



**IS THIS FARM BOOM** *different?*  
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*Conference Rapporteur:  
Is This Farm Boom Different?*

## **Is This Farm Boom Different?**

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*Michael Boehlje  
Distinguished Professor  
Purdue University*

This has been a very stimulating and informative symposium. First, I will summarize the key “take-aways” of the presentations from my perspective. Then I will make some additional observations and identify some key uncertainties that are shaping the future of agriculture-- “what to watch” in these turbulent times.

### The key “take-aways”

1) Slower economic growth – Outside forces are important drivers of the future of agriculture. We will return to this issue in the closing comments on the uncertainties you should monitor to see how the future unfolds. But let me be more specific. The *Wall Street Journal* reported today (July 17, 2012) that the International Monetary Fund revised again its quarterly projections for world economic growth. They update the numbers every quarter. This is the fourth quarter in a row they have decreased their projections for global economic growth. That’s not good news for the U.S. economy because there is the potential contagion effect, and it is not good news for agriculture. More specifically, they reduced the world growth rate by -0.1 percent for 2012, and -0.2 percent for 2013. It may be more important for agriculture that they decreased India’s growth rate by -0.7 percent for 2012 and 2013. The *Wall Street Journal* didn’t report a growth rate for China, but earlier reports indicate the rate slowing to 7.6 percent. This has

*Conference Rapporteur: Is this Farm Boom Different?*

major implications for agriculture. What did all of our speakers say? What is a major driver of the current prosperity in U.S. agriculture – Chinese growth.

It is growth in income that counts – it's not growth in the number of people. What has been so exciting for agriculture has been the rapid growth in income in China – 8 to 10 percent per year for 20 years, 10 percent per year prior to the recession. And now that growth rate is slowing down. Income growth in India has been at 8 percent per year for the last 10 years prior to the recession. These two countries have 2.4 billion people. But it's not the people, it's the income-- and that growth rate in income is expected to slow down to 5 percent to 6 percent by the end of this decade and on to 2025.

Income growth in emerging economics is really critical for the entire U.S. economy, because what has pulled us out of this recession into a modest recovery hasn't been consumers spending, businessmen investing, or government programs in terms of fiscal stimulus, but it has been exports. And exports are even more important for agriculture, because 25 percent of our production is exported—almost double that of the entire U.S. economy. If the Chinese economy slows significantly, there are legitimate concerns about whether this prosperity is sustainable.

2) Risk – Clayton Yeutter was really honest and forthright in his comments. He said, “I am going to a board meeting of a major company this week, and they do not know how to manage risk.” David Apgar in a book entitled *Risk Intelligence* argues that the major source of sustainable competitive advantage in the future will be risk management capabilities. Do you have some form of systematic Enterprise Risk Management program in place? Do you have your CFO focused on risk, or maybe even

*Conference Rapporteur: Is this Farm Boom Different?*

better, somebody that is a CRMO (chief risk management officer) who reports directly to the CEO and Board?

Almost every one of the speakers at this symposium talked about the increasing risk in the agricultural sector, and that we can't just focus on the averages or "typicals." If you've not read Nassim Taleb's books, *Fooled by Randomness* or *The Black Swan*, you ought to read them. If you do, you will conclude that we need to be aware of the impact of the extremes-- the tails of the distribution count. We need to position ourselves for the unanticipated surprises. How many of you would have predicted the MF Global failure? What about the European sovereign debt disaster? Or the 2012 drought? If you are in the banking community, have you stress tested your customer base for potential financial shocks of lower incomes or higher interest rates? How many of you have done a risk audit of your customers? A really formalized risk audit-- a risk audit that helps you and your customer understand the risks they are taking beyond price and production risk, what management strategies are being used to manage those risks, and who is responsible to implement those strategies? We need in this business environment to do much more to analyze and manage risk.

3) Land values – Do you think that a multiple on land values at 30 (land value to cash rent) is sustainable long-term? What is the typical multiple on financial assets-- the price to earnings (p/e) ratio? The p/e ratio in the financial market is approximately 18. Why should someone spend \$30 for a dollar of earnings from a farmland investment and \$18 in the stock market? What has been the average multiple for the last 25-30 years on farmland? Less than 20. The current multiple in farmland is relatively high compared to the multiple for other financial instruments as well as for farmland historically. Is that

*Conference Rapporteur: Is this Farm Boom Different?*

multiple permanently supportable? If not, there are obviously two adjustments that would lower it—land values could decline or cash rents could go up.

