The Feed

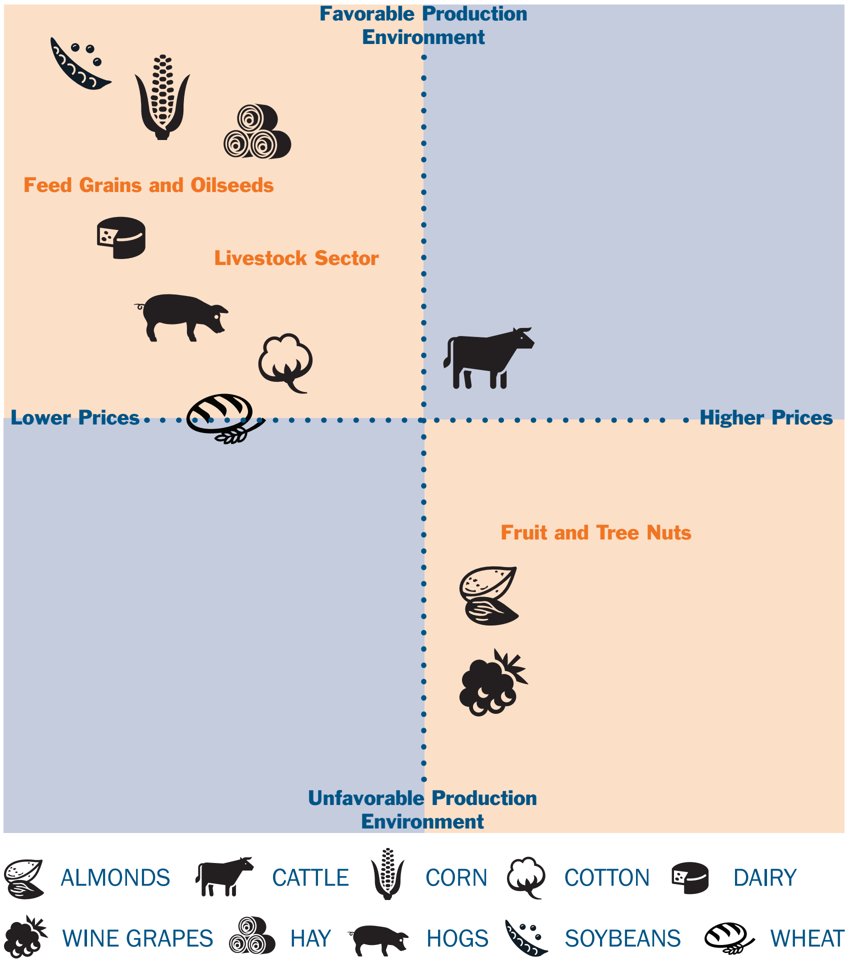
Farmer Mac's Quarterly Perspective on Agriculture

Winter
2015 | 2016

FARMER MAC

FINANCING RURAL AMERICA

Production and Market Price Perceptual Map



Key Highlights

Farm income in 2015 is down across most farm business types.

Farm debt is increasing at an increasing rate; relative to income and asset levels, debt is still low compared to the 1980s.

Lender survey conducted by Farmer Mac demonstrates ag credit industry's awareness of and cautious sentiment about economic conditions.

Commodity prices have been weighed down by strong U.S. dollar and excess supply.

Unsurprisingly, net farm income will be down significantly in 2015 as a result of lower commodity prices and ample global supplies. Very few sectors can tout higher prices at the end of 2015 compared to the beginning. Farmers and ranchers will likely have to offset any production losses by either borrowing or liquidating assets. USDA data indicates that producers will do some of both with lower financial asset levels and higher debt levels. Real estate and non-real estate debt is on the rise heading into 2016, and much of it comes from traditional ag lenders. Weather conditions in the West are improved as a result of El Niño precipitation. Considerably more precipitation is required to fully alleviate the effects of the drought, but a wet 2016 water year is a good start. Corn and soybeans growers in most producing states saw record yields this fall thanks to the good growing conditions experienced in the upper Midwest. Prices responded lower on the increased supplies. Cattle markets are in motion due to lower retail prices and cutout values that have slashed feedlot margins. Lower cattle prices are likely in store as demand shifts to alternative proteins. U.S. dairymen continue to see stiff competition in foreign markets with low prices being the result. Broiler prices are down on higher cold storage inventories, but demand is inching up as a result of the price differential between beef and chicken. Wheat prices are down in the face of strong global supplies, cheaper grain, and steep competition in foreign markets.

FARM ECONOMY HIGHLIGHTS

Farm incomes in 2015 are down across nearly all subsectors of the industry. Based on the latest projections from the USDA, total net farm income is expected to fall 38 percent in 2015. Net cash income (the amount of cash available to service debt payments, pay family expenses, invest in capital expenditures, or save for future use) is also expected to fall this year but at a slightly slower pace. Lower commodity prices, caused by a combination of a strong U.S. dollar and ample supplies of most agricultural goods, are now affecting much of the livestock sector in addition to the grains and oilseeds markets. Farm business incomes are forecast down by as much as 32 percent in the grain, oilseeds, and fiber sectors, and between 13 percent in the cattle sector and 70 percent in the dairy sector. Specialty crop producers like fruit and nut growers have outperformed on stronger than expected demand in overseas markets. Crop yields largely beat expectations, but the larger corn and soybean crops put downward pressure on market prices. Overall, 2015 is shaping up like many predicted, with the livestock sector coming in slightly worse than anticipated[1].

Farm balance sheets are also under pressure heading into 2016. After two consecutive annual declines in farm income, some producers have been forced to liquidate financial assets and increase debt levels to compensate. The USDA projects total farm assets to fall by 2.8 percent by the end of 2015 driven by lower financial assets, lower inventory values, and lower real estate asset values. At the same time, debt levels are increasing on both operating and real estate debt. The net result is the first decline in farm equity in both real and nominal terms since 2009. In inflation-adjusted terms, farm debt is approaching levels seen in the 1980's, but relative to assets and income, leverage is still considerably lower. Much of the recent growth in farm debt has been provided by commercial banks and Farm Credit System institutions, but there has also been sizable growth in debt provided by non-bank financial and other sources of credit[1]. Demand for credit appears strong heading into 2016, and thus debt levels will likely continue to increase as borrowers look to further fortify financial positions.

