



QUARTERLY U.S. RURAL ECONOMIC REVIEW, Q2-2012

Mounting Economic Woes and Rising Crop Concerns

This quarterly update is prepared by the Knowledge Exchange Division and covers the key industries served by CoBank, including the agricultural markets and the rural infrastructure industries.

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Key Points:

- *Europe’s sovereign debt saga, the U.S.’s looming “fiscal cliff,” and concerns about China’s capacity to sustain growth are taking a toll on global economic growth prospects.*
- *Affordable, rapidly changing technology is accelerating a shift in how enterprises and consumers use communications services. The proliferation of smartphones, tablets, and other consumer devices is pushing data traffic to new heights, especially on the wireless side.*
- *Increased oil production, weak global demand, the strengthening U.S. dollar, and reduced geopolitical risk have combined to push oil prices sharply lower.*
- *After two years of lackluster crop production, grain and oilseed stocks are precariously low; and drought conditions rivaling those of 1988 are now dashing hopes in the dairy and animal protein sectors for lower feed costs in 2012/13.*
- *As the warm, dry weather persists into July, there is mounting concern about the worsening drought and stunted yields, as crop prices have surged higher in recent weeks.*
- *The animal protein industries continue to struggle with high feed costs and stiffening consumer resistance to higher prices, amidst sluggish economic growth. Companies’ risk mitigation strategies and skills will likely be severely tested during the next 18 months.*
- *Pressured by declining milk prices and prolonged high feed costs, dairy producer margins turned negative in March.*

Preview

The two-speed global economy, driven by emerging market growth, may be faltering. Both European and U.S. economic prospects are becoming increasingly influenced by the failure to implement effective fiscal policy actions to address their sovereign debt issues. At the same time, China has initiated various internal economic stimuli to recover some of its lost growth momentum.

The U.S. agriculture sector remains strong, but there are rising concerns that the 2012/13 grain and oilseed harvests will not replenish low inventories, thus leaving the protein and dairy complexes to face continuing cost and profit pressures. Despite the crop concerns, agriculture will remain one of the strongest sectors in the U.S. economy. Net cash farm income in 2012 will likely be below the record high in 2011 but still very robust by historical standards.

Macroeconomic Outlook

Europe's sovereign debt saga, the U.S.'s looming "fiscal cliff," and concerns about China's capacity to sustain growth are beginning to take a toll on global economic growth prospects. It is now clear that none of these challenges will be addressed in the political arena in the near term. Major elections continue throughout Europe and the U.S., and a leadership transition is under way in China. Political unrest in the Middle East and Russia are further complicating the needed global policy reforms. Falling energy prices have ushered in some relief for global consumers, but the oil markets remain vulnerable to Middle East turmoil.

The latest euro-crisis has been averted with the formation of a coalition government in Greece committed to remaining in the euro zone. However, renegotiations regarding the schedule of austerity measures are now under way. Meanwhile, bank and government solvency issues in Spain and Italy are moving toward crisis levels.

The U.S. economy will remain on a 1.5-2.0 percent growth path for the foreseeable future as consumers struggle with debt loads, high unemployment and weak housing values. In coming months, worries about the fiscal cliff are likely to intensify as the presidential and congressional elections limit any chances for bipartisan agreements until after the elections have been held. If Congress fails to take alternative action, the 2 percent payroll tax cut and the tax cuts put in place in 2008 will expire on January 1, 2013; and across-the-board cuts in government spending would be triggered. The combination of higher taxes and reductions in government spending would dramatically increase the

“*Despite the crop concerns, agriculture will remain one of the strongest sectors in the U.S. economy.*”

likelihood of a U.S. recession in 2013 given the anemic condition of the economy.

China's central bank has reduced interest rates by 25 basis points, the first reduction since late 2008. The rate reduction and the encouragement for expanded lending are designed to boost domestic investment and consumption to offset sharply lower exports, particularly to Europe.

On the positive side, a significant decline in oil prices has brought some much needed relief to consumers. The declines have been triggered by a reduction in the risk premium associated with the Iranian nuclear debate, the stronger U.S. dollar and a weaker U.S. and global economy. However, it will take some time before the full benefits of these reductions are passed through the system. Middle East tensions could reemerge overnight, and many companies are hesitant about realigning their pricing models until a full resolution of issues is achieved.

Rural Infrastructure

Infrastructure industries – including communications, electric power generation, transmission, and distribution, natural gas, and water utilities – are highly diverse. But in varying degrees, they all carefully monitor and are tied to overall U.S. economic conditions. Plus, regulatory and legislative issues continue to be major concerns of all of them.

Communications

The communications industry continues to be a story of transition. Affordable, rapidly changing technology is accelerating a shift in how enterprises and consumers use communications services. The Pew Internet Project found that accessing the Internet on the PC is going by the wayside, with young adults, minorities and low-

income groups reportedly using their phones as their primary avenue for going online. Trends such as these are erasing the distinction between communications companies, forcing providers to retool business models. These trends are also complicating the government's mission to overhaul telecom rules and regulations. While the industry faces formidable challenges, savvy communications companies are identifying and cashing in on opportunities.

The proliferation of smartphones, tablets, and other consumer devices is pushing data traffic to new heights, especially on the wireless side. The number of wireless subscriptions in the U.S. has now surpassed the population, and the domestic demand for mobile data is roughly doubling each year and now constitutes 85 percent of all wireless traffic. While wireless data revenue

“*Personal cloud services will replace the personal computer by 2014.*”

has posted impressive growth in the past several years and is expected to grow another 19 percent to \$80B in 2012, revenue from data accounts for only 39 percent of total revenues. The success of the wireless industry depends upon the operators' ability to charge subscribers for the amount of data used. Verizon may have jump-started this change with a recent announcement that it will no longer offer unlimited data plans. Major wireless players previously attempted to introduce this bold pricing structure but were met with severe consumer criticism. This time, however, other carriers are expected to follow suit, and the media are highlighting subscriber disappointment versus public backlash.

Wireless providers are not the only communications companies that are benefitting from the surge in traffic; data centers and fiber transport companies are also seeing gains from the explosion of digital data. Today's consumers want to access their content seamlessly on several different devices, some wired and others

wireless. This expectation prompted a rise in personal cloud storage and data centers. Gartner Research predicts that personal cloud services will replace the personal computer by 2014. Data center companies are also seeing strong demand from enterprises, with the average corporation spending one third of its IT budget on data center services. Valued at \$15.8B in 2011, the data services market will see a compound annual growth rate of 19.2 percent through 2016, according to 451 Research. Fiber transport providers have arguably reaped the most rewards from the flood of traffic. Fiber transport providers can carry any type of digital content over their fiber routes, and therefore benefit when the overall amount of wireline or wireless traffic increases. The success of these two sectors is highlighted by the fact that the bulk of the merger and acquisition (M&A) activity in the communications industry is in the data center and fiber transport space. Not surprisingly, these providers are also posting the strongest valuations.