Will cash rents go up when they are already \$200 plus on average and \$400-\$500 an acre on the top end-- how much higher can cash rents go? I don't know the answer to that question, but if commodity prices decline and costs of inputs don't adjust down, margins will be pressured and it will be difficult for cash rents to increase.

Land values are vulnerable to declining incomes. Current commodity prices and farmland returns per acre are abnormally high. There is at least some vulnerability to the downside on commodity prices long term, even though there is currently short term upside to prices.

If the income capitalization concepts are used to value land, equally important is the uncertainty in the cap rate. When valuing assets, the income stream is capitalized by (divided by) a cap rate. Where is the cap rate on farmland today – 3.0 percent to 3.5 percent. Historically it has been 4 percent to 6 percent. The cap rate is impacted by interest rates – low interest rates result in a low cap rate. But it is not just interest rates that I worry about, because interest rates will certainly go up eventually. There are two other important things to think about in terms of the cap rate. The cap rate includes a risk premium. What have we said earlier about risk – it is increasing. So even if interest rates didn't rise much in terms of the fundamental cost of money, shouldn't we be adding a higher risk premium compared with the past?

Secondly, work by Melichar from the Federal Reserve on land values many decades ago used what is called the growth stock model for valuing assets. The growth stock model argues that you reflect growing income over time either in the numerator, or

*Conference Rapporteur: Is this Farm Boom Different?*

you adjust the denominator by the rate of growth. In essence an investor is willing to pay more for a stock (or an asset) that has a growing income stream than for one that has a constant income stream. The growth in income from farmland as measured by cash rents has been about 4 percent per year for the last 20 years. That is why we are willing to accept a 4 percent to 6 percent rate of current return on farmland, because it is growing 4 percent per year.

At what rate will earnings or rents grow over the next 20-30 years? Do you think rents are going to grow from the current \$200-\$250 per acre for the next 20 years at 4 percent per year? I think there is a significant risk associated with the growth rate in earnings staying that high, and if it declines, that increases the cap rate, putting downward pressures on land values.

Don't forget that it's not just interest rates that determine the cap rate. The risk premium and the rate of growth in income also impact the cap rate.

4) Political demand/supply episodes – Politically driven demand episodes are critical. What if we decided to relax the biofuels mandate? What would that do to commodity prices? The question some are raising right now is that we don't have a "safety valve" to adjust the supply-demand balance, given the drought driven short crop, without very high prices that may permanently destroy demand in the livestock and export sectors.

The U.S. has a mandate of how much corn will be used in biofuels. At some point, the issue will be raised with EPA that argues the mandate is resulting in higher food prices as well as the price of feed for livestock producers, so it should be

*Conference Rapporteur: Is this Farm Boom Different?*

temporarily relaxed. If the mandate is relaxed, what do you think will happen to the corn, bean, and wheat market?

More broadly, much of what is shaping this industry is policy driven, not necessarily markets—the U.S. mandate on biofuels, sugar and biofuels development in Brazil, Chinese growth policy, environmental rules, monetary policy and interest rates, etc. Many argue that much of Chinese demand is policy-driven, making sure they have adequate resources and inventories to respond to growing demand and production shortages, particularly in feedstocks for the livestock industry.

5) Increased supplies and supply volatility – We are currently facing a drought induced supply shock, but 123 million acres of additional land have been put in production in the world in the last six years, 30 million acres in the last year alone. Production is increasing in areas of the world that have much more volatility in yields, because those areas don't have the stability in weather patterns we have in the United States and in parts of South America. This adds more potential supply volatility to the global food system beyond just the weather that we might have in the United States.

Shouldn't this increased supply volatility increase further not only the focus on risk management, but the risk premium in the agricultural market? Doesn't this further the argument that the cap rate on land investments must capture the risk premium in an increasingly volatile agriculture?

