

Review of US Agricultural Policy in Advance of the 2012 Farm Bill
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Written Statement Extends Oral Testimony of Daryll E. Ray before the
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Full Agriculture Committee
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Thank you Mr. Chairman and the members of the Agriculture Committee of the US House of Representative for your invitation to participate in this hearing to review US agricultural policy in advance of the 2012 Farm Bill. It is indeed an honor to appear and to interact with the committee.

My testimony steps back from the nuts-and-bolts of the commodity program trees and focuses on the broader farm policy forest. Specifically, I want to suggest that it is important to consider how public policy for commercial agriculture performs during the times of economic extremes. Any farm policy or no farm policy at all works just fine in times economic stability with little stress. But how does it perform when prices plummet and remain "low" due to successive years of production outrunning demand? Or when prices sky rocket due a sudden and persistent demand surge or multiple years of crop failure?

We lived through both extremes within the period of a decade: low prices for several years beginning in 1998 and a price explosion a decade later. It is, of course, during these extremes that economies of agricultural sectors are the most disrupted and long-term price incentives are the most distorted.

During the low-price period at the end of last decade, many program-crop farmers became "wards of the state" as they received more than all of their crop net income from government payments. These low prices caused immediate harm to farmers living in developing countries where backfilling gaps in market receipts with public payments was not remotely possible. Livestock producers and grain ingredient buyers gladly accepted the subsidy and based production decisions on unrealistically low grain prices.

The price surge a decade later wreaked havoc on the livestock industry, the ethanol industry, and the nutritionally vulnerable worldwide, as well many other sectors and groups.

¹ Harwood D. Schaffer, Agricultural Policy Analysis Center, made contributions to this statement, but any errors of fact or logic remain the responsibility of the author.

These extremes would not have occurred or would have been moderated if food and production agriculture could have quickly adjusted to price swings. But as has been known for decades if not centuries, neither can. Consumers don't quit eating when prices explode (and thereby relieve the pressure on prices, which consumers would do for most other goods) nor do individual producers, who are price-takers for undifferentiated crops, shut down production on their land when prices are low (in contrast to producers in other sectors who take production orders or affect their price by gauging production to demand).

Although we sometimes forget it, commodity programs exist because of this inability of aggregate agriculture to quickly self-correct. Logically it makes sense then to evaluate recent farm policy approaches examining how each functions during the times when this lack of quick market self-correction causes the most economic and social disruptions.

Let's consider the two basic alternatives offered in the 2008 FB, ACRE and DCP.

In the case of revenue insurance programs such as ACRE, the bottom line for me is that they tend to generously insure farmers during good times and provide virtually no help during extended bad times².

Following a series of "good" market revenue years, revenue insurance provides farmers with a proportion of the relatively "high" revenue level if prices (or yields) tumble. Depending on how high prices were during the good revenue years, farmers' revenue may be protected at or even above the full cost of crop production.

On the other hand, if prices fall and remain relatively low for several years, revenue insurance provides farmers with very little protection—actually no protection if prices are relatively unchanged but "remain very low compared to production costs" and little protection if prices or yields drop hard and stay there. With declining prices, protection ratchets down with the prices.

The reason many stochastic studies have shown that ACRE would typically pay farmers more than DCP is because of recent advantageous market conditions. Since revenue insurance is calibrated to recent market revenue (constrained by the 10 percent rule in ACRE), the safety net does not stay put. There is no long-term floor for the price portion of revenue as there is with DCP. That is why I say revenue insurance programs tend to generously insure crop farmers during good times and provide virtually no help during extended bad times. During times when prices hit bottom and remain there and the "need" in crop agriculture is the most acute, revenue insurance protection marches to zero.

² In general selling revenue insurance is akin to selling residential fire insurance when it is known that all the insured houses have the potential to burn down simultaneously. Prices do not affect farmers randomly. When prices fall, they fall for all. Traditional insurance, on the other hand, is a numbers game based on the knowledge that a relatively small but predictable percentage will "collect" during a finite period of time. So if the good times are really good and then prices fall very hard, the cost of insuring revenue could be extremely large.