With growth in access lines and broadband subscribers bolstering performance measures, cable valuations are holding up well, and the M&A activity in the cable sector looks to be on par with 2011. Although the rise of over-the-top video content allowed a number of consumers to cut their cable provider, analysts expect the current business model will hold out for some time as it will be several more years before consumers will have alternative providers for all video content. Small cable providers continue to pay more for content than their larger counterparts; and therefore consolidation, cost-containment, and revenue diversification are the keys to success for these companies.

Although some rural local exchange carriers (RLECs) have assets in the aforementioned areas and have realized enough diversified revenue to sustain viable and often successful businesses, the broader RLEC industry is struggling to operate in an uncertain environment. The transition to a data-centric broadband world has been particularly tough for this group. During the first decade of the 2000s, the RLEC industry lost not only 45 percent of its access lines, but also the cost-recovery funds tied to those lines. Although RLECs support the Federal Communications Commission's (FCC) efforts to

transition the current voice-centric cost-recovery systems to fund broadband, the rural carriers contend that the proposed regulations fail to provide predictable and sufficient support in the future. Analysts agree with the RLEC opinion and estimate that the latest proposals will not only reduce available funding by \$1.3B each year, but will also jeopardize companies' abilities to service debt from previous investments and severely limit access to capital and investment in the future. In the meantime, operating in a state of hyper-uncertainty has taken a toll on smaller RLECs. M&A activity has come to a near halt, with a meager 6 deals announced in 2011, and only one announcement so far in 2012 – down significantly from the 16 publicized in 2010. Valuations for the smaller, private company deals are considerably lower than those of the larger, publicly traded companies. With the new communications rules and regulations offering far less certainty and support, revenue diversification, cost containment and gains in economies of scale are the most promising avenues to realizing a successful, long-term RLEC business strategy.

Electricity Industry

Total U.S. consumption of electricity has still not fully recovered the ground lost during the steep economic recession of 2008-09. While total consumption did increase 3.6 percent during Q1-2012, the gain was mostly seasonal. For all of 2012, the U.S. Energy Information Administration (EIA) is projecting a 1.0 percent decline in total electricity consumption to 3.818 billion kilowatt hours. If realized, this projected level would be about 2 percent below the annual cyclical peak reached in 2007.

Looking ahead, the EIA is projecting modest growth in total electricity consumption over the next 25 years. Its base-case projection calls for total consumption to grow 0.8 percent a year over 2010-35 – the same growth rate experienced over the 20-year span extending from 1987 to 2007. Over the next 3-5 years, however, total electricity consumption is likely to grow at a slower pace than the longer-term average, considering that real GDP growth in the next few years is likely to be just 1.5-2.0 percent.

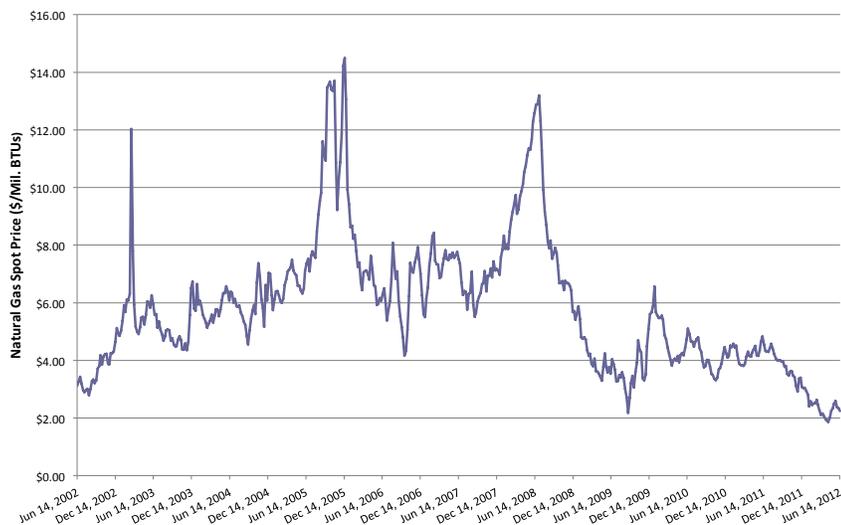


This pump jack is extracting oil from shale in southern Texas. Drillers are using hydraulic fracturing for oil wells as well as natural gas wells.

The fuel mix for U.S. electricity generation continues its long-term shifts toward natural gas and, to a lesser extent, renewable energy sources – and away from coal. That said, recent short-term swings in the relative prices of fuel sources have triggered brief accelerations or slowdowns in these trends. For example, as natural gas prices fell sharply last year and in early 2012, U.S. power generators stepped up their use of natural gas; their consumption of natural gas is projected to increase 20 percent in 2012, raising its share of the fuel mix to 30.4 percent in 2012 from 24.8 percent in 2011. Coal consumption is projected to decline in 2012, with its share of the fuel mix expected to decline to 36.9 percent in 2012 from 42.2 percent in 2011. Going forward, natural gas prices are expected to bottom out in mid-2012 and then ratchet higher. The share of natural gas in the fuel mix for electricity generation should edge down in 2013, while coal's share will inch higher.

Natural gas prices have fallen to the lowest level in ten years, and this decline has dampened the growth in retail prices for electricity. The average retail price for all users increased 1.6 percent in 2011, after being flat in the previous year. For the first three months of 2012, retail prices were virtually unchanged from the same period a year ago. The retail prices for residential users, however,

Exhibit 1: Henry Hub Gulf Coast Natural Gas Price (\$/Mil BTUs, Weekly)



Source: U.S. Energy Information Administration.

continue to outpace those for commercial and industrial users. For the first three months of 2012, retail prices for residential users were 3.4 percent above what they had been a year ago.

Energy Commodity Markets

Oil prices fell sharply in recent weeks. The spot price for West Texas Intermediate crude oil dropped from \$105-110 a barrel at the end of March to \$83-85 in July. This decline partly reflects the recent downbeat news about the global economy. Additionally, the easing in geo-political tensions with Iran has succeeded in shrinking the large risk premium that had been built into global oil prices.