6) Financial stress potential – everyone believes, based on USDA numbers, that debt in the farm sector is not a problem. The farming sector has low leverage--a debt to asset ratio of approximately 10 percent. That implies that the sector has fully adequate capacity to accommodate financial stress. Then Allen Featherstone says, "Wait a minute -

*Conference Rapporteur: Is this Farm Boom Different?*

Kansas farm record data doesn't necessarily support that." The Kansas numbers suggest that we *do* have the potential for some debt problems if we have a reduction in incomes during the next two or three years and we see rising interest rates. You put lower incomes and higher interest rates together, and you might have something not all that dissimilar to the debt repayment problems of the 1980s.

What are the implications of this possibility? It reinforces the earlier argument that lenders should stress test every customer in their portfolio that has a leveraged position, I would argue, of 40 percent or greater and find out what happens if they face a 25 percent to 30 percent reduction in income combined with higher interest rates.

Actually next year (2013) is not the problem – crop insurance will provide significant protection for those who don't harvest a normal crop. What is a concern is that crop insurance is not a long-term risk mitigation strategy, because the insurance indemnity will decline when market prices decline. The concern is 2014 and 2015 when there is a higher probability of lower prices and higher interest rates. And we haven't talked about the sectors that are of most concern-- financial stress will show up more quickly in the livestock sector than it will in the crop sector. The livestock industry, particularly dairy, doesn't have very strong financial absorptive capacity-- they are coming off some low income years and have not been able to recover their working capital. We will return to this issue shortly.

7) The financing requirements of agribusiness – Grain originators and input suppliers will have higher financing requirements. We have focused on production agriculture in most of our discussion, but what about the other parts of the value chain? How many bankers have looked at their credit lines with their grain originators and their



*Conference Rapporteur: Is this Farm Boom Different?*

agribusiness companies, and thought about what margin calls and high priced inventories are doing to that line?

8) Land/Asset sales – Most of our discussion of land values focuses on the demand side—income, interest rates, cap rates, etc. What could result in an increase in the amount of land offered to the market? We don't know much about the supply side of the farmland market and under what conditions the offer curve for farmland increases or decreases.

Let's return to the 1980s. A significant driver of the decline in land values was not just the demand side (lower income, higher interest rates), -- the offer curve shifted to the right. A large volume of foreclosed properties had to find a new home. A similar phenomenon has occurred recently in the housing market; a large volume of properties had to find a new owner.

Some argue that land is owned primarily by farmers and is a business asset that likely won't be put on the market. They argue further that it's bought with no or low leverage, therefore we wouldn't expect many foreclosures. But the Kansas farm record data gives a different perspective on these arguments – it implies that there is more debt on commercial farms than we might think and that there is a segment that is sufficiently highly leveraged to be vulnerable to income shocks (just like the 1980s) that might need to sell or be subject to foreclosure, thus increasing offerings to the market. We need to obtain a better understanding of the supply side of the land market.

And the livestock sector, as we've said, has less financial absorptive capacity than the crop sector. The dairy industry is more highly leveraged and has limited working

*Conference Rapporteur: Is this Farm Boom Different?*

capital. We have the same problem in the pork industry. So these industries are more vulnerable to asset value decreases than the crop sector.

In the long term (10-20 years), I am concerned about U.S. livestock competitiveness. The U.S. livestock industry was built on cheap feed. Will we return to cheap feed? I doubt it. It will be less expensive than it is today, but not cheap like it was. Furthermore, we are increasing the regulatory cost of livestock production in the United States compared with the rest of the world? And the U.S. demand for animal proteins is mature at best because of consumer demographics. Older people don't eat as much animal protein as younger people. Mid-age people don't eat as much animal protein (particularly red meats) as they used to, because they are worried about issues associated with health. And kids eat even less than in the past, because they are worried about animal welfare issues. Domestic demand for animal protein is under significant attack.

If I am a global animal protein production company, like Smithfield in pork and JBS in beef, why would I want to invest in more livestock facilities in the United States in this environment? Why wouldn't I go to the Black Sea area in Europe and use barley and wheat as a feed grain (by the way, that's an important point, wheat is a feed grain in most of the world—they don't have the corn we have). Why not invest in the Black Sea area or in China? Local production or imports can be used to source feed, and I don't have to worry about as restrictive regulatory rules as in the United States. Just to illustrate, we have not expanded the productive capacity in terms of new construction in pork in this country very much lately. It has expanded in the rest of the world.