So how well do revenue insurance programs overcome the extreme economic conditions created by lack of quick price responsiveness by food consumers and aggregate crop agriculture? Since revenue insurance programs do not dependably protect even crop farmers when production outruns demand for extended periods of time, revenue insurance fails on all counts. There is little or no help for domestic or worldwide crop farmers when prices are pushed well below the cost of production. And there is no help for livestock producers, other grain users including ethanol producers, and the nutritionally vulnerable when prices explode.

During the two identified sets of extreme (also polar extreme) economic conditions, the DCP program was the basic farm program in effect, albeit with some variation in details. DCP and the emergency payments during 1998 to 2001 protected crop farmers from total economic ruin by replacing market receipts with government payments³. But aside from that, the DCP program fares no better at ameliorating the extremes than a revenue insurance program.

US farm policy has evolved over time to its present configuration partly, if not mostly, because it was thought that earlier programs were hindering trade. It was widely thought that supply management and price support programs were allowing US export competitors to undercut the US and to snatch away export markets. It was thought that by allowing prices to fall to free market levels, crop exports would increase ferociously, compared the degree of decline in prices, allowing the US to reclaim its former stratospheric share of total world grain exports. And since export volumes were expected to increase proportionally more than the fall in prices (implying a price elastic export demand), export values were expected to soar when prices were lowered from price support levels.

There was a second component to the export-centric narrative driving US farm policy for the last quarter century. Administration officials, farm organizations, academics, and commodity organizations have continually fed the belief that growth in world population and incomes are "about to" propel US agriculture to the promised land of accelerating export growth and financial prosperity.

While this export-centric narrative was successful in moving farm policies to the check-writing-payment programs of today, the grain-export promises failed to occur. Over the last three decades, US corn export demand has been variable but with a flat trend while wheat export demand has trended downward. Soybean complex exports (soybeans, soybean meal and soybean oil) have trended upward during part of the period, but the US share of world soybean complex exports has plummeted, declining from 56 percent in 1980 to 33 percent in 2009.

³ Of course, had revenue insurance been in effect during the low price years, emergency payments likely would have been paid as well. But then what would the 2002 FB have looked like? If revenue insurance were the principle program instrument, would the countercyclical payment program have been put into the 2002 FB? Would ad hoc emergency payments been continued instead?

Even with the increase in soybean exports, the combined exports for the three major export crops remained below their 1980 level during most of the last thirty years. Amazingly and contrary to general belief, the US is now exporting a smaller proportion of its combined production of corn, wheat and soybeans than in 1980—45 percent in 1980 and 25 percent in 2009. That is to say that the increase in domestic demand has been far more important to US farmers than the vacillation of grain exports.

The price elastic export demand argument didn't pan out either. Contrary to expectations, USDA historical data on crop prices show fluctuations of greater amplitude typically than the corresponding amplitude of changes in the volume of crop exports. Even more telling—again contrary to expectations—USDA data on the value of crop exports typically moves in the same direction as change in the crops' prices. These market observations are not consistent with a demand that is price elastic, rather one that is price inelastic.

Crop exports have not performed as promised. It is not uncommon for conventional wisdom to lag behind reality, sometimes because of inertia, sometimes because we don't bother to look up the data, and sometimes because we "know how something should be" and that's good enough. Crop exports are indeed a case in which conventional wisdom lags reality.

Since the premises of the export-centric narrative turned out to be false, that export narrative is not a valid reason to confine commodity program discussions to government payment programs of one kind or another.

Nor, in my opinion, is it valid to not consider non-government-payment approaches to farm policy because such market interventions cause market distortions. I submit to you that severity of economic dislocations flowing from the current produce-all-you-can-and-backfill-market-receipts-catastrophes-with-payments-with-no-reserve type of program takes the market distortion argument off table.

Nor would previous complaints about the cumulative cost of previous non-government-payment commodity programs stand up well against the cumulative cost of payment-based programs. Aside from being less expensive than current programs, there could be billions of dollars of potential savings by avoiding the reactions to and effects of the exaggerated price signals experienced with current programs.

So to those who claim that inventory management programs including grains reserves are too expensive to consider, my question is: compared to what?

