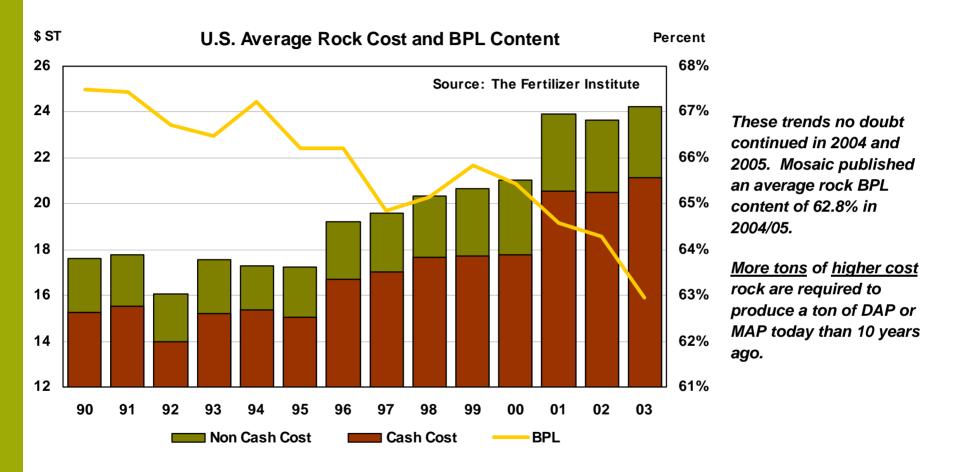


Largely due to cost-push pressure from ammonia





Cost-push pressure also from escalating rock costs





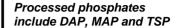
Cost-push pressure also from escalating rock costs

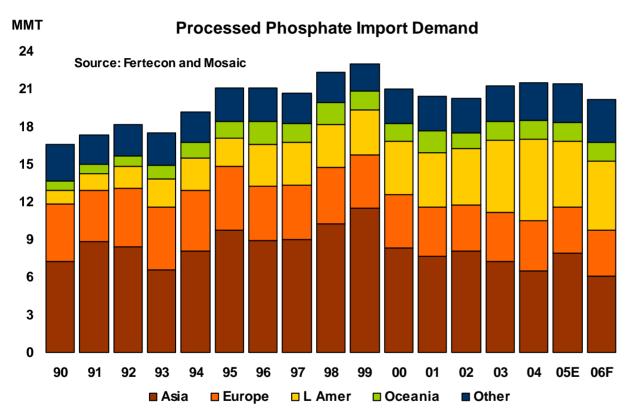
Erosion of the Competitive Advantage of the U.S. Phosphate Industry

LICCALT	4005	2002	Change	Percent
US\$ MT	1995	2003	Change	Change
Rock Costs Delivered Plant				
Central Florida (TFI)	\$21.2	\$28.9	\$7.7	36.4%
Morocco Jorf Lasfar (CRU 2002)	\$26.5	\$28.0	\$1.5	5.7%
Russia Cherepovets (CRU 2002)	\$39.0	\$41.0	\$2.0	5.1%
Rock Cost Per MT DAP				
Central Florida	\$35.4	\$49.7	\$14.3	40.5%
Morocco Jorf Lasfar	\$41.9	\$44.2	\$2.4	5.7%
Russia Cherepovets	\$49.1	\$51.7	\$2.5	5.1%



World Processed Phosphate Import Demand



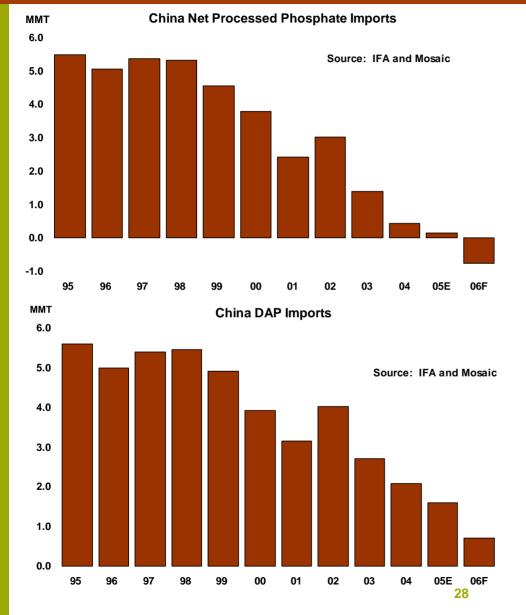


A rebound in Asian DAP imports will offset the drop in South American MAP imports this year.