Domestic U.S. oil production continues to grow, having climbed from a trough of 4.95 million barrels a day in 2008 to 5.67 million barrels a day in 2011. Application of the new well drilling techniques involving hydraulic fracturing has benefited domestic oil production, as well as domestic gas production. With domestic oil production of 6.16 million barrels a day during the first three months of 2012, the EIA is projecting that total production will average 6.32 million barrels a day in 2012 and 6.73 million barrels a day in 2013. Analysts generally agree that U.S. oil reserves are indeed vast, with some

estimates indicating that the nation has over 1.4 trillion barrels of recoverable oil.

Domestic U.S. production of natural gas continues to boom, thanks to the large number of new wells being drilled and to the increased productivity of those wells. Last year, total production of natural gas grew by 7.9 percent, the largest volumetric increase in history. Current production continues to outstrip demand, and the working natural gas inventory (gas in pipelines or storage) has swelled to unusually high levels. It is this abundance of gas that pushed prices to their April lows (see Exhibit 1).

Analysts are anticipating that the current glut of natural gas will end soon. The gas rig count declined to 588 rigs in

June 2012 from 877 a year ago, in response to the steep decline in natural gas prices. Since early 2007, the volume of natural gas production has tended to move in synch with the number of gas rigs, albeit with a short lag. Hence, over the next 6-12 months, domestic gas production is likely to peak and begin to recede, and gas prices are likely to stage an upturn and climb higher. Analysts at the EIA are projecting that the Henry Hub natural gas spot price will average \$2.55 per MMBtu in 2012 (versus \$2.72 per MMBtu on July 11) and \$3.23 per MMBtu in 2013. Other analysts, however, suspect that these projections could prove to be conservative.

Energy Policy

The wind energy tax credit is scheduled to expire at the end of 2012 unless Congress passes an extension. The odds that Congress will actually do so are slim. At present, there is a bipartisan effort underway to pass a two year extension of the wind energy tax credit. The legislation to extend it was introduced in the week of March 16, but there is no clear path on how this legislation will ultimately be passed. The politics of extending the wind energy tax credit is muddled with tax credits for oil, gas, and solar production.

Water Industry

Funding continues to be a struggle for water utilities. Their difficulties in financing infrastructure repairs, replacements, and upgrades are well known. Less well known, but even more pressing, are their difficulties in simply covering short-term operating and maintenance (O&M) expenses. According to the results of the 2012 survey of American Water Works Association members, more than half of utility respondents reported that their operating income and rates were inadequate to cover O&M costs. Moreover, the proportion of utilities experiencing such revenue shortfalls appears to be rising.

This is not an easily remedied problem. For the utilities, the basic problem is that water consumption per capita is trending downward, owing to conservation measures, unpredictable weather patterns, and implementation of increasing block rate pricing structures. Additionally, the utilities' O&M costs continue to climb, with energy costs and regulatory compliance costs setting the pace. Compounding the revenue shortfall for utilities is users' stiff resistance to proposed rate increases. American consumers regard water rate increases as tantamount to tax hikes.

Decoupling revenue from water usage appears to be an emerging trend in the water industry, as long as the PUC allows it. A similar trend is also unfolding in the energy industry, where consumption per capita is also declining because of conservation. At present, only New York and California allow revenue decoupling within the water industries; but Idaho, Maryland, Vermont, and California allow revenue decoupling within the electricity industries. Several other states have allowed certain utilities to pilot programs. All in all, however, the number of PUCs that have ventured into decoupling is still relatively few.

Even as water utilities struggle to cover O&M costs, they also continue to search for creative ways to overcome their difficulties in financing infrastructure repairs, replacements, and upgrades. High on their list of possibilities are public-private partnerships (PPPs), but few such deals have actually gotten done. Two PPPs are currently under consideration and, if realized, could break the logjam. One PPP involves the pledge of future cost savings from three sewer systems in Nassau County

“*Persistent dry weather in key crop areas is rapidly reducing potential grain output.*”

NY to a financing entity (not yet named) in return for an upfront investment of about \$750 million. The other PPP would outsource the operation and maintenance of Rialto CA's water and wastewater enterprises to a private contractor for 30 years, and the concession agreement calls for much-needed capital improvements. Both of these PPPs are evidently just weeks away from final approval, though both may yet be voted down. However, the fact that both deals have come as far as they have testifies to the keen interest that water utilities and other municipal entities have in reaching out to the private sector for long-term capital funding.

U.S. Agricultural Markets

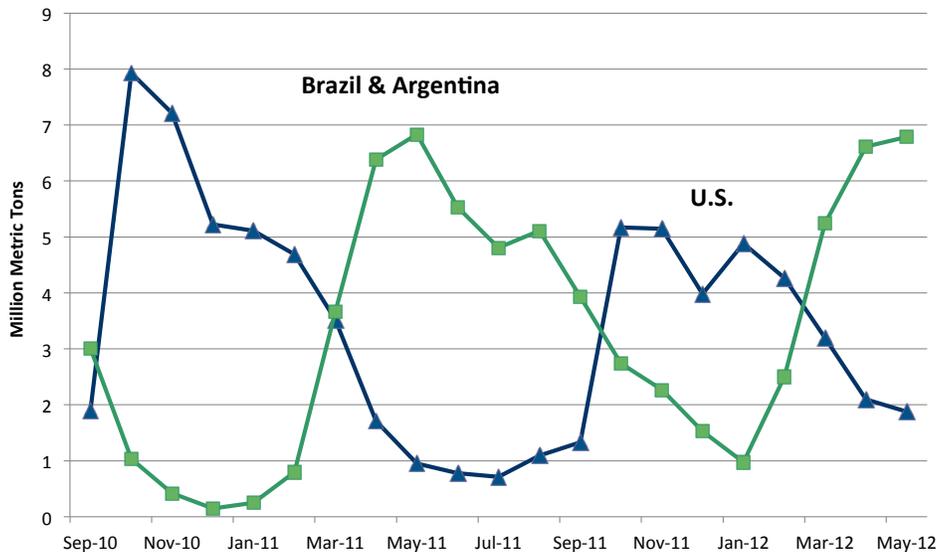
Grain and oilseed inventories remain precariously low, and the animal protein and dairy complexes were counting on large 2012/13 harvests for reducing price volatility, lowering feed costs and restoring consistent profitability. However, persistent dry weather in key crop areas is rapidly reducing potential grain output, and rising concern about declining U.S. grain yields has reignited speculative interest in grain markets. Any early signs of reduced harvests in Russia and parts of Europe would compound the uncertainty. Indeed, the sharply reduced South American soybean harvests have already left the U.S. as the principal global supplier until 2013.

Against this skittish backdrop, producers and processors in the protein and dairy complexes will have to sharpen their risk mitigation strategies and skills for use during the next 18 months. U.S. and foreign markets will remain fragile, and the ability to pass rising costs through the food chain may be limited.