*Conference Rapporteur: Is this Farm Boom Different?*

Some additional observations

I don't think the question is— is this boom sustainable? I think the *real* question is, is a bust inevitable? Prosperity could dissipate relatively slowly. Or, we could have a financial collapse like the 1980s. Which of those has the potential to occur?

We have a different business climate than the 1980s in a number of dimensions:

a) The wealth effect is not as strong as in the 1980s when farmland was arguably purchased in many cases for its capital gain and as an inflation hedge. This wealth effect is not nearly as strong today as it was in the 1980s.

b) The leverage effect today isn't nearly as strong as it was in the 1980s when lenders were aggressive in making loans securitized by appreciated asset values. What have lenders done this time around? They have limited the debt per acre or the loan to value ratio and required land buyers to have more equity at risk. They have *not* increased loan-to-value ratios to book business.

c) Recall that the first phase of the 1980s collapse was a reduction in demand—demand for exports declined dramatically. The potential demand reduction we think is not likely to be as dramatic this time—it will just not grow as rapidly as it has recently. The biofuels demand is mandated, -- EPA may give a temporary relief of the mandate, but I don't think they'll permanently change it. Asia/China and developing country demand are unlikely to collapse-- it will likely grow less rapidly than it has for the last five or six years. The current increase in the value of the dollar, which puts U.S. export markets at increasing risk, is likely not permanent. I do worry, however, that the shock absorber in the market to short supplies might be exports. That might be permanent demand destruction. If importing countries decided that they cannot rely on the United

*Conference Rapporteur: Is this Farm Boom Different?*

States as a supplier, they will go elsewhere like the Japanese did in the 1970s in the soybean markets. And the Black Sea area as well as Brazil are increasing their production capacity rapidly.

d) Asset values will not likely be under as much pressure. We expect fewer sales from foreclosures than in the 1980s. Most of the purchases of higher priced farmland have been by farmers for business purposes, rather than investors who may not have a buy and hold mentality. But remember, livestock has not had the same kind of stability in its asset values, whether it is cows, sows, or facilities. Those assets do not provide as strong a security position from the lender's perspective.

What could create a bust? First, a demand reduction – reduced biofuels mandates, livestock numbers or exports. Second, continued bidding up of asset/land values. The more asset values are bid up, the more the risk of having to readjust. Third, more leverage – more debt concentrated in a few highly leveraged borrower customers could create serious problems. Fourth, higher interest rates that result in higher capitalization rates, higher costs and lower margins/incomes.

There are some additional sources of vulnerability for individual farmers. The structure of the balance sheet is a problem for many farmers. A number of farmers have moved assets “below the line” – that line between current and noncurrent assets. They bought equipment, land or other assets, and they didn't fund noncurrent assets with term debt – a classic imbalance in the balance sheet. Properly structured debt (funding current assets with current liabilities and non-current assets with non-current liabilities) is critical to financial resiliency. Working capital has been destroyed in a number of businesses, and the first line of defense against financial stress is working capital.

*Conference Rapporteur: Is this Farm Boom Different?*

We also are concerned about high “pseudo” debt obligations. Some cash rent arrangements are multiple-year agreements. That isn’t much different than borrowing money and having to make a mortgage payment. We are concerned about those farmers that have paid high cash rents (\$300 plus per acre) with a multiple-year commitment.

What about deferred taxes? How many lenders have determined the tax burden that could occur for their farm customers if they ask them to liquidate some assets? What is the tax basis for raised grain and livestock? For any farm filing under Schedule F, the tax basis of those raised inventories is zero. Assume you have a farmer with \$500,000 of raised inventory who has encountered financial stress. The lender says to that customer, “You have too much debt. Let’s take some of that inventory, sell it off, and pull down some of your debt.” If you sell \$500,000 of raised grain and livestock, 100 percent of that is taxed as ordinary income, the farmer has a high tax bill and the lender doesn’t have as much money as was anticipated to be available to pay down debt.

What will happen to interest rates? I can give you nine reasons why interest rates have to go up. They *will* go up, the only questions is when. We have been in a long-term decline for the last 20 years in the United States and actually globally in interest rates. A study by McKinsey & Company indicates that in the next decade (once the economy recovers), real interest rates will be 200 basis points higher than they have been for the last decade. The only reason we don’t currently have higher rates is the recession and slow recovery, and accommodative monetary policy to stimulate that recovery. Once we have a sustained recovery, the capital markets will not be able to fulfill the increasing global demand for capital. The savings rate isn’t high enough to meet global demand without having significantly rising interest rates.