Import demand is projected to drop in 2006 as a result of further declines in China, a pull-back in India and only a modest recovery in Brazilian imports next year.



China moves to phosphate self-sufficiency



China was a consistent net importer of more than five million tonnes of processed phosphate during the last half of the 1990s.

Since then, net imports have declined steadily as a result of the start-up of new domestic phosphate capacity.

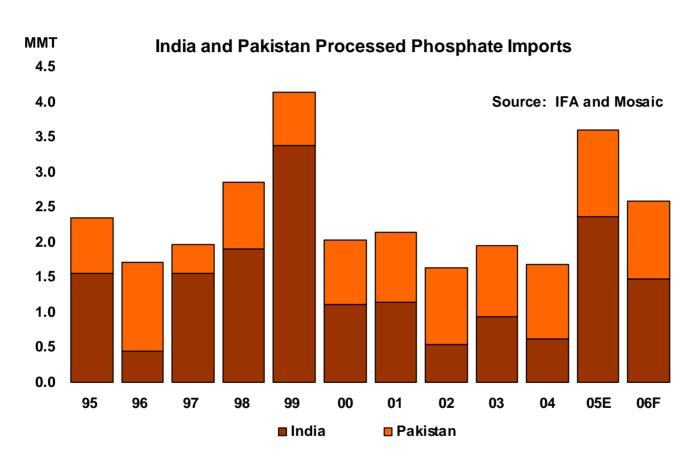
China is expected to transition from a small net importer to a small net exporter of processed phosphate in 2006.

Exporters are projected to ship 1.6 mmt of DAP to China in 2005.

DAP shipments to China are expected to decline again in 2006 due to further increases in domestic production.



India and Pakistan imports more than doubled in '05



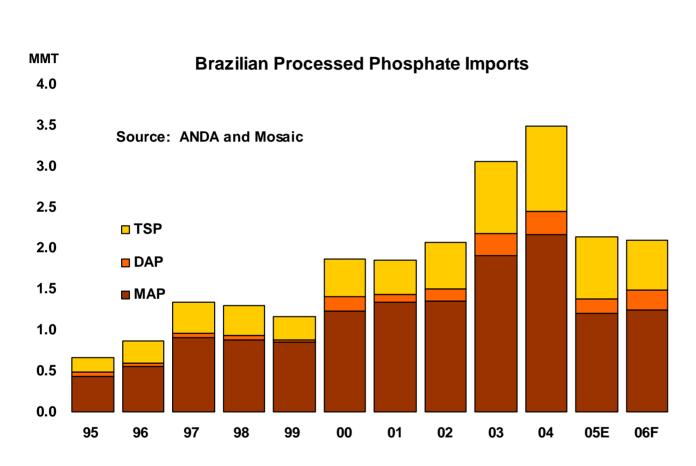
Total processed phosphate imports by India and Pakistan are estimated to more than double to 3.5 million tonnes in 2005.

Indian DAP imports are forecast to increase to 2.4 mmt in 2005 due to: 1) healthy phosphate demand growth, 2) minimal stocks to draw on this year and 3) below-plan domestic fabrication.

Imports are forecast to decline next year but still exceed levels of the previous five years. The decline is due to expected increases in domestic fabrication in 2006.



Brazil phosphate imports dropped 40% in '05



Processed phosphate imports by Brazil plunged 40% or 1.4 million tonnes in 2005 due to the deep erosion of farm economics.