Figure 1: Farm Business Net Cash Income Trends by Year and Production Type[1]

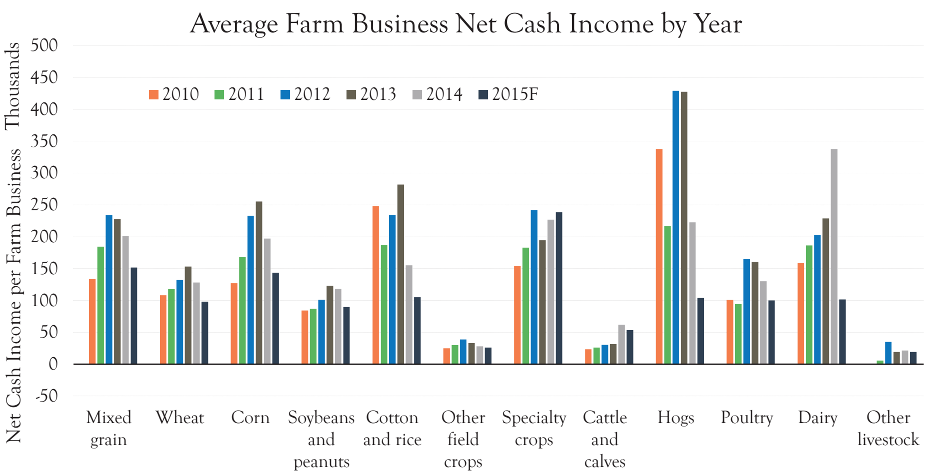
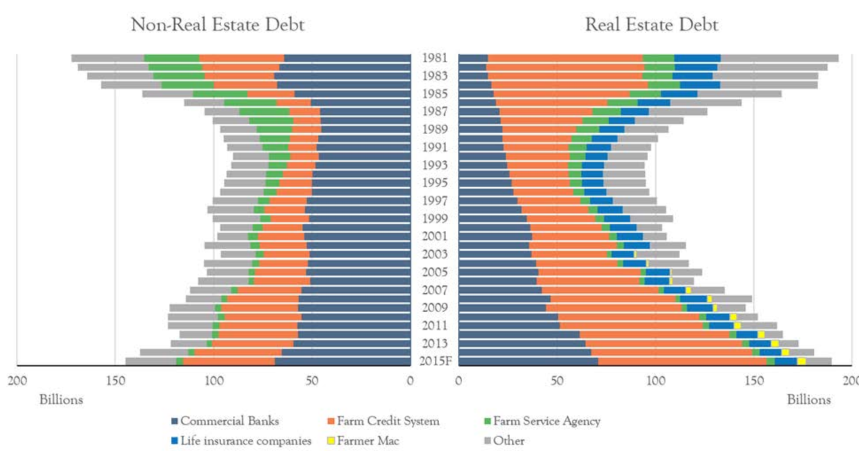


Figure 2: Farm Debt Outstanding (Adjusted for Inflation)[1]



Key Highlights

Farm incomes are meeting expectations of being much lower than recent experience.

Balance sheets are still showing strength but will likely exhibit lower real estate values and higher debt loads.

Most of the growth in farm debt is arising from traditional ag lending channels.

SPECIAL REPORT: LENDER SURVEY ON ECONOMIC CONDITIONS

Key Highlights

Lower sales and land values are expected in 2016 in Midwestern states, while the same to higher number of sales and land values are expected in Western states.

Over 70% of lenders are confident both short and long-term interest rates will rise in the next six months.

Nearly 80% of lenders expect ag real estate values in their region to fall in 2016.

Greatest concerns at the farm level are income and liquidity, specifically for grain and cattle producers.

Over 60% of lenders report using accrual-based financial analysis on at least some of their credits and nearly 80% say that they would prefer to use it if it were readily available.

Current ratio is the ubiquitous measure of liquidity used by 95% of lenders; other measures are less common but over 50% evaluate working capital-to-revenue ratio and 38% evaluate the working capital burn rate.

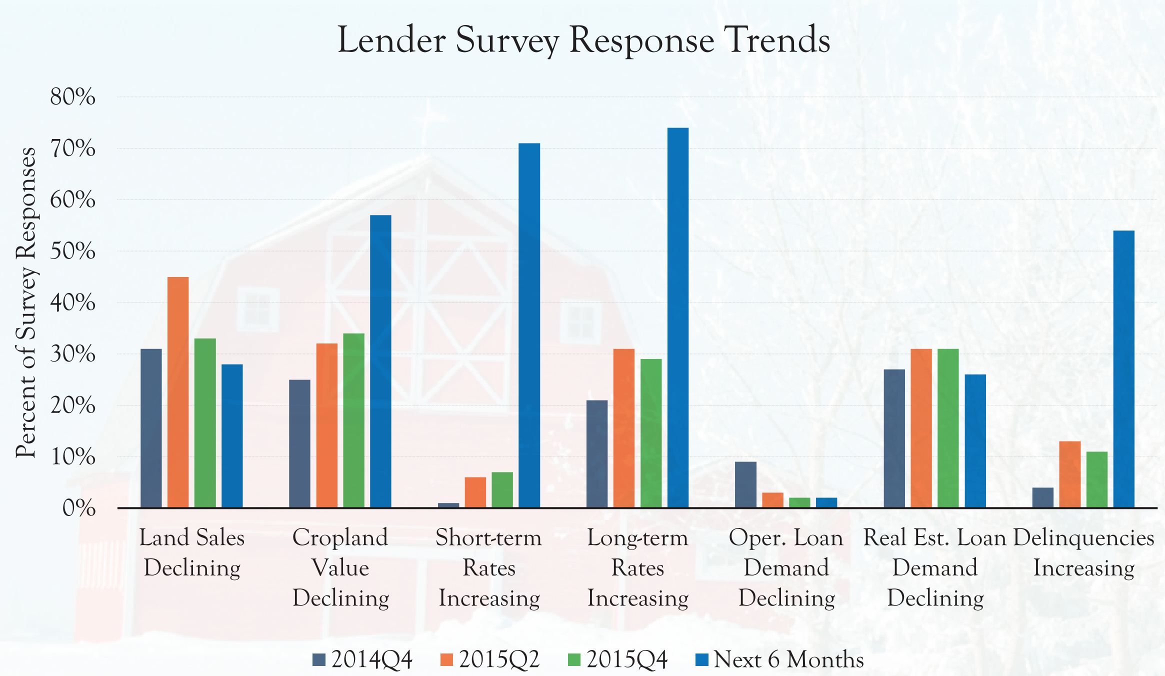
Only 16% of respondents report using social media as a source for news and current events.

Farmer Mac counts among its assets, an extensive network of agricultural lenders across the country. In early 2014, Farmer Mac's research department began polling ag loan officers, managers, and executives within its lender network. The survey specifically targets lender sentiment on the state of the agricultural economy in each respondent's region today and for the coming six months.

The first series of questions in the survey asks respondents to indicate whether economic conditions increased, decreased, or stayed the same during the last six months. In general, lenders felt that land sales were similar or down from six months ago, land values were similar or down, short-term interest rates were unchanged, long-term interest rates were unchanged, operating loan demand was similar or up, real estate loan demand was similar or down, delinquency rates were similar and only slightly up, and cash rents were similar or down. The greatest differences across regions were on the number of land sales, cropland values, and cash rents. Lenders in Midwestern and Southern plains states reported lower land sales, lower cropland values, and lower cash rents compared to the Western states where more lenders reported a higher number of land sales, similar or higher cropland values, and similar or higher cash rents. Lenders operating in Western states reported higher levels of real estate loan demand compared to those in Midwestern states; over 85 percent of respondents operating primarily in the West reported real estate loan demand was similar or increasing compared to the less than 70 percent national average.