Grains, Oilseeds, and Ethanol

A warm, relatively dry winter and early spring paved the way for one of the earliest planting seasons on record.

Exhibit 2: Monthly Soybean Exports: U.S. versus Brazil and Argentina



Sources: USDA-FAS and Informa.

Corn planters were in the fields as much as a month earlier than usual in parts of the Corn Belt, and winter wheat harvests were also early across the Midwest and Plains states. As the warm, dry weather has intensified during the growing season, there is mounting concern about drought and pest control. After two years of lackluster crop production, inventories are unusually low, and the grain markets are closely monitoring the deteriorating crop conditions.

Corn

In early spring, weather and soil conditions across the Heartland presented a perfect opportunity for producers to get a head start on the growing season. Those optimal planting conditions have lingered, however, and now are inhibiting crop development, as fields across much of the Corn Belt are showing moderate to severe signs of drought. Little short term relief is in sight, and climatologists indicate that a transition to El Niño weather patterns is likely to begin in late August or September; too late to have much impact on the growing season. The lack of moisture has caused some private grain advisory firms to revise their yield projections downward to the low-140s, and the USDA has reduced its forecast for

corn yields from 166 bushels per acre in June to 146 bushels per acre in July.

Corn use in the second quarter was steady, as an increase in ethanol production was offset by weakening export demand. Domestic corn stocks remain very tight, which has priced U.S. corn out of the global market. This is likely to remain the case through the summer, as Brazil and Argentina are positioned to supply the bulk of world demand.

The USDA's June 29 reports on acreage and stocks provided few surprises, but the July WASDE report reflected USDA's first attempt at quantifying the deteriorating crop conditions. USDA analysts cut their estimates of the 2012/13 corn crop by nearly 2 billion bushels, or 12 percent. Corn uses for feed, ethanol, and exports were all slashed significantly, with rising corn prices expected to curtail demand in the coming year. Corn prices soared by more than 40 percent between mid-June and mid-July, and USDA has now raised its season-average price estimate for 2012/13 by more than a dollar, to a range of \$5.40-6.40 per bushel.

Soybeans

Soybean production has also been impaired by the unrelenting drought conditions. USDA analysts reduced their soybean yield estimates by 8 percent in July, and raised their 2012/13 average price by a dollar, to a range of \$13-15 per bushel. Soybeans reach the critical development stage about a month later than corn, so if weather conditions improve by late-July/early-August, it could aid the crop. But significant damage has already been done, and at a very inopportune time considering the lack of global supply. South America's dismal growing season had already set the stage for a very tight 2012/13 season, and for very strong world demand for U.S. soybeans.

Inverse growing seasons typically dictate that U.S. exports dominate the world soybean market from October to March, while Brazil and Argentina fill global export orders in the rest of the year (see Exhibit 2). With last year's combined production for Brazil and Argentina estimated to be down 14 percent year-over-year (YoY), U.S. soybeans are being exported at roughly twice the rate as last year at this time. That pace is expected to continue through much of the next 8 months, as the U.S. will have a near-monopoly on soybean exports from August until Q1-2013, when the next South American harvest begins. A record-setting 70 percent of U.S. new crop soybeans is likely to be either crushed or exported during the first half of the marketing year.

With strong contra-seasonal export demand causing old crop stocks to dwindle faster than expected, the new crop outlook is becoming even tighter because of smaller carryover stocks. The domestic 2012/13 stocks-to-use (S/U) ratio is estimated to fall to a historically low 4.2 percent, which represents only 15 days of use. This is largely the result of a global surge in corn acreage in 2012 at the expense of soybeans. Soybean production is expected to fall to a 20-year low in China this year, as farmers there respond to price signals of \$10/bushel corn. Chinese soybean imports have been very strong in recent months despite poor crushing margins, as processors and reserve buyers attempt to build-up inventories before supplies tighten further in coming months.

Recent domestic demand pressures have also been unexpectedly strong. Although the number of animals on feed increased only minimally in 2011/12, more soybean meal has been used in feed rations to account for the low protein content of last year's crop. Use of soybean oil for biodiesel production has also been robust. The domestic crush, however, is expected to decline in 2012/13, as elevated prices curtail domestic and export demand for soybean meal. Biodiesel production will likely fall YoY, as soybean oil prices squeeze margins.

Despite the spring and summer rally in soybeans, prices may rise even further to ration global demand that far exceeds supply. Increased price volatility is expected for the duration of 2012, especially if dry conditions in the



Growers are now harvesting their winter wheat crops. This year's crop will be considerably bigger than last year's.

Corn Belt persist and new crop production estimates decline further. The early winter wheat harvest is one countervailing factor, which provided ample opportunity for producers to plant double-crop soybeans. Although earlier double-crop planting typically reduces some of the yield risk for producers, the drought has eliminated much of that advantage this year.

Wheat

Dry conditions have impacted winter wheat yields in western states and the Central Plains, but only just enough to prevent total U.S. yields from setting a record. Overall, the winter wheat harvest should be much improved from last year, with the USDA's estimates calling for a 13 percent increase YoY. This improvement is largely the result of additional acreage and fewer abandoned acres in the Central and Southern Plains region, which experienced a devastating drought in 2011. Including anticipated spring wheat acreage, total new crop U.S. wheat production is likely to rise 11 percent above what it was in 2011/12, also due to gains in last year's drought-ravaged regions.

U.S. exports and domestic milling have been stronger than expected in recent months, and this has reduced the carryover from 2011/12 into the new crop year. World wheat supplies are still abundant, with 2012/13 S/U ratios estimated at 27 percent in the U.S. as well

as globally. However, the upcoming crop year will be the third consecutive year in which the U.S. and the world consumes more wheat than it produces. Signs of increasing demand, declining inventories, and weather related crop concerns in Russia, Europe, and the Middle East, are all contributing to stronger wheat prices and a decoupling of prices from corn.

Ethanol

After a first quarter industry-wide pullback, ethanol producers ramped up output in Q2. On average, operating margins were narrowly positive year-to-date (YTD), but since late spring, market conditions have deteriorated. A 20 percent decline in crude oil prices also dragged down ethanol prices. Short-lived selloffs in the corn market created some buying opportunities, but have given way to soaring prices and extremely high input costs for ethanol producers. In recent weeks, most producers have been operating in the red, while several small facilities and one large plant have temporarily shut down production. Most plant managers who suspended production stated that they anticipated restarting

production to coincide with the corn harvest. However, the notion that the harvest will usher in cheaper prices is much less likely now, and margins could be pressured well into the fall.