- ❖ Compared to the billions of dollars of economic losses of the livestock, dairy and ethanol industries because there were no grain reserves to help affect the market?
- ❖ Compared to additional millions of people worldwide who were forced into poverty because of the price of staples? Compared to the future "low" US crop prices that almost inevitably follows major crop price run-ups?
- ❖ Compared to the losses to farmers worldwide who have experienced (and most likely will experience future) low prices but who receive no payments?
- ❖ Compared to the other impacts of dumping commodities on the world market at below the cost of production including the Brazilian cotton case?

I recognize that today's farm policy is what it is and even noncontroversial changes can come grudgingly or not at all. But one place to begin would be to reinstitute a grain reserve program. With its authorization when, not if, grain prices drop into government payment territory, grain could be isolated from the market in a reserve. The benefits would be reduced government expenditures for farm payments since isolating and storing a relatively small percent of production which would raise prices, is much different than doling out annual payments for most or all of production. In addition, a reserve would be available to moderate prices that otherwise would go skyward during TRUE demand or supply shocks. Other criticisms have been lodged against grains reserves besides cost and price distortion concerns, but most of those criticisms deal with implementation and thus it is important to codify purposeful operational rules and to make the rules transparent to all.

As we have seen in the financial markets, the efficient markets hypothesis on which so many economic recommendations, including agricultural policy, rest is not without its problems. This is especially true for crop markets where the low elasticities of supply and demand create further challenges. In recent years we have dealt with both of these challenges by searching for mechanisms by which we can stabilize farm income. The result has been either the backfilling of farm income through huge emergency and marketing loan payments or offering outsized subsidies to insurance companies to induce them to offer actuarially unsound policies designed to protect farmers against widespread systemic risks like yield, production, and/or income loss. In addition, these programs have been unable to reduce the huge economic distortions that occur on both the high and low ends of the price spectrum.

The direct and indirect costs of these various approaches have been far in excess of what they would have been with the traditional reserve and supply management programs which, when well managed, provided a price band within which the forces of supply and demand efficiently allocated agricultural resources, protecting farm income while guarding against the distortions that result from price extremes.

Other Thoughts and Perceptions

- Excess capacity can and likely will return with a vengeance. Yes, this time it could be different. But as any agriculturalist who lived through the 1970s and those familiar with agriculture's long-term history (not to mention Malthus) can tell you, the odds of "this time being different" are extremely small. In the past, supply has always caught up with demand growth and then surpassed it. And typically it does not take long for that to happen.
- Once again we could see \$2 per bushel corn and comparable prices for other major crops in the future. There is nothing to stop it. Yes, there was a higher price plateau after the price run up in the seventies but then there were two factors that do not exist today: one was extreme high general price inflation by US standards and the other was increased support prices.

- Given agriculture's propensity to overproduce, drafting FB legislation based on projections of "high" prices that happen to exist during FB debates usually results in unexpected and disappointing outcomes. One example being the 1996 FB when prices dropped by nearly one-half less than a year after the legislation was signed into law.
- There is little reason to believe that US farmers could prosper by trading the farm program safety net for complete access to international markets. Such a fantasy fails to take into account how most, if not all, countries view food and the other unique characteristics of the food and agriculture sectors.
- The export-centric narrative, which has been recited as fact to sell the current direction of farm programs, has turned out to be fiction. It is time to acknowledge that, while exports are important and always will be, they are not going to make agriculture ever more prosperous. This won't happen because importing countries want to produce as much of their own food as possible (even if it is cheaper to import it) and, just as importantly, because our export competitors really are export competitors, many of whom have profitable growth opportunities in terms of acreage expansion and the closing of yield gaps.
- Grain reserves also perform an important international trade function. Production disruptions can be so severe even in the US that domestic demanders of grains could have difficulty securing physical quantities of grain at any price. It is in those situations that we also are most likely to become unreliable suppliers in the export market. Legislation preventing embargoes can and likely would be rescinded. Previous grain and soybean export embargoes occurred during times, like now, when the US had no reserves on hand.
- The trade disruptions in 2008 could have been avoided had reserves been available. Without the security of knowing that reserves exist, it is perfectly understandable why countries felt compelled, when availability became uncertain, to restrict exports of the very staples that their populace depend upon. It is also important to understand that, without reserves, it is unlikely that the existence of totally free trade, in its most complete sense, would have changed the motivations or actions of those exporters.
- We should do our part to combat world hunger. We should remember however that even when crop supplies were plentiful and cheap (1998-2001), there were in excess of 800 million people in the world who were hungry. Producing 300 bushel per acre corn and 90 bushel soybeans in the years ahead does not magically translate into feeding the hungry of the world. Neither do we do developing countries any favors by supporting policies or agribusiness aspirations to move poor small-holder farmers from their land into urban slums.