Looking forward, lenders generally exhibited higher levels of pessimism on the ag economy. A higher percentage of lenders reported expectations of increasing land sales,

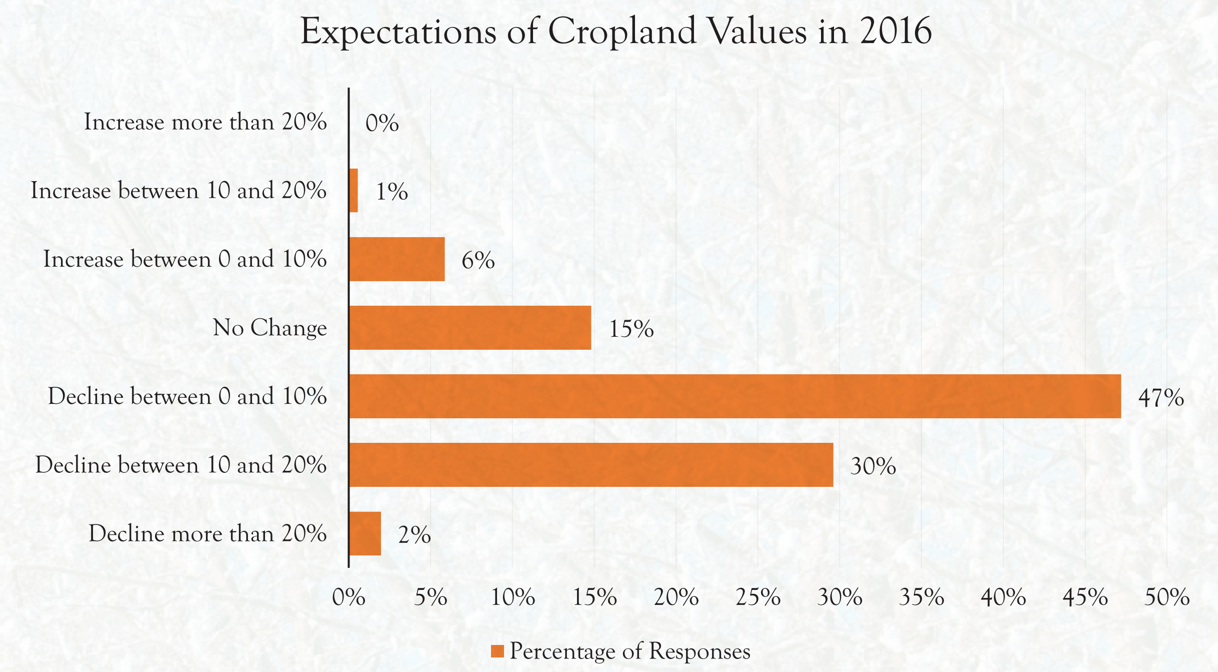
Figure 3: Lender Response to Specific Ag Economy Conditions



but many of these respondents also expect a decline in cropland values. Over 70 percent of all respondents believe interest rates will increase in the next six months. Most lenders anticipate an increase in the demand for agricultural operating loans, but the views on the direction of real estate loan demand are mixed. While 27 percent of respondents expect demand for real estate loans to drop, 22 percent foresee the demand increasing. Lenders in Western states appear to have a more optimistic view of the demand for real estate – approximately 74 percent of lenders operating in Western states indicate stable demand compared to 50 percent of lenders operating in Midwestern states. The majority of respondents expect loan performance to suffer in early 2016 with higher delinquency rates. This is similar to the results reported by the quarterly conditions survey released by the Federal Reserve Bank of Kansas City[2].

In addition to general conditions, ag lenders are keenly interested in the path of land values. When asked about their expectations in 2016, nearly 80 percent of lenders predict a decline in cropland values. Just under half of the respondents put expectations between zero and ten percent, but 32 percent expected land values to decline by more than ten percent. Regional differences are apparent in land value expectations as well, with respondents in Western states expecting stable to increasing values and respondents from Midwestern states expecting large declines.

Figure 4: Lender Response to Cropland Value Change in 2016



Lender Sentiment Comments:

"Low milk prices bring dairy farmers to the top of concern and lower commodity prices and higher cash rents after that. Good yields in 2015 will help."

"Very tight margins and still fierce competition for land."

"Things will get tight on a margin basis, but good producers and managers will continue to succeed."

"Real estate values are at historical highs and there has been a recent decline in nut prices. This could stop increase in land values."

"Close to 100% of the farmers I talk with are very concerned about input costs staying high when crop prices have dropped."

Key Highlights

Early El Niño brings some heavy rains in Mid and Southern U.S. but dryness persists in West.

California snow pack is building and is near average for this time of year.

Soil moisture conditions in U.S. are much better than most other major bulk commodity producing countries.

For weather watchers, the name of the game this winter is El Niño. The southern oscillation (ENSO) is in full effect with higher oceanic water temperatures and significant rainfall across the southern states during fourth quarter 2015[3]. Heavy rains drenched much of the plains and delta states erasing much of any remaining drought from South Dakota down through Texas[4]. A big winner in the early ENSO cycle has been the Pacific Northwest; coastal Washington and Oregon received some significant and largely unanticipated precipitation during the late fall months. This moisture has eased but not expunged the dry conditions in the upper northwest. Despite near normal rain and early snow in northern California, the drought across California remains a concern. Snow pack picked up in the Sierras, and at the end of December, snow pack in the region stood at 105 percent of normal. Many weather models indicate more moisture in the West as the water year progresses, but early indications from the California State Water Project are to restrict water usage again in 2016 regardless of precipitation and snow pack[5]. Soil moisture levels in the U.S. are much better than other major growing regions, specifically in Brazil and in the Black Sea region[6]. These hot, dry conditions could hurt foreign corn, soybean, and wheat yields in 2016.

Looking ahead, growing conditions for winter wheat are fair and over 50 percent of growers rated their 2016 crop 'Good' or 'Excellent' at the end of November[7]. Midwestern states will likely experience a warmer than average winter, which could indicate an early planting and possibly some soybean rust emergence later in 2016. Western states look to have above average temperatures but also above average precipitation as a result of the ENSO. Southern and Central California have the highest likelihood of significant precipitation for early 2016.