One bright spot for the industry continues to be exports. While off considerably from the highs of December and January, exports have remained relatively strong. Overseas demand has provided much needed support for the industry as it continues to navigate a high input-cost environment.

Animal Protein and Dairy

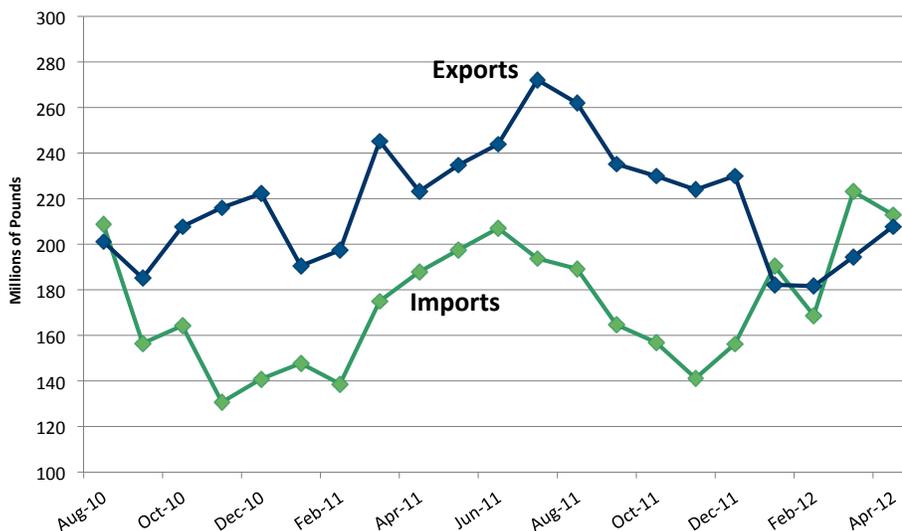
The animal protein sectors continue to contend with high feed costs and stiffening consumer resistance to higher prices amidst sluggish economic growth. After the devastating drought of 2011, the beef cattle industry was poised to begin expanding. Persistent dry conditions across cattle grazing country and the Corn Belt are likely to delay that expansion, however. With record high input prices, all sectors of the beef industry are being squeezed, with the exception of the cow/calf segment. The chicken

and pork industries were both expected to increase production during the remainder of the year, but high feed costs are likely to limit those expansions as well. Margins in both industries will narrow as they battle to steal market share away from beef, as well as from each other. In dairy, there are early signs suggesting that the herd expansion of the past year and a half is slowing down – and may even have ended.

Beef

The beef cattle industry continues to feature shrinking inventories, rising prices, and challenged margins for feedlots and packers. Beef production YTD is down nearly 3 percent, and this trend is likely to continue through the third quarter. Full-year production is expected to

Exhibit 3: U.S. Monthly Beef Trade
(Millions of Pounds)



Source: USDA-ERS.

fall roughly 4 percent compared with 2011. As domestic beef supplies have contracted, exports have declined and imports have surged (*see Exhibit 3*). April was the third of the past four months where the U.S. was a net importer of beef. At no time between September 2010 and December 2011 did U.S. beef imports outweigh exports, but a shrinking cow herd has necessitated a shift in the trade balance. Beef exports YTD are down by nearly 11 percent from last year's record levels, but higher prices have lifted the value of exports by 5 percent. In contrast, beef imports are up 22 percent compared with the same period last year. For all of 2012, USDA analysts expect beef exports to decline 6 percent, while imports increase 19 percent.

Even with this large shift in the trade balance, American consumers will still end up with a lower volume of beef in 2012 than what they had in 2011. Domestic beef availability is now forecast to fall more than 2 percent in 2012, and an additional 2 percent next year. As feeder cattle prices have soared, it has behooved producers to retain heifers and expand the herd size. However, after improving in the winter and spring months, pasture conditions are regressing, and producers have responded by holding back fewer animals from slaughter. Producers are expected to increase the number of cattle on feed temporarily, and push herd rebuilding further into the future.

Through the first half of the year, retail beef prices were 6 percent higher than a year ago. And while price increases have slowed in early summer, prices are expected to re-accelerate before long. Retail prices lately have been very low in relation to the wholesale cutout prices and live cattle futures. Many analysts expect to see intensifying upward price pressure at the wholesale and retail levels during the second half of the year. However, two factors will act to counteract this increase. First, beef prices are now historically high compared with chicken and pork prices. Significant price increases from here onward could cause consumers to balk, and shift consumption to competing meats. The faltering economic recovery is also cause for concern, as consumer income is rising at a much slower pace than beef prices.

Margins along the supply chain are slim or negative, with the exception of the cow/calf sector. Cow/calf producers have been in the black for many months now, and are currently netting well over \$100 per head. Feedlot operations continue to experience huge losses on a cash basis, and are likely to see very little relief even after the new corn crop is harvested. Feedlot margins could remain in the red into the fourth quarter and beyond. Packer margins, after being deeply in the red for much of 2012, turned positive in May and June. This dramatic change is due to improvement in the wholesale cutout, which is expected to support positive packer margins through the third quarter, albeit at much lower levels than seen in 2010 and 2011.

The margin relief at the packer level has come at the expense of the retailers. With pork and chicken prices showing some signs of weakness, retailers are finding it increasingly difficult to pass along higher beef prices to consumers. And it will likely become harder still to do so in the third quarter as grilling season winds down.

Pork

After a very sluggish spring, pork markets turned dramatically tighter in May/early June. Lower hog weights, smaller slaughter numbers, and strengthening short-term demand combined to send lean hog futures back above \$90/cwt. This boon to producers proved to be short-lived, though. Pork production is already on the rise again, with recent YoY increases of around 5 percent. Feed cost pressures will cause producers to liquidate more of their herd, so production increases YoY are likely to continue through much of 2012. Year-long production is expected to rise 2.4 percent in 2012 compared with last year.

Overseas demand has provided a backstop for prices, as export sales have maintained their strength. Pork exports have surpassed year ago levels in 17 out of the most recent 18 months. USDA analysts expect that exports will rise 4 percent in 2012. A trade dispute between Brazil and Russia has boosted U.S. exports to Russia, and Chinese imports have been fairly steady at roughly three times the level they were a year ago. Growth in exports, however,

will not outpace production increases, causing domestic availability of pork to rise by more than 1 percent this year. As more supply comes to bear on the market, lean hog futures could recede to the \$70/cwt range by early fall.