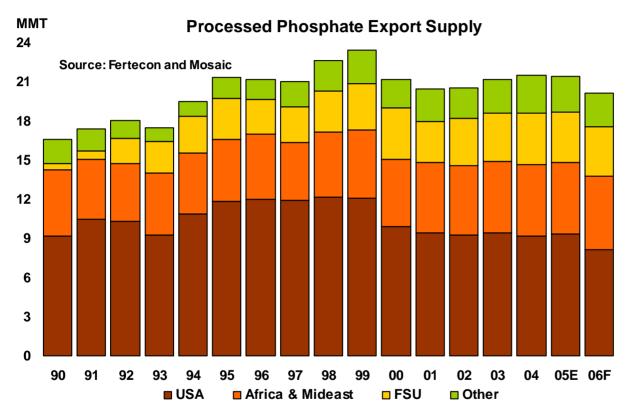
Farm economics have eroded as a result of the strong appreciation of the real, lower soybean prices, higher fuel, pesticide and other input costs and the severe drought in the southern Brazil.

MAP imports are expected to drop almost 50% or 1.1 million tonnes from the record level in 2004.

No recovery is expected in 2006 unless the real depreciates and/or soybean prices rebound to improve farm economics.



World Processed Phosphate Export Supply



Processed phosphates include DAP. MAP and TSP

The U.S. phosphate industry exported 12 mmt of processed phosphate per year during the last half of the 1990s. Exports have dropped to the 9 mmt range today.

U.S. exports required to meet residual demand are forecast to drop further in 2006 as a result of increases in production in China, India and Morocco.

However, the drop in exports required from the United States is roughly equal to the decline in production resulting from the recent closure of the U.S. Agri-Chemicals plant.



The U.S. industry adjusts to change

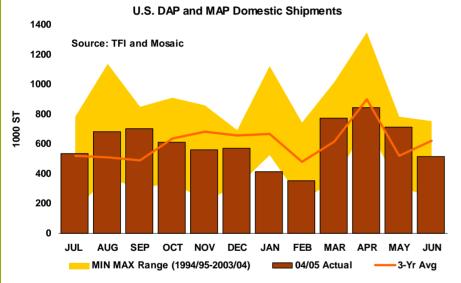
U.S. Phosphate Plant Closures

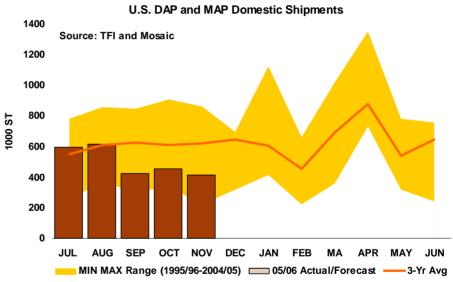
Unit: 1000 MT Phosphoric Acid (P₂O₅)

Company	Facility	Year	Capacity
Mosaic (IMC)	Nichols	1999	255
Mulberry Phosphates	Piney Point	2001	300
	Mulberry	2001	300
Mosaic (IMC)	Faustina	2003	510
USAC	Ft Meade	2005	550
Total			1,915
DAP Equivalent			4,120