Figure 5: Drought Monitor Map (USDA, NOAA, University of Nebraska-Lincoln)[4]

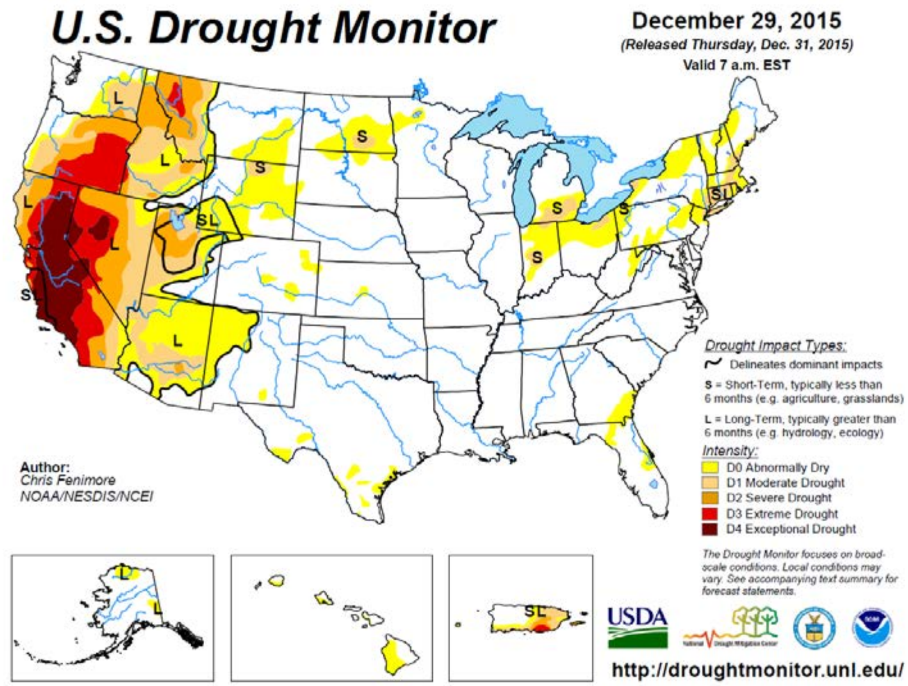
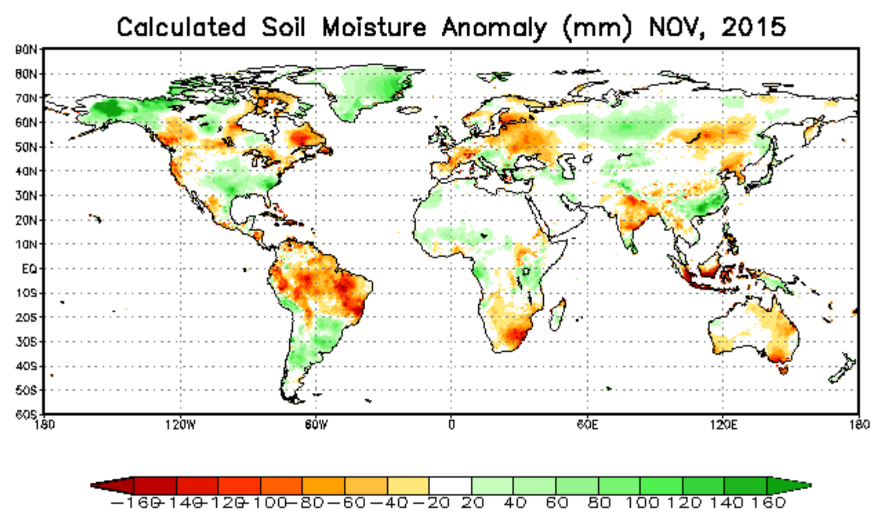


Figure 6: Soil Moisture Anomaly Map (NOAA, National Weather Service)[5]



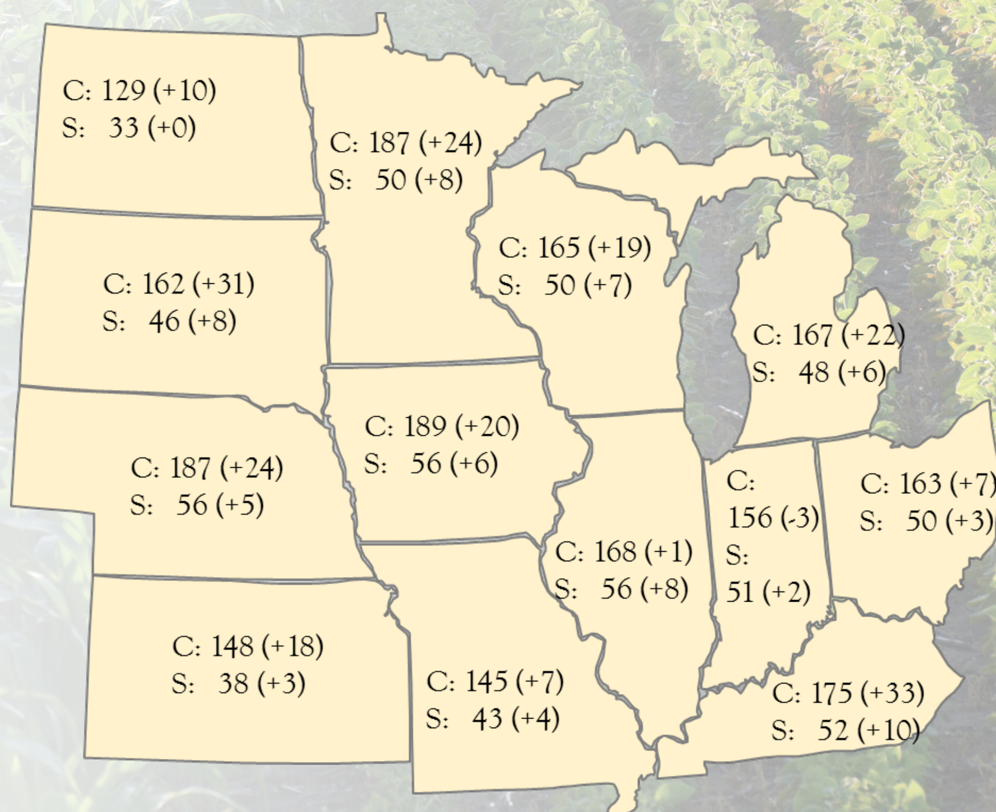
CORN AND SOYBEANS

U.S. grain markets continue to experience heightened supplies. The 2015 corn crop, estimated by the USDA at 13.7 billion bushels, is the third largest on record; the 2015 soybean crop, estimated at 4 billion bushels, is the largest in history rivaled only by the 2014 crop. Corn stocks at the beginning of September are at their highest levels since 2006, and soybean stocks are rebuilding from the lows experienced in 2013 and 2014. These supply trends are putting significant downward pressure on market prices. Many states experienced record or near-record yields for grain crops[8] (see Figure 7), but the higher yields were partially offset by lower prices at harvest.

Demand for U.S. corn and soybeans has slipped somewhat this year due to a stronger U.S. dollar and stiffer competition from foreign producers. Through October, corn export quantities are down ten percent compared to 2014, and while soybean export volumes are actually up six percent in the calendar year, the USDA forecasts soybean exports to fall by seven percent during the marketing year[9]. China imported a record 31 million metric tons of U.S. soybeans in 2014, but at the same time imported a record 32 million metric tons of Brazilian soybeans[10]. Brazil has been a major competitor for U.S. grains and oilseeds this year with a weaker currency, a good second-crop harvest, and an improved transportation and port system. Argentinian soybean producers were waiting to market their 2014 crop until their newly elected president issued a promised holiday for export tariffs. Many analysts and investors expected the lower export tariffs to spur a large sell-off of soybean stocks into the global market; however, the Argentinian peso is under significant inflationary pressure, and growers may hold off on selling as a hedge against currency devaluation. Domestic consumption of corn and soybeans is looking pretty good with increases in the Renewable Fuels Standard volume requirements for 2015 and 2016 and higher animal units on feed.