Hog producer margins have been mostly positive in the first half 2012, but higher feed costs will turn margins negative during the second half of the year. Pork packers have struggled to maintain positive margins for much of 2012; but with higher slaughter rates and lower prices on the horizon, packer margins are expected to stabilize at \$5-10 per head for the remainder of the year. This year, retailers were able to keep prices high for most pork cuts into the spring. Since then, retail prices have fallen for several weeks, at the same time that wholesale prices have climbed. What happens to domestic sales in the coming weeks will depend critically on whether retailers pull back from their price reductions or simply wait for wholesale prices to decline.

“*Thus far this year, broiler producers have succeeded in maintaining their reduced level of production.*”

Broilers

Thus far this year, broiler producers have succeeded in maintaining their reduced level of production. This restraint has correlated to much higher prices for all cuts, and several months of rebuilding balance sheets. In recent weeks, egg sets and chick placements have still been running below year ago levels, but the gap has narrowed significantly. The trend of cutting production is likely to end soon as integrators strive to prevent the loss of market share to pork in the third quarter. Egg sets could begin to exceed year ago levels by the end of July, and broiler production YoY is expected to swing positive by the fourth quarter. However, the growth in production should come late enough in the year that domestic per capita availability of broiler meat will still fall by nearly 3 percent in 2012, before rising in 2013.

While most cuts are still commanding much higher prices this year, weakness has been developing in some dark meat cuts, especially thighs. Further dark meat price risk exists pending a decision on Mexico's anti-dumping case against U.S. leg quarters. Mexico is the largest market for U.S. broiler exports; it's twice as large as the second leading market. Mexico accounts for 16 percent of all U.S. chicken exports, and 7 percent of all leg quarter exports. China and Russia have both imposed duties on U.S. leg quarters as a result of similar cases in the past, so a favorable ruling for U.S. producers is not anticipated. A decision is expected in August, and the duties likely will range from 64-129 percent. If tariffs of this magnitude are imposed, exports would be eroded, but not devastated. Mexico imports a variety of broiler parts, and demand for cuts unaffected by the tariff could increase somewhat.

The extent and speed at which integrators increase production in the second half of 2012 will determine the level of profitability for the fourth quarter and into 2013. For now, margins are expected to turn negative by the fall due to much higher feed costs. If production increases are not restrained, the losses could extend into 2013.

Turkey

The restraint exhibited by the turkey industry over the past year is now a thing of the past. Placements YTD are up 2.5 percent from a year ago, but in recent weeks placements have been running more than 5 percent ahead of last year's pace. Full-year production is expected to rise nearly 4 percent versus last year; and despite solid demand, per capita availability will rise by 2.5 percent. This surge in supply could depress prices as much as 20-30 percent YoY in the second half 2012. Producers' margins will fall during the rest of 2012, but should remain slightly positive until they turn negative in early 2013.

Dairy

The overarching theme of recent months has been milk, milk and more milk. Favorable production conditions in the U.S. and overseas, combined with increasing productivity per cow, seasonal patterns and an expanding

U.S. herd, drove milk prices down and pushed dairy product inventories up. As the second quarter ended, however, it appears that production had begun to weaken and that prices have bottomed out.

On the production side, near-ideal conditions through May 2012 elevated productivity per cow well above trend-line levels. With summer weather now upon us, productivity per cow has begun its seasonal decline, a trend that has been accelerated by adjusting rations to rein in production and reduce costs. Additionally, after 19 straight months of expansion, the major dairy states finally reduced their herds slightly by 3,000 cows in May. As a result, the May increase in U.S. milk production slowed to 2 percent YoY, a welcome decline from the 3.5-4.5 percent increases that were seen from January through April. Production in Iowa and Pennsylvania actually decreased YoY in May. On a daily average basis, milk production across the U.S. dropped 1 percent in May.

After turning negative in March, producer margins were pressured not only by low milk prices, but also by prolonged high feed costs. While corn and soybean meal prices remained relatively stable albeit robust through mid-June, alfalfa prices continued to climb. As a result,

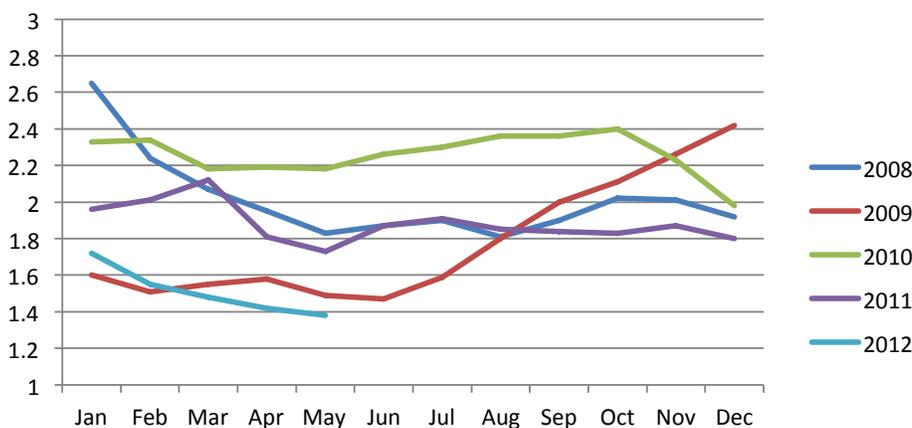
the milk-feed price ratio fell to a record low of 1.38 in May (see Exhibit 4). Total margins in May similarly fell to their lowest level since August 2009. In response to those margin pressures and normal seasonal trends, milk prices bottomed out in May and began to rise.

Going forward, dairy producers will closely monitor crop development of corn, soybean, and hay through the summer months. If the hot, dry weather persists throughout the Midwest, producer margins will likely remain negative until next year. The preliminary June all milk price averaged \$16.10/cwt, and the 2012 all milk price is projected to average \$17.05-\$17.35/cwt.

On the dairy product side, given the glut of milk, fluid milk sales continue to disappoint while sales of other products have realized mixed success. Fluid milk sales have now fallen for 26 straight months YoY, with the latest (March) data showing a 3.5 percent decline. In the meantime, while inventories of nonfat dry milk/skim milk powder have reached their highest level in 20 years, slowing production, along with a projected 5 percent increase in 2012 domestic demand and a 4 percent increase in exports, should help lift prices off their recent bottom. Butter inventories have also climbed

significantly, as production is up nearly 8 percent and domestic disappearance is off close to 5 percent so far this year. A 16 percent increase in 2012 butter exports to 135 million pounds should provide some price support off of early May lows. Cheese exports are projected to increase 10 percent YoY to 547 million pounds, after hitting a record high in March, falling just slightly in April, and rebounding in May. With cheese manufacturers generally limiting production to known or expected sales, inventories haven't become too stout. In fact, stronger cheese and whey prices over the past month have

Exhibit 4: Milk-Feed Price Ratio



Note: Milk-feed ratio is defined as the number of pounds of 16 percent protein-mixed dairy feed equal in value to one pound of whole milk.