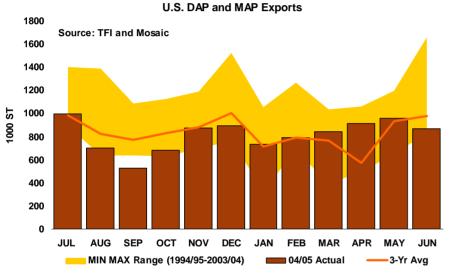
Domestic shipment are down19% YTD

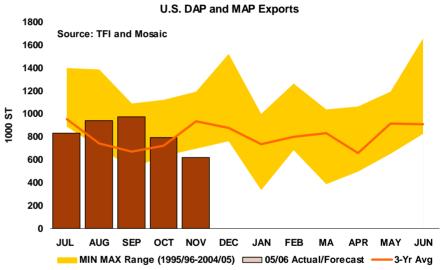






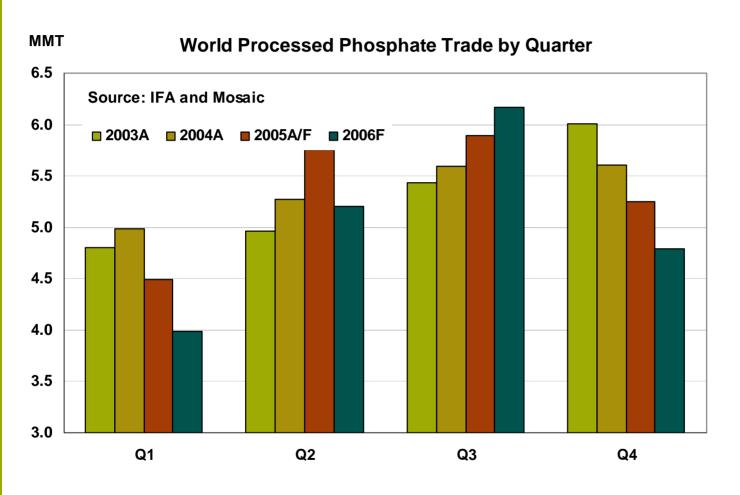
Export shipments have slowed recently







Increasing seasonality is an issue



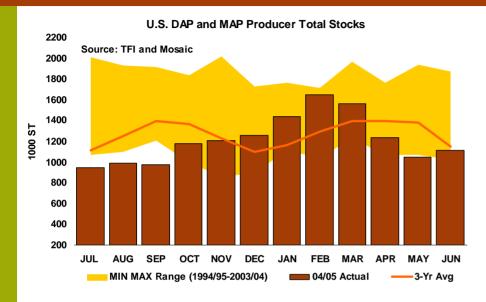
Recent demand changes have caused greater seasonality in offshore shipments.

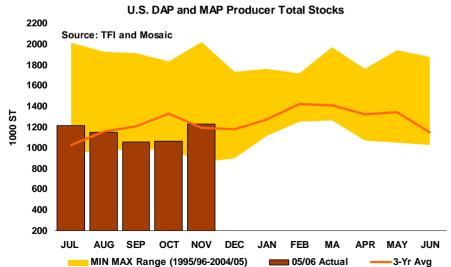
For example, the increases in shipments to Brazil, India and Pakistan and the drop in exports to China during the past few years has reduced Q1 and Q4 shipments and boosted Q2 and Q3 shipments.

This trend is expected to continue in 2006 with heavy shipments mostly concentrated in Q2 and Q3 of the calendar year.



Increasing seasonality is an issue





U.S. DAP and MAP stocks swung from the low end of the 10-year range during the fall of 2004 to the high end of the range during the early spring of 2005.

Losses from the Florida hurricanes coupled with a seasonal up-tick in both export and domestic shipments pulled down stocks to below the 10-year minimum during Q3 2004.

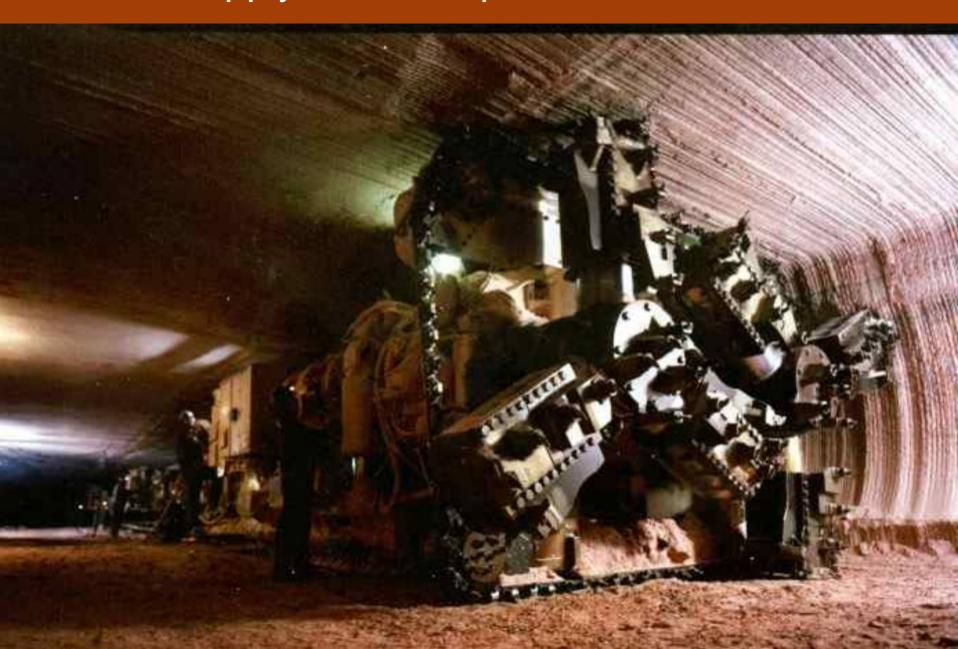
Stocks climbed to the upper end of the 10-year range due to the slowdown in shipments to Brazil and China in Q1 of 2005.