The net effect of supply and demand forces on U.S. grain markets is a stable outlook. Market prices for grains have seen good support despite the large global supplies because demand for higher-value agricultural goods like oils and proteins is stable-to-increasing. Soil moisture is well below average in many of the world's best grain-growing regions (see Figure 6), and that could hurt global production in 2016. The strong U.S. dollar is the likely biggest headwind U.S. producers will face in 2016.

Figure 7: 2015 Corn and Soybean Yields in Bushels per Acre (+/- Deviation from 10-year Wtd. Avg.)[8]



CATTLE

Key Highlights

Beef supplies remain tight domestically but ranchers are signaling expansion.

Demand for U.S. beef is off due to cheaper substitutes in pork and poultry and a stronger dollar depressing exports.

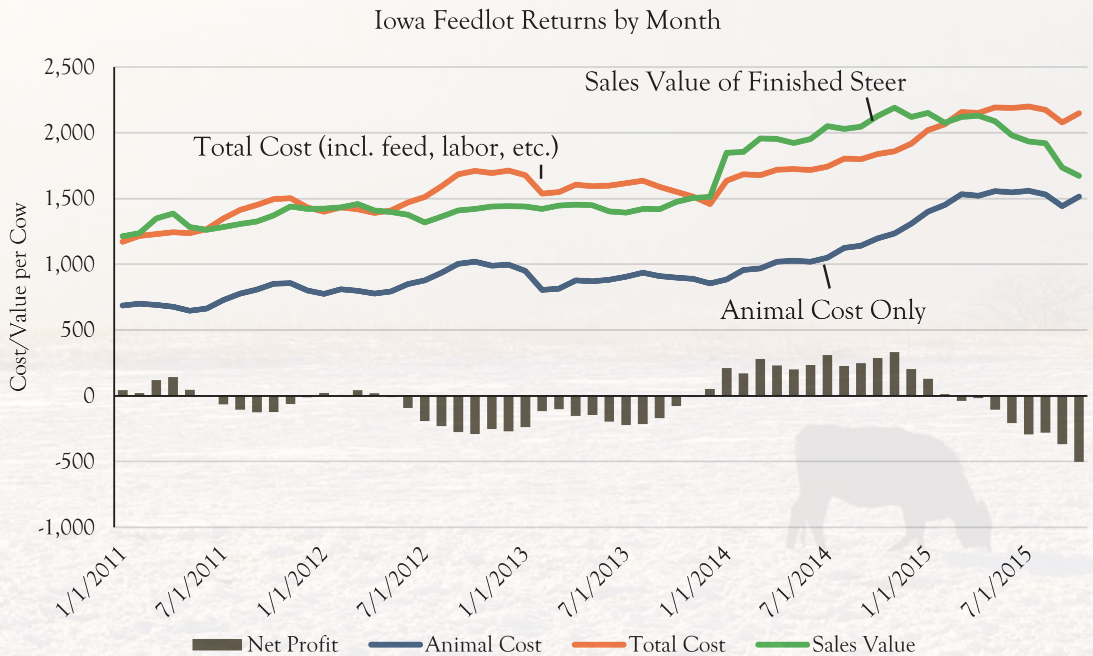
Feedlot profits are under pressure, putting downward pressure on cattle prices.

Supply-side economics in the cattle industry have favored cow-calf operators over feedlots for the bulk of 2015. USDA data shows that live cattle and feeder prices have been at or near record levels since late 2013 as a result of ongoing herd consolidation. For much of the year, pasture conditions across the country exceeded the five-year averages, particularly in the Southern Plains where above-average precipitation nearly wiped out drought conditions. These conditions put upward pressure on cattle prices and forced feedlots to pay a premium to place cattle. Beef supplies have been fairly tight both domestically and globally, which has helped buttress retail and wholesale prices. The USDA PSD data shows that global beef ending stocks in 2015 reached their lowest levels since 2006 on lower supplies than in 2013 or 2014. Higher fed cattle weights will likely increase supplies in 2016 as feedlots place heavier cattle on feed for longer periods prior to slaughter.

The real story for the beef industry is on the demand side. Retail beef prices were pushed to all-time highs during 2015, peaking in July at over $6.00 per pound. That price represents a 1.6 multiple to average pork retail prices and a 3.1 multiple to a broiler composite retail prices[11], multiples that are traditionally around 1.2 and 2.3, respectively. Domestic consumers were presented with a relative value in protein substitutes, and since July retail beef prices have fallen by ten cents per pound. Exports of beef products are also down in 2015 as a result of the stronger U.S. dollar. The decline in consumer and export demand works backwards through the supply chain, and ultimately the retail prices drive live and feeder cattle prices.

Combined, the net effects of supply and demand in cattle markets indicate lower profitability in 2016. Other proteins offer a greater relative value than beef, and that will put downward pressure on cattle prices. Greater heifer retention signals herd rebuilding, so live animal supplies are likely to increase in the next few years. Feedlots are currently seeing record high close-out losses due to the high cost of feeder animals, which ultimately puts downward pressure on live and feeder cattle prices. One positive for feedlots and cow-calf operations is the low cost of feed and improved pasture conditions. Despite lower input costs, feedlots are likely to lose on placements through the end of 2015, and ultimately cow-calf operators will likely be faced with lower cattle prices in 2016.

Figure 8: Historical Feedlot Operation Profitability[12]



Source: Iowa State University Extension and Outreach, Estimated Livestock Returns

DAIRY

Supply continues to increase in global dairy markets. U.S. production in 2015 through October is up by one percent on a higher number of cows combined with a higher average output per cow[8]. The profitability experienced in 2014 signaled industry expansion and producers responded. Midwestern dairies experienced the largest increases[13]. Production in California has been lower in 2015 due largely to lower output per cow as a result of hotter, drier conditions. Global supplies are also up on greater output from the EU and Oceania[14] where producers responded to the same market signals as U.S. producers.

Demand for dairy products is mixed heading into 2016. Domestic cheese and dry whey product disappearance is up in 2015, but exports are down dramatically through October[13]. Russia extended its ban on Western agricultural imports through August 2016, and their disappearance from the import picture has put more European dairy products onto the world market. Chinese dairy imports have slowed tremendously, and while Mexico has soaked up some of the excess supplies, total dairy trade is off in 2015 in most dairy products. U.S. producers are at an added disadvantage to both the EU and Oceania due to the currency effects of a stronger dollar.

The combined effects of the supply and demand functions imply continued pressure on producer profitability in 2016. Class III milk prices are holding near $15.00 per cwt at year-end, but even with lower feeding costs, dairy returns are expected to be in the red through October. The USDA is forecasting an average Class III price near $14.70 for 2016; feeding costs could abate somewhat in 2016 if grain and hay prices stay low. Supplies are not likely to contract by much, so producers must look to control costs and spur demand growth at home and in new overseas markets.