Source: USDA.

helped lift Class III milk prices. Finally, robust high value whey protein and lactose exports have provided good news for processors.

Other Commodities

Cotton

The USDA's July WASDE report projects that 2012/13 domestic cotton production will increase 8.4 percent. A reduction in global planted acreage is expected to reduce global production by around 6 percent, and mill use in 2012/13 is projected to rise 2 percent. However, large carryover stocks from the previous year will keep supply above demand, and USDA analysts are projecting that global ending stocks will grow 9 percent to 72.4 million bales in 2012/13.

The June 29 USDA report on acreage indicated that U.S. growers planted 12.6 million acres of cotton, down 4 percent from the March report and down 11 percent from the previous season. The July 9 crop progress report showed 23 percent of the cotton acreage forming bolls, well ahead of the normal seasonal pattern. Worldwide, the U.S. is the only region expected to increase production in 2012/13.

Texas and Georgia, the nation's two largest cotton growing states, are experiencing a much milder growing season this year. Production in Texas is expected to jump from 589 pounds per acre in 2011/12 to 720 pounds per acre in 2012/13. The total U.S. upland cotton yield is expected to increase 64 pounds per acre. The July 9 crop condition report rated 35 percent of Texas' cotton good to excellent, while 58 percent of Georgia's cotton was rated good to excellent.

Projected U.S. cotton exports for the 2011/12 season were raised to 11.6 million bales, while exports for 2012/13 were increased to 12.1 million bales. China continues to source cotton from the U.S. and accounts for 55 percent of U.S. exports. Analysts are wondering, however, how long China will continue to build stocks, especially inasmuch as the USDA's 2012/13 forecast predicts that China will hold 44 percent of global ending stocks. Chinese imports from the 2011/12 global crop

are now projected to reach 23.3 million bales. This may negatively impact their appetite for 2012/13 production.

The USDA's current price forecast for 2012/13 is 60-80 cents per pound, down sharply from the last year's price of 91 cents per pound. If the projected growth in global cotton stocks is realized, cotton prices will probably continue to fall. Considering that historically high cotton prices have impaired cotton's competitiveness relative to manmade fibers, lower prices will restore some of cotton's competitiveness and thereby bolster the profitability of mills.

Rice

Global rice production for the 2012/13 season is projected to reach a record 465.1 million tons, a 1 percent increase from the previous season. The larger crop is being attributed to record planted acreage, up 1 million hectares from a year ago. Global ending stocks for the 2012/13 season are projected at 102.5 million metric tons, closely in line with those for the previous year; however, the U.S., India, Argentina, and Egypt are expected to harvest smaller crops. The current season will be the first one since 2006/07 that global ending stocks have decreased, albeit very modestly from last year's 104.2 million metric tons.

This year's U.S. rice crop is off to a good start. The July 9 crop progress report indicated 26 percent of the U.S. crop was headed, 10 percent ahead of last year. The July 9 crop condition report rated 69 percent of rice acreage as good to excellent, 8 percent higher than the previous year. Of the six states listed in this report, all but Arkansas have at least 70 percent rated good to excellent.

USDA analysts are projecting that the U.S.'s carryout for 2011/12 will fall 14 million cwt to 34.5 million cwt, reflecting larger exports and slightly lower imports. In turn, the projected carryin of 34.5 million cwt for the 2012/13 season is 29 percent below the previous year's carryin. Long grain carryin for 2012/13 is projected to decline 48 percent, while medium/short-grain carryin is expected to increase 31 percent. Although total production of U.S. long-grain rice is anticipated to increase 15 percent YoY, the 2012/13 crop would still be the second smallest since 1987/88. Medium/short-

grain production is expected to decrease 16 percent YoY. Total rice imports are anticipated to increase 8 percent for 2012/13, but are not expected to outweigh supply shortfalls due to lower planted acreage and lower carryin stocks. The rice S/U ratios are projected to decline from 19.4 percent in 2010/11 to 15.7 percent in 2011/12 and 13.3 percent in 2012/13.

Long grain rice prices for the 2012/13 crop are expected to average \$13.00-\$14.00/cwt, compared to \$13.40 last season. Medium/short-grain prices are projected to average \$15.50-\$16.50/cwt, up from \$15.70 last season. While the U.S. faces lower stocks in the coming season, the ample world supply and weak global macroeconomic outlook should keep price increases at bay in the short term.

Sugar

Sugar demand exceeded supply during the past four years, pushing down the S/U ratio while pulling prices to historic highs. The USDA recently revised its Loss-Adjusted Food Availability data. The revised per capita sweetener intake for Americans in 2011 fell 0.8 pounds from the year prior and 10 pounds from 2000. However, U.S. sugar consumption is expected to increase in fiscal years (FY) 2011/12 and 2012/13.

U.S. sugar supply increased 502,000 short tons raw value (STRV) in 2011/12 based on better than expected sugar beet yields and the increased imports from Mexico following the rise in the U.S.'s tariff-rate quota. The 2011/12 S/U ratio is now estimated at 15.4 percent, up from only 8.99 percent in March. This will mark the first increase in S/U since 2006/07. The first-round estimates for 2012/13 project a modest supply increase of 64,000 STRV, thanks to an improved beet sugar yield and additional acreage planted. Sugar beet production increased to 4.75 million STRV in 2011/12, and is expected to increase to 5.105 million STRV in 2012/13. Cane sugar production is expected to reach the USDA's projection of 3.548 million STRV in 2011/12 and 3.645 million STRV in 2012/13.

Offset partly by an expected fall in sugar imports, the projected increase in domestic production will probably not be large enough to prevent reduction in the 2012/13

“*Sugar policy in the 2012 Farm Bill is likely to remain intact.*”

S/U ratio. The ending S/U ratio for 2012/13 is expected to be 14.7 percent, down slightly from the previous year. While 2011/12 looks to relieve some of the tightness in sugar markets from 2010/11, it doesn't appear at this point to be long lived based on projections of smaller S/U in 2012/13.

Sugar prices in 2012 are expected to fall slightly from their 2011 highs. Refined Midwest sugar beet prices may slip to around 51.6 cents/pound, and continue to decline into 2012/13. Domestic No. 16 sugar futures will also likely trend downward into 2012/13. Sugar prices will likely drift lower in the near term given the outlook for an easing S/U ratio.

Sugar policy in the 2012 Farm Bill is likely to remain intact. The Senate tabled a phase-out bill, albeit by a narrower margin (50-46) than previous farm bill anti-sugar amendments. The House Agricultural Committee voted to retain the existing program.