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EDUCATIONAL BACKGROUND

Bachelor of Science, Agricultural Economics, Iowa State University, 1965
Doctor of Philosophy, Agricultural Economics, Iowa State University, 1971

PROFESSIONAL EXPERIENCE

Professor, Blasingame Chair of Excellence in the Department of Agricultural Economics and
Director of the Agricultural Policy Analysis Center, The University of Tennessee,
Knoxville, 1991–present.

Professor, Dept. of Agricultural Economics, Oklahoma State University, 1978–1991.

Associate Professor (with Tenure 09/01/74), Dept. of Agricultural Economics, Oklahoma State
University, 1974–1978.

Assistant Professor, Dept. of Agricultural Economics, Oklahoma State University, 1971–1974.

Research Associate, Economics Department, Iowa State University, 1967–1971.

Research Assistant, Economics Department, Iowa State University, 1965–1967.

NOTEWORTHY PROFESSIONAL ACTIVITIES:

- Founder and Director of the Agricultural Policy Analysis Center within the Department of Agricultural Economics, University of Tennessee. Its primary charge is to analyze and publish impacts of economic conditions and policies at the national, state, and farm levels.
- Developed the first econometric, equation-based policy simulation model of U.S. agriculture with subsector detail on supply and utilization components for major crop and livestock categories. This model was the foundation for the early econometric policy simulation work done at Iowa State University's Center for Agricultural and Economic Development.
- Developed an elasticity-based policy simulation model, POLYSIM, which was the first comprehensive policy simulation model to be routinely used by the U.S. Department of Agriculture.
- Developed the first stochastic, multi-commodity agricultural policy simulation model, a technique that was eventually adopted by the Congressional Budget Office and other analysis units that report directly to Congress.
- Author of over 650 professional papers, articles, columns, and book chapters and have made over 260 invited presentations. Invited international presentations include: 2010 GrainWorld Conference, Manitoba, Winnipeg; United Nations Food and Agricultural Organization (FAO) 67th public side event session, Rome, Italy; Global Agri-Food Forum, Mexico City; US-China Rural Finance Seminar hosted by the Dallas Federal Reserve; along with lectures and meetings with the Chinese Academy of Sciences, the Institute of Geographical Sciences and Natural Resources and the Rural Development Institute at the Chinese Academy of Social Sciences.
- Awarded the Distinguished Policy Contribution Award by the American Agricultural Economics Association.
- Lecturer for the 2004 John Pesek Colloquium on Sustainable Agriculture, which was created to bring issues in sustainable agriculture to both a university and a community forum.
- Testified numerous times before the Senate Committee on Agriculture, Nutrition, and Forestry and before the House Committee on Agriculture at their request.
- Testified before Presidential commissions dealing with agricultural policy issues.

- Publish a weekly agricultural policy column carried by over 300,000 paid subscribers to national and regional newspapers, magazines, and other outlets. After its initial publication, each column is posted on APAC's website and sent to 1000s of recipients via email distribution.