Stocks fell again to the low end of the 10-year range last fall as a result of large shipments to India and Pakistan and significant production losses from Hurricanes Katrina and Rita.

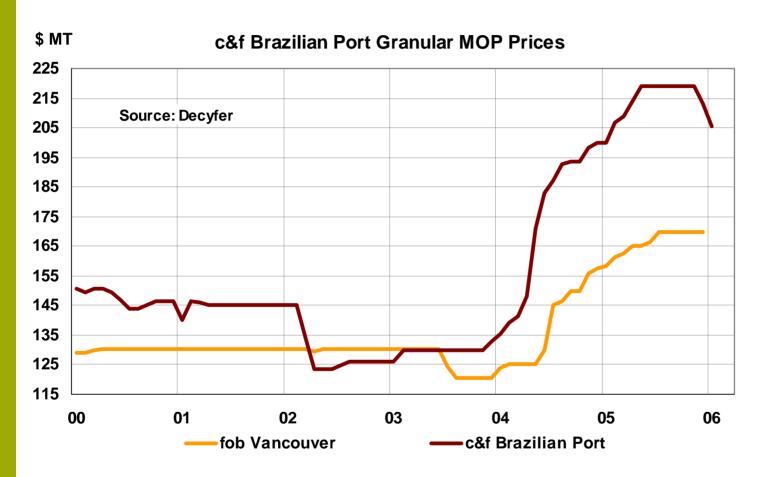
The further drop in U.S. exports to China, limited buying interest from Brazil and poor domestic fall movement has forced producers to reduce operating rates in order to prevent a similar build this year.



Potash: Supply catches up with demand



Surging demand pulled prices to record highs



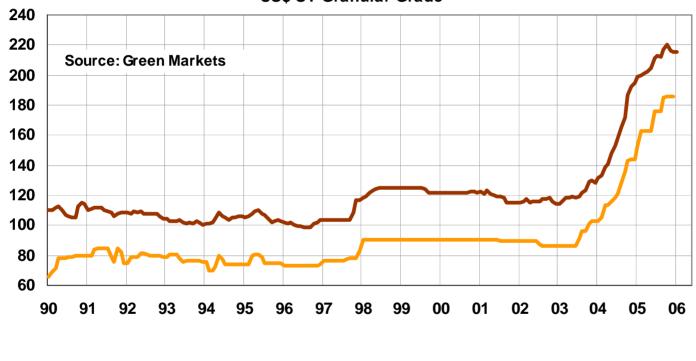
Surging demand tightened the potash market and pulled global prices to record highs in 2005.

The Brazilian c&f price has softened recently due to the strong supply response worldwide and a sharp drop in local demand.



Domestic prices also have increased to record highs



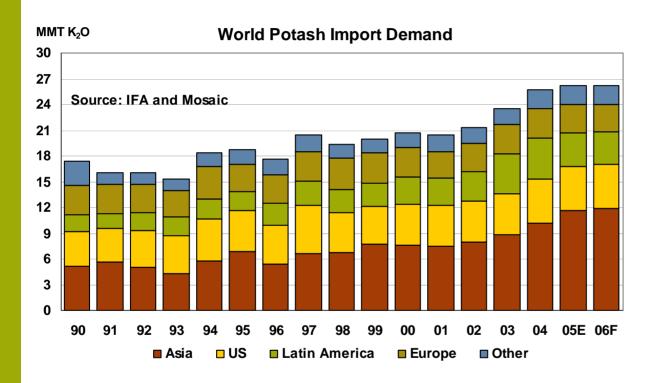


Domestic prices also have increased to record highs during the last two years.