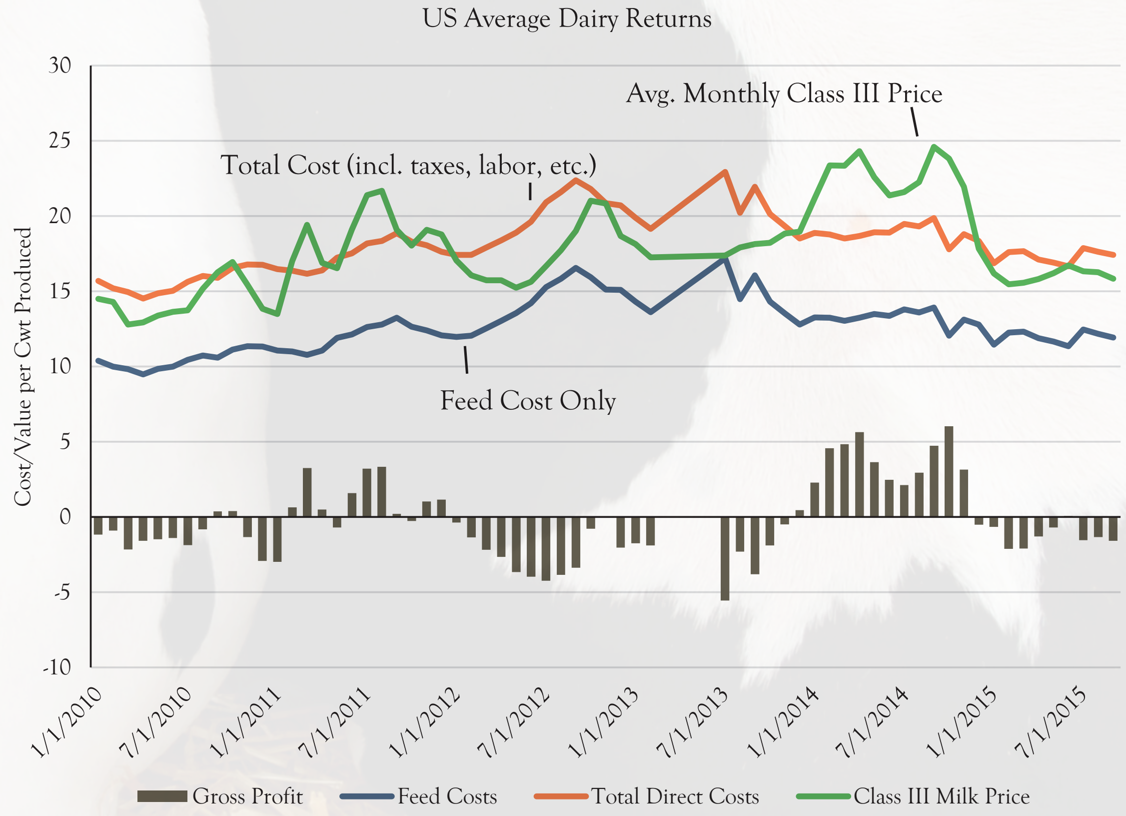
Key Highlights

Global supplies continue to weigh down world dairy prices.

Milk production is up in U.S., the EU, and Oceania in 2015.

Producer profitability will be tight in 2016 with continued low milk prices but stable production costs.

Figure 9: Historical Dairy Profitability



Source: USDA ERS National Milk Cost of Production Estimates

BROILERS

Broiler production is up significantly in 2015. Slaughter weights are higher and at the same time more birds are moving to slaughter. Inventories in cold storage have increased steadily in 2015 as many foreign markets continue to ban U.S. broiler exports due to an early year outbreak of the Highly Pathogenic Avian Influenza (HPAI). Broiler hatcheries and growers were largely unaffected by the outbreak, and so the ban caused an immediate build-up of broiler meat stocks[15]. World broiler meat supplies are up on greater production in most major producing countries but primarily in Brazil and the U.S.[9]

Domestic demand for poultry is up but global demand is down in 2015. U.S. consumers are consuming poultry at a higher rate per capita than in recent years, at least partially spurred by the high beef prices. Consumers may continue to favor poultry in 2016 as the retail price multiple to beef is at all-time highs. Export demand could pick up if U.S. producers are able to proceed through the winter with very limited HPAI outbreaks. The same strain of HPAI that affected U.S. producers earlier in 2015 was discovered in France in late November, and the EU represents the fourth largest broiler-producing region.

The net result of the supply and demand forces will likely be mixed in 2016. U.S. supplies could tighten if export markets loosen their import bans, but they could increase if the HPAI reemerges this winter. Domestic consumption of poultry products is likely to be strong in either case, so there is good support for broiler prices at their current wholesale level of $0.74 per pound[15]. Feed costs are likely to remain low due to ample supplies and a weak currency. Chicken growers can be optimistic heading into winter, but they must be diligent in preventing the spread of disease to realize good market conditions.

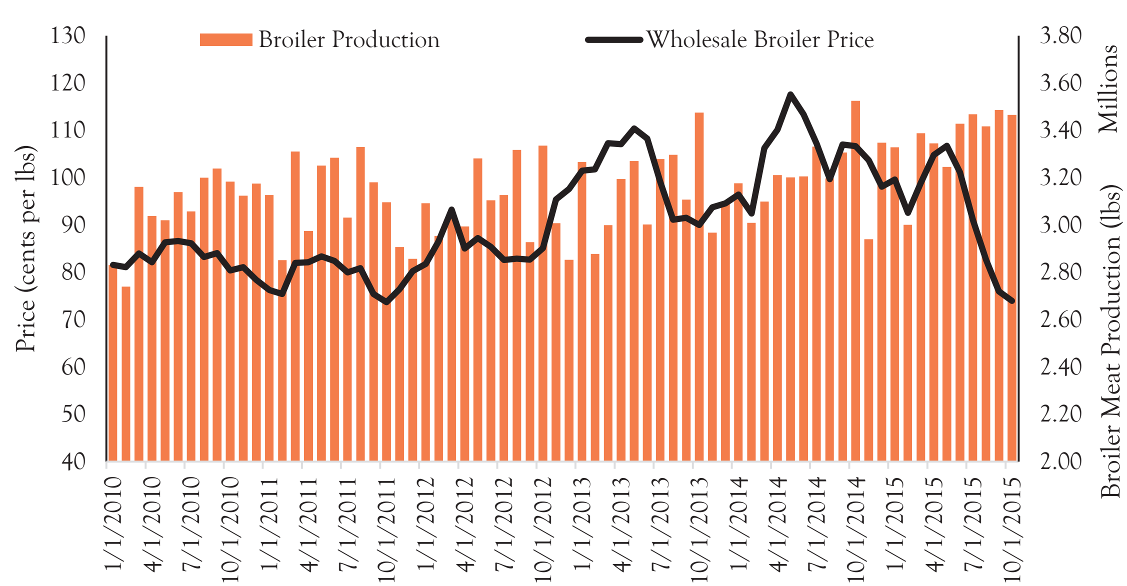
Key Highlights

U.S. stocks remain high due largely to lower export levels.