Fruits, Nuts, and Vegetables

Spring kicked off with several weeks of unseasonably warm weather followed by late freezes and destructive storms that moved through many parts of the U.S. In some areas, the cold snaps and storms devastated the tree fruit that came into bloom early; some vegetable crops were also damaged. Michigan's fruit crop was decimated, with apple losses reaching 50-60%, and 80% or more of the cherry and stone fruit production being wiped out. Only the West Coast producers appear to have made it through the spring unscathed.

Growers from Washington down through California are expecting bumper crops in nearly every commodity category, with apple and cherry production expected to boost harvest records to new levels. Although yields of this magnitude typically outstrip market demand and suppress prices, the severe losses in Michigan and New York should prevent the bountiful Western harvests from becoming a glut. Oversupply from the

West should be just enough to satisfy overall demand, yet still garner strong prices for the product. Although the examples are less extreme on the vegetable side, isolated storms in Pennsylvania, Georgia, and Texas will likely reduce overall yield, and help sustain adequate prices throughout the summer months. It is critical for fruit and vegetable prices to remain competitive among other commodities as crops jockey for acreage.

“*Long-term issues including food safety, labor, access to water, pest and disease control, and global competition continue to challenge the FNV industry.*”

As harvests approach, growers are increasingly concerned about labor. The USDA estimates that as many as 50% of the 1.2 million laborers required for the peak of harvest, in July, are in the country illegally. Producers are in fierce competition with one another to hire enough workers to harvest the crops before they become overripe. Some growers are offering benefits including housing and on-site medical check-ups to attract workers, while others will likely face a labor shortage. Producers will either pay more for labor, or risk losses from an incomplete harvest.

While the nation's focus on health and wellness continues to foster a strong domestic demand for produce, exports remain an important market for the fruits, nuts, and vegetables (FNV) industry as well. The USDA's latest forecast expects fresh and processed fruit, vegetables, and tree nuts to bring in \$13.1 billion in 2012, accounting for nearly 10% of all U.S. agricultural exports. High quality products, U.S. food

safety standards, and a favorable exchange rate have all contributed to the success of produce exports.

Recent developments have resulted in compelling stories for several commodities within the FNV industry. The wine industry is looking forward to a comeback. After several years of excess inventory, deep discounts, and limited vineyard development, the industry sees a supply shortage for the next one to three years, which will drive up the prices of both grapes and wine. Tree nuts continue to be the star of the FNV industry, with impressive yields and more acreage coming into production every year. Almonds ended their 2011/12 season with a best-ever harvest that topped the previous record by 19 percent. Despite the flood of product, high prices have prevailed due to robust overseas markets. The citrus industry, however, is dealing with challenges. Orange juice futures are on the rise again. Those prices had spiked in January 2012 in anticipation of a U.S. ban on South American citrus; but when the ban failed to materialize, prices plummeted 31% from mid-January until mid-May. California citrus growers continue to foot the bill for a costly battle to keep the Asian citrus psyllid and citrus greening bacteria out of commercial groves.

Long-term issues including food safety, labor, access to water, pest and disease control, and global competition continue to challenge the FNV industry. In addition to implementing practices and standards designed to mitigate the impact of each of these issues, growers and processors are looking to Congress to enact new laws and policies that will assist them in their efforts to address these challenges. Forward progress on the Food Safety Modernization Act has stalled as the Office of Management and Budget analyzes the economic impact of the produce rule, among others. The latest version of the 2012 Farm Bill includes several programs that would channel research and promotional funds to support FNV producers both domestically and globally. However, the industry's most critical and controversial issues, including labor, remain unresolved.

Farm Supply

Early planting and higher acreage planted to fertilizer-intensive crops, particularly corn, resulted in unusually large drawdowns in fertilizer inventories during the spring months. According to the USDA's June 29 acreage report, growers planted 5.5 million more corn acres, 1.7 million more spring and durum wheat acres, and 4.2 million more soybean acres than they did last year. Some of the acreage gains will be from continuous corn and utilization of more marginal land requiring more crop nutrients to bolster expected yields. Double cropping systems will account for some of the soybean acreage, and shifts from cotton and rice to other higher value crops have also played a role in how this year's acreage mix has shaken out. At any rate, the increase in corn acreage has played a key role in contributing to the robust volumes and firm-to-upward pricing of fertilizer during the springtime.

After spring planting was complete, nitrogen prices began to wane and retail sales tapered off following the spring top dress and side dress seasons. Summer fill programs will soon be under way.

Ammonia market conditions remain tight given the robust planting season and a sprinkling of plant outages. NOLA barge prices increased steadily from mid-March and are currently at \$562/ton – or about 9 percent above year ago levels. However, prices of other nitrogen fertilizers (urea and UAN) have fallen drastically from earlier in the second quarter, potentially leading to demand destruction for ammonia in the short term and, thus, lower ammonia prices. Lower nitrogen fertilizer prices should lead to tighter supplies in ammonia, thus providing some short-term support for prices. However, the usual summertime lull in demand and the possibility of a rebound in supply may result in some countervailing downward pressure on prices.

Conditions in the urea and UAN markets eased considerably since the beginning of the spring planting season. The price of urea fell from above \$700/ton in

“*Early planting and higher acreage planted to fertilizer-intensive crops, particularly corn, resulted in unusually large drawdowns in fertilizer inventories during the spring months.*”

mid-March to around \$400/ton in late-June. Supply has caught up to, and surpassed, demand, causing prices to fall like a stone. The price of UAN has been on a parallel track. In some cases, NOLA barge UAN prices dropped below \$300/ton – and, at that level, are slightly below where they were a year ago. Looking ahead, UAN and urea prices should remain soft in the short term, reflecting ample supplies and the usual summertime lull in demand.

Phosphate sales appear to be gaining traction in overseas markets even as those in the U.S. slip. DAP and MAP prices eased within the U.S. as seasonal demand declined and fill programs have yet to become robust. NOLA barge prices declined to approximately \$530/ton, roughly 10 percent below year ago levels. DAP and MAP prices should remain around current levels or could even strengthen, assuming that world demand continues to be robust.

Potash markets remain weaker than the other fertilizer markets. High inventory levels appear to be a drag on current prices. Overseas demand has been sluggish, especially from Brazil and India, and is expected to remain lackluster. Hence, in coming months, potash prices will likely hover at current levels or drift slightly lower. ■

This quarterly update is prepared by the Knowledge Exchange Division and covers the key industries served by CoBank, including the agricultural markets and the rural infrastructure industries.

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