Demand growth slows but still climbs to record highs



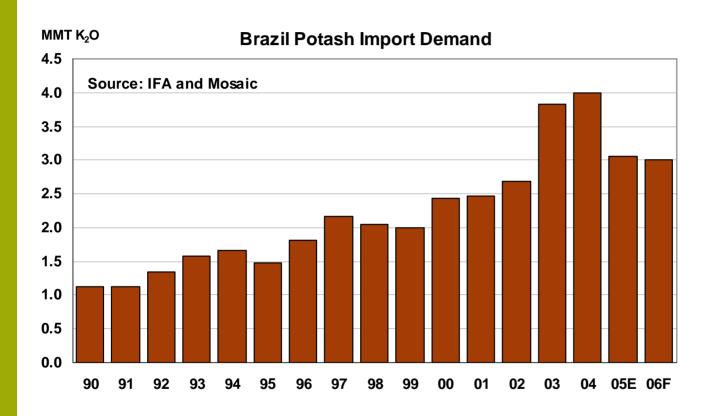
World import demand surged 26% or 5.3 mmt K_2O from 2001 to 2004 due to rapid growth in both Asia and Latin America. That is the equivalent of 8.8 mmt of KCL.

Demand growth slowed in 2005 largely as a result of a significant decline in Brazilian imports. Shipments to China and India set records again in 2005.

Import demand is forecast to stay flat at the current record high level in 2006 due to more moderate growth in Asia and no significant recovery in Brazil.



Brazilian imports plummet



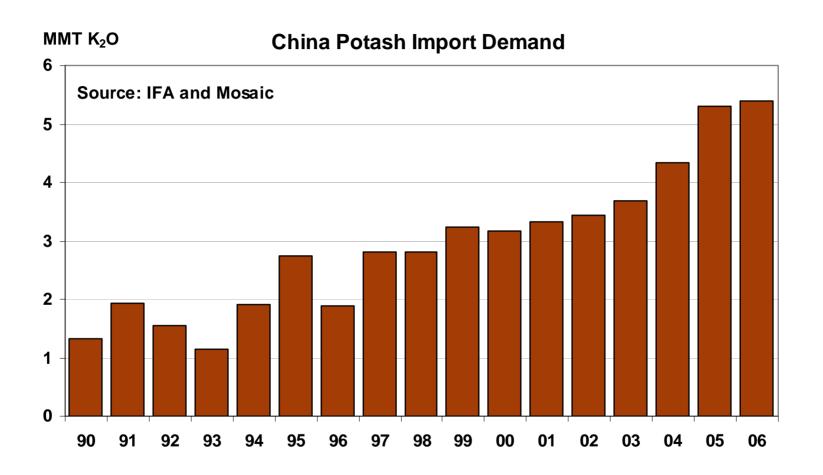
After surging in 2003 and 2004, Brazilian muriate of potash imports are projected to drop 23% or from roughly 4.0 million tonnes K_2O in 2004 to 3.0 million tonnes K_2O in 2005.

The appreciation of the real, lower soybean prices, higher input costs and a severe drought in the southern part of the country combined to shrink demand in 2005.

Potash stocks increased sharply in 2004 because record imports exceeded actual use. As a result, imports in 2005 dropped even more than the decline in use.