Bans on U.S. broilers remain in China and South Korea as a result of the 2015 HPAI outbreak.

Prices may rebound somewhat in 2016 depending largely on consumer choice and the severity of HPAI this winter.

Figure 10: Historical Broiler Production and Price History[11]



Source: USDA ERS Livestock Price and Spread Data

WHEAT

Key Highlights

Global wheat stocks have rebounded since 2012.

U.S. wheat is less competitive on world markets due to strong dollar and ample supplies.

Grower margins will compress to more historical norms in 2016 as a result of the market conditions.

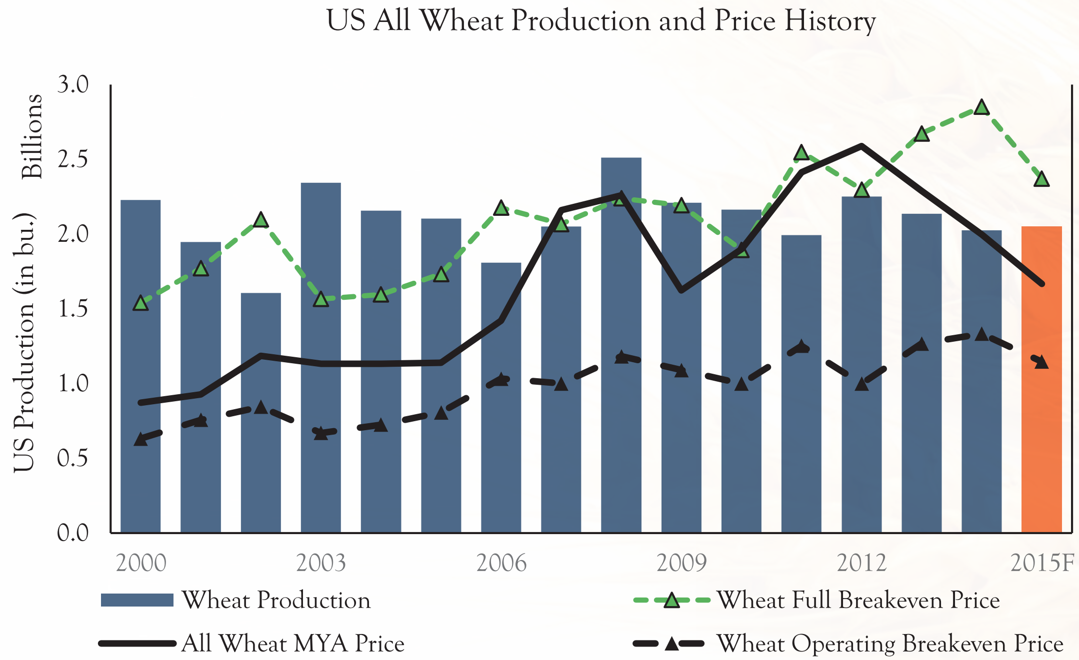
Global wheat supplies are up in 2015 led by higher carry-in and increased production. U.S. producers planted roughly the same acres in this year compared to 2014, but lower average yields kept production from spiking. The USDA estimates the 2016 crop to look very similar to the 2015 crop both in terms of acres planted and average yields. Global production increases have been led by the EU, Russia, and China, and ending stocks in mid-year 2016 are expected to be up by over seven percent[15].

Demand for U.S. wheat usage is down from record highs in 2013 and 2014. While usage for food and seed has been increasing since 2009, feed and residual use and exports have declined in 2014 and 2015. Wheat was largely used as a substitute for high-cost corn and soybean products during the drought in 2012. Since feed prices have subsided, wheat usage for feed has fallen alongside them.

Given the stronger U.S. dollar and ample supplies abroad, U.S. wheat is less competitive on world markets than it has been in recent years. Of the roughly 2.1 million metric tons in global ending wheat stocks in mid-2015, roughly 35 percent was held by China. Trade could continue to be compressed in 2016 due to these ample supplies.

U.S. wheat growers are facing lower profitability as a result of current market conditions. The all wheat price is near $5.00 per bushel driven lower by the strong dollar, lower demand, and ample supplies. The margin of market price to average operating costs is lower than recent experience, and the margin to total economic costs (including the opportunity cost of labor and land) was highly negative in 2014 and 2015. The U.S. will likely continue to lose market share of world wheat markets as the EU has a geographic advantage for African and Middle-East markets and China and India seek self-sufficiency. Prices in the high four dollar or low five dollar range are likely throughout 2016 barring some disruption to global supplies.

Figure 11: Historical Wheat Production and Price History[9]



Source: USDA NASS QuickStats Production Data, ERS Commodity Costs and Returns

POLITICAL UPDATE

Legislative activity in the agriculture arena picked up significantly as the end of the year approached. The first order of business had to do with a proposed change in the crop insurance program which was overhauled in the 2014 Farm Bill. Basically, in order to help partially pay for the two year budget agreement enacted in October of 2015, a cap on the rate of return on earned premiums at 8.9% was put in place. Such a reduction from 14.5% would have saved the government an estimated $3 billion over 10 years. However, a reduction of this cap would have also had serious negative consequences on the many crop insurance companies across the nation. Thanks to the support of nearly every agriculture organization in town, including Farmer Mac, we were able to reverse this policy via an amendment in the recently enacted transportation bill. Not only is this good news for lenders, crop insurance sellers and farmers and ranchers, it reversed what could have been a dangerous precedent. When Congress enacts legislation intended to last for five years, those in the marketplace need to have the assurance it will be valid for five years and won't be altered. The work done by the crop insurance coalition ensured that certainty.

Yet another issue critical to agricultural lenders and their farmer/rancher customers is the permanent extension of the "Section 179" deduction for small-business expensing. Section 179 of the IRS code allows businesses of all types, including farm and ranch operators, to deduct the full purchase price of qualifying equipment and/or software purchased or financed during the tax year. Essentially, if you buy or lease qualifying equipment you can deduct the full purchase price from your gross income. There are limits to the amount that can be deducted from individual pieces of equipment and a total cap for your operation. Most recently, those limits were $500,000 of qualified capital expenditures, with a cap of $2,000,000. Unfortunately, there has been a great deal of uncertainty related to this provision due to the fact that Congress has either passed extensions at the last minute, or as was the most recent case, passed extensions retroactively after the provision expired. Again, this uncertainty can cause small business customers like farm and ranch operators to postpone purchasing equipment thereby decreasing the economic activity in our rural areas. Fortunately, at the end of 2015, Congress passed legislation to make permanent the Section 179 deductions at the aforementioned levels and index them to inflation. This much needed "fix" to this important business development section of the tax code should provide for enhanced lending activity in the area of farm and ranch equipment purchases.