*Conference Rapporteur: Is this Farm Boom Different?*

Finally, what to watch – what are the critical uncertainties impacting agriculture?

1) The financial crises in the European Union – It isn't over-- it's a classic kick-the-can down the road. The current concern is Spain. Spain is facing high rates on sovereign debt, which continue to bounce up to 7 percent – 7 percent on sovereign debt is where everybody says a financial bailout is needed. The focus is no longer Greece – its Spain and Italy. The person who controls this is Merkel in Germany. She has to make a decision of whether she's going to try to convince the German public to increase their taxes and bail out Southern Europe.

With that uncertainty in the global market, there is a potential contagion effect. Who is China's biggest customer – the EU? What happens if the EU goes into a deep recession? The only country with positive growth in the EU is Germany – and it's less than single-digit growth. If a deep or long recession occurs in the EU, they will buy fewer imports from China. China's economy is driven by exports – fewer exports means slower growth in China, lower growth in animal protein demand, and thus fewer imports of meat and feed grains from the U.S.

The sluggishness of the recovery of the U.S. economy; the now rising value of the dollar (which is bad news for any export-based industry); the unpredictable future growth of income in China and Asia more broadly are key uncertainties that bear watching.

2) The drought in the U.S. has resulted in short supplies of corn and soybeans. How long will the higher prices for these crops last? As noted earlier, a total of 123 million acres have been brought into production in the world in the last six years – only 3 percent of that has been in the U.S. High corn, bean and wheat prices create

*Conference Rapporteur: Is this Farm Boom Different?*

incentives to expand acreage in grain production world wide – don't believe that “they aren't making more land” – we are making land not current tilled into more productive land.

Just to put 123 million acres in context, we planted 95 million acres of corn in the U.S. this year. And once that land comes into production, it is not likely going back out of production when prices decline. Farming around the world is a high fixed-cost industry, and resources stay in production until prices decline substantially because even with lower prices, producers can still cover their variable costs of production.

3) Future U.S. farm policy is very uncertain. We likely will not have a Farm Bill passed this year – most likely the current law will be extended and a new farm program will be debated next year. This debate will be very contentious – a reduced budget baseline for agriculture, concern about the budget deficit generally, higher government budget expenditures for crop insurance indemnities resulting from the drought, a debate about reducing supplemental nutrition assistance (SNAP) during a time of continued high unemployment, etc. An expanded insurance program is the most likely outcome, but it may have higher premiums for farmers and/or limitations on the amount of the subsidy or the indemnities to target the benefits to smaller scale farming operations. The new farm program could have a major impact on the costs and benefits of one of the most attractive tools that crop farmers have had to manage risk – crop insurance.

4) Fiscal policy and the budget dilemma we face are important to resolving the uncertainty businesses and consumers face, and in sustaining the U.S. recovery from

*Conference Rapporteur: Is this Farm Boom Different?*

the recession. And these issues are huge – the budget deficit, tax policy, and the debt limit.

Continued slow economic growth and high unemployment in the United States will make it difficult for demand to grow for meat products in particular, and the livestock industry will continue to be under financial pressure without domestic as well as export demand growth.

5) Cost volatility is a permanent part of the future of agriculture. Fluctuations in fertilizer, seed, and chemical and energy prices will not abate, and when combined with wider product price volatility, will result in much more variability in margins and cash flows than in the past. And eventually interest rates will go up, putting additional margin pressure on farmers.

6) And, finally, an increase in counterparty risk. The financial failure of MF Global is just one example. Grain elevators will face more counterparty risk in the form of farmers who are unable to fulfill their grain sales contracts because of the drought. Livestock feeders that have contracted with growers for forage and feed supplies may face similar problems. When there is increased volatility and more money at stake, non-performance on contracts/commitments and counterparty risk increases.

The long-term future of agriculture is bright--growing incomes world-wide create additional demand growth and the potential of continued strong incomes. But there will be “bumps in the road” to that long-term future, and it is critical to be positioned to handle those “bumps” to be part of that future.