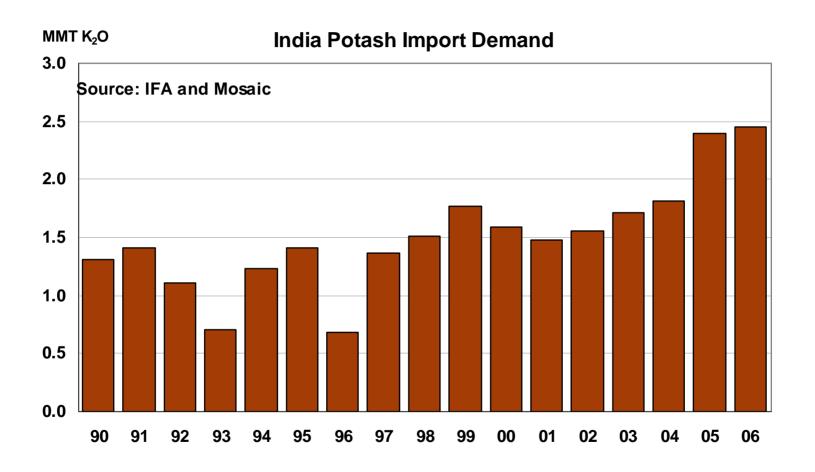


But Chinese imports increase sharply



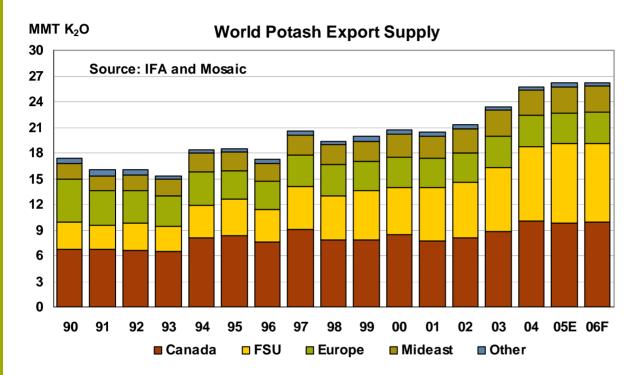


And Indian demand also steps up to a new level





Record Canadian exports required to meet demand



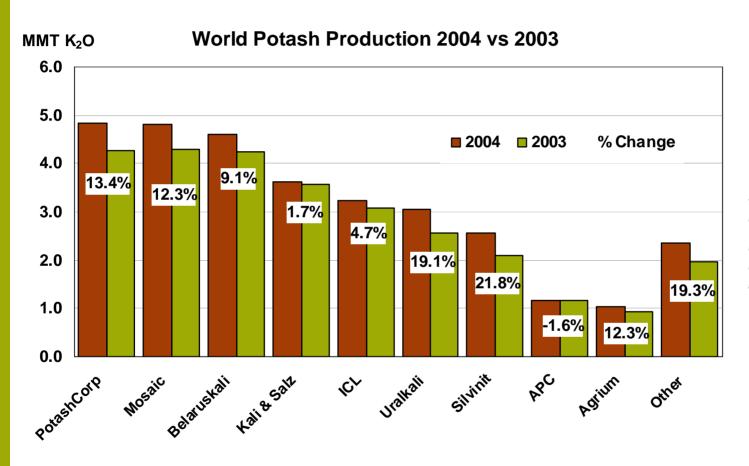
Exports from Canada to offshore destinations required to balance the world market are forecast to reach 5.3 MMT K_2O in 2005, up almost 2.2% or 110,000 MT from 2004.

Canadian exports are forecast to increase 1.5% to 5.4 mmt K_2O in 2006.

Canpotex exports totaled a record 8.2 million tonnes in CY 2005, up from 7.8 MMT in 2004. Canpotex exports are expected to remain flat in 2006. FSU exports are forecast to increase 5% or 460,000 mt K2O in 2005 to a record 9.15 mmt K2O. Current FSU production levels are more than double that of a decade ago.



Demand increase met by a higher operating rates

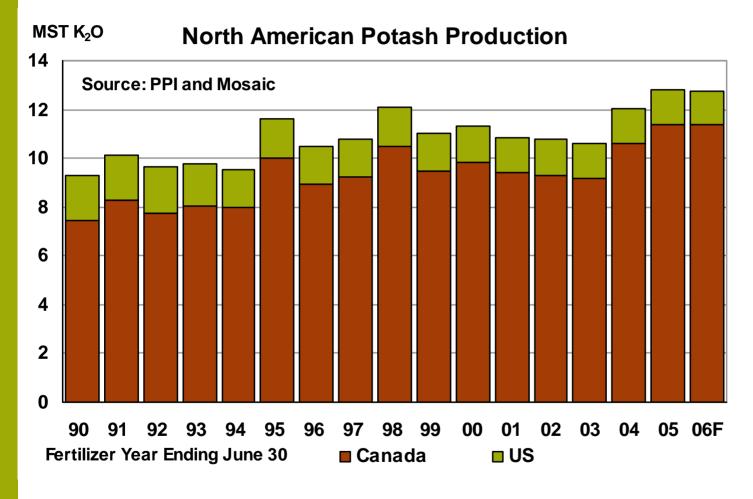


The market is signaling a need for increased production.

Nearly all producers increased operating rates in 2004.