AREAS OF INTEREST

California Drought. California continues to experience devastating drought conditions. Reservoir levels throughout the state are well below historical averages, many of them half of historical capacity in early December[16]. The 2015 water year was one of the warmest on record, and the lack of sufficient water allotments from the state and federal water projects caused some serious stress to growers in the San Joaquin Valley. State-level farm expense data from the USDA shows California growers' irrigation expenses climbing from $400 million in 2009 to $1.1 billion in 2014[1]. Early indications from the current El Niño cycle are for a wet winter, and early December rains in the Pacific Northwest as well as in North Coast have been greatly helpful in easing dryness along the Pacific Coast. The Central Valley desperately needs a solid snowpack in the Sierra ranges this winter, and the results of the water year will largely be known by March.

Trans-Pacific Partnership. After seven years of negotiations, the regional free trade agreement between 12 Pacific countries known as the Trans-Pacific Partnership (TPP) was finalized in October. While the agreement has yet to be ratified and signed, that all participants were able to agree on the terms was a major step forward for the landmark trade deal. While many U.S. industries are affected by the proposed removal of trade barriers in the region, U.S. ag producers would benefit tremendously from the opening of previously protected markets. Tariff eliminations are a principal component of the deal, particularly for the Japanese markets where select fruits, vegetables, and some higher value goods will receive duty-free treatment immediately while others and some protein products would see taxes decline over the next decade[17]. Dairy producers would benefit from the elimination of tariffs in Malaysia and Vietnam within five years, Japan over the next 16 years, and expand tariff-rate quotas in Canada for selected dairy products. Protein producers and the grain producers that provide their feed could also benefit from lower tariffs on meat exports. The TPP also streamlines sanitary and phytosanitary requirements, encouraging a scientific, evidence-based approach. There is still a long road to ratification, but ag producers could benefit greatly from the adoption of the TPP.

Figure 12: Map of Trans-Pacific Partnership Participants

RESOURCES

The information and opinions or conclusions contained herein have been compiled or arrived at from the following sources:

1. USDA Farm Sector Finances (http://www.ers.usda.gov/topics/farm-economy/farm-sector-income-finances.aspx)
2. Federal Reserve Bank of Kansas City Ag Finance Databook (https://www.kansascityfed.org/research/indicatorsdata/agfinancedatabook)
3. National Weather Service (http://www.weather.gov/)
4. University of Nebraska-Lincoln/USDA/NOAA Drought Monitor (http://droughtmonitor.unl.edu/)
5. California Department of Water Resources Data Exchange (http://cdec.water.ca.gov/cdecapp/snowapp/sweq.action)
6. NOAA/National Weather Service (http://www.cpc.ncep.noaa.gov/)
7. USDA Crop Progress and Condition (http://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=1048)
8. USDA National Agricultural Statistics Service QuickStats (http://quickstats.nass.usda.gov/)
9. USDA Foreign Agricultural Service PSD Online (http://apps.fas.usda.gov/psdonline/psdHome.aspx)
10. USDA Foreign Agricultural Service Global Agricultural Trade System (http://apps.fas.usda.gov/gats/default.aspx)
11. USDA Economic Research Service Meat Price Spreads (http://www.ers.usda.gov/data-products/meat-price-spreads.aspx)
12. Iowa State University Extension (http://www2.econ.iastate.edu/estimated-returns/)
13. University of Wisconsin – Understanding Dairy Markets (http://future.aae.wisc.edu/)
14. U.S. Dairy Export Council (http://www.usdec.org/)
15. USDA Livestock, Poultry, and Dairy Outlooks (http://www.ers.usda.gov/publications/ldpm-livestock,-dairy,-and-poultry-outlook/.aspx)
16. California Department of Water Resources (http://cdec.water.ca.gov/index.html)
17. USDA Foreign Agricultural Service Trade Negotiation Analysis (http://www.fas.usda.gov/tpp)

ABOUT THE FEED

For over 10 years Farmer Mac's research department has produced a quarterly agricultural economic outlook report designed to keep management abreast of current events and conditions in the ag economy. The report is broad-based and covers multiple regions and commodities to reflect the diversity in the company's portfolio. It incorporates data and analysis from numerous sources to present a mosaic of the leading industry information, with a focus on the latest information from the United States Department of Agriculture and their Economic Research Service. There are several regularly included sections like weather and major industry segments, but the author rotates through other industries and topics as they become relevant in the seasonal agricultural cycle. Where the report adds value to readers is through its unique synthesis of these multiple sources into a single succinct report. In 2015, the Farmer Mac management team found the research so valuable that they decided to share the company's quarterly perspective on agriculture with customers, investors, and the general public. Please enjoy.

ABOUT THE AUTHORS

Author - Jackson Takach, Farmer Mac's resident economist, is a Kentucky native whose strong ties to agriculture began while growing up in the small farming town of Scottsville. He has since dedicated a career to agricultural finance where he can combine his passion for rural America with his natural curiosity of the world and his strong (and perhaps unrealistic) desire to explain how we interact within it. He joined the Farmer Mac team in 2005, and has worked in the research, credit, and underwriting departments. Today, his focus at Farmer Mac currently includes quantitative analysis of credit, interest rate, and other market-based risks, as well as monitoring conditions of the agricultural economy, operational information systems analysis, and statistical programming. He holds a Bachelor's degree in economics from Centre College, a Master's degree in agricultural economics from Purdue University, and a Master's of Business Administration from Indiana University's Kelley School of Business. He has also been a Chartered Financial Analyst charterholder since 2012.

Contributing Author - Curt Covington, Farmer Mac's Senior Vice President, Agricultural Finance, leads the company's business development efforts in the Farm & Ranch and USDA Guarantees business segments, in addition to overseeing the company's credit administration and underwriting functions. Curt's passion for rural America developed at a young age on his family's grape and tree nut farm in Selma, California. His extensive experience in ag lending spans over three decades. In addition to his role at Farmer Mac, Curt is a respected leader in the agricultural mortgage industry and is actively involved in leadership roles within industry trade groups. He is the present chairman of the RMA Agricultural Lending Committee. Curt also serves as co-chair and manages two agricultural Lender programs: The Agricultural Lending Institute, a joint venture with California State University, Fresno, and The Agricultural Banking Institute of the Americas, a joint venture with Universidad del Pacifico, in Peru.

Contributing Author - Chris Bohannon, Farmer Mac's Vice President - Corporate Relations, is responsible for the company's public relations and government affairs efforts. A seasoned expert with a vast knowledge of agriculture and energy policy issues, Chris's career has been spent advocating for rural America in the political arena.

ABOUT FARMER MAC

Farmer Mac is the stockholder-owned company created to deliver capital and increase lender competition for the benefit of American agriculture and rural communities.

For more than a quarter-century, Farmer Mac has been a vital partner in helping America's rural lenders meet the evolving needs of their customers, bringing the financial strength of the nation's premier secondary market for agriculture right to their customers' farms and ranches.

Lenders of all sizes use Farmer Mac's broad portfolio of loan products to offer more financial choices to their rural customers, helping them keep pace with today's capital-intensive agricultural industry.

Contacts

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For inquiries:
Megan Pelaez
Director - Communications
MPelaez@farmermac.com
202.872.5689

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1999 K Street, N.W. Fourth Floor
Washington, DC 20006
Phone: 800.879.3276
Fax: 800.999.1814
www.farmermac.com

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