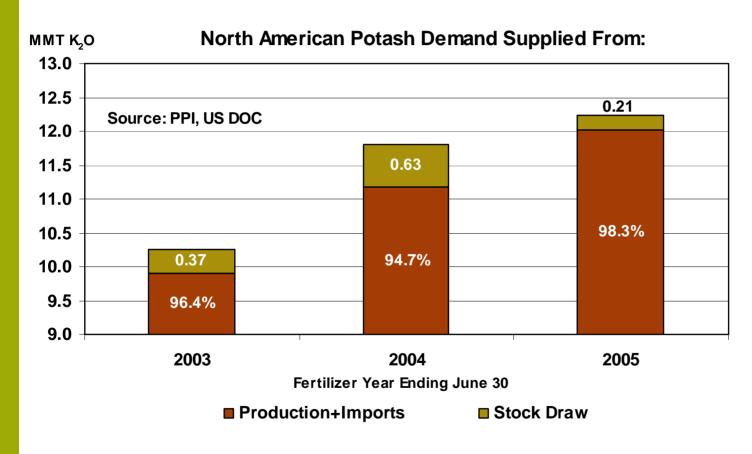
NA producers respond to strong demand



North American potash producers, like their counterparts in Europe and Asia, have increased production in order to meet demand.



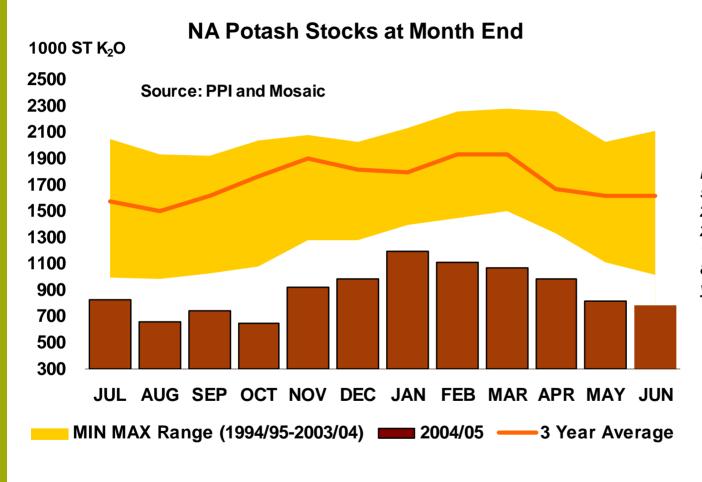
Demand also met by a large stock draw-down



North American producers met demand by drawing down stocks 1.2 mmt K_2O or 2.0 million tonnes KCL during the last three years.



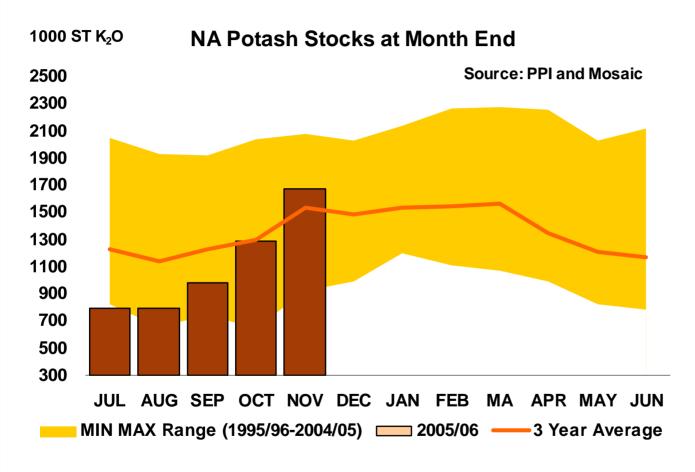
NA producer stocks at month end - 2004/05



North American potash stocks at the end of the 2004/05 fertilizer year were 231,000 tons K_2 O less than 10-year minimum and nearly 830,000 tons less than the 3-year average



Stocks have increased



Month-end stocks during the first quarter of the fertilizer year were at the low end of the 10-year range.

However, high operating rates and slower-than-expected domestic and offshore shipments have push stocks above the 3-year average and prompted producers to curtail production in order to prevent further increases.



Thank You!

Fertilizer Market Outlook

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