AWARDS

- 2010 National Farmers Union Award for Outstanding Service to American and World Agriculture.
- 2009 Kansas Farmers Union's Ruth Hirsh Award for outstanding dedication and service to agriculture and America's family farmers and ranchers.
- 2004 Iowa State University's Floyd André Award for an outstanding contribution to agricultural business or in a position to have a significant influence on Iowa agriculture.
- 2004 Pesek Scholar: John Pesek Sustainable Agriculture Colloquium
- 2004 American Corn Growers Association's Carl L. King Award for Distinguished Service
- 2003 American Corn Growers' Association Appreciation Award
- 2003 President's award from the Nebraska Farmers' Union
- 1983 Distinguished Policy Contribution Award by the American Agricultural Economics Association

GRANTS AND CONTRACTS

Total APAC grants and contract expenditures have exceeded \$4 million. Agencies and organizations providing grants and contracts include:

- | | |
|--------------------------------------|---|
| American Corn Growers Association | Economic Research Service (USDA) |
| Leopold Center | National Farmers Union |
| National Research Initiatives (USDA) | Natural Resources Conservation Service (USDA) |
| Oak Ridge National Laboratory | Office of the Chief Economist (USDA) |
| Oxfam America | R.J. Reynolds Co. |
| University of Virginia | U.S. Department of Energy |
| Howard Buffett Foundation | Pew Foundation |

CURRENT COURSES TAUGHT

Agricultural Economics 530 – Agricultural Policy Analysis

PROFESSIONAL MEMBERSHIPS

- American Agricultural Economics Association
- Southern Agricultural Economics Association
- Editorial Council, Journal of Agricultural and Applied Economics
- Western Agricultural Economics Association
- Council for Agricultural Science and Technology

PUBLICATIONS AND PROFESSIONAL ACTIVITIES:

National and Regional Professional Journals	32
Book Chapters Published.....	8
Proceedings of Conferences.....	16
Experiment Station, Outreach Articles, Columns, and Misc. Publications	654
Professional and Industry Presentations	269
Book Reviews	4

TOTAL **1075**

Plus 510 weekly columns in publications with a paid circulation that exceeds 300,000.
Over 30 media interviews per year.

**Committee on Agriculture
U.S. House of Representatives
Required Witness Disclosure Form**

House Rules* require nongovernmental witnesses to disclose the amount and source of Federal grants received since October 1, 2007.

Name: Daryll E. Ray

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Organization you represent (if any): Agricultural Policy Analysis Center, University of Tennessee

1. Please list any federal grants or contracts (including subgrants and subcontracts) you have received since October 1, 2007, as well as the source and the amount of each grant or contract. House Rules do NOT require disclosure of federal payments to individuals, such as Social Security or Medicare benefits, farm program payments, or assistance to agricultural producers:

Source: _____ **Amount:** _____
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2. If you are appearing on behalf of an organization, please list any federal grants or contracts (including subgrants and subcontracts) the organization has received since October 1, 2007, as well as the source and the amount of each grant or contract:

Source: <u>NASA- UT-Battelle Framework Tool</u>	Amount: <u>\$ 300,00.00</u>
Source: <u>Dept of Energy-OnLocation BiomassMetaFunctn</u>	Amount: <u>\$ 50,000.00</u>
Source: <u>ORNL-UT-Battelle Biomass Feedstock</u>	Amount: <u>\$ 63,000.00</u>
Source: <u>Dept of Energy-OnLocation POLYSIS into NEMS</u>	Amount: <u>\$ 45,000.00</u>
Source: <u>Sun Grant Center DOT Internal DTOS5907</u>	Amount: <u>\$ 78,009.00</u>
Source: <u>USDA-CREES 093510205009 Water</u>	Amount: <u>\$ 275,490.00</u>
Source: <u>ORNL-UT-Battelle 4000076587 Decision Support</u>	Amount: <u>\$ 55,384.00</u>

Please check here if this form is NOT applicable to you: _____

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** Rule XI, clause 2(g)(4) of the U.S. House of Representatives provides: Each committee shall, to the greatest extent practicable, require witnesses who appear before it to submit in advance written statements of proposed testimony and to limit their initial presentations to the committee to brief summaries thereof. In the case of a witness appearing in a nongovernmental capacity, a written statement of proposed testimony shall include a curriculum vitae and a disclosure of the amount and source (by agency and program) of each Federal grant (or subgrant thereof) or contract (or subcontract thereof) received during the current fiscal year or either of the two previous fiscal years by the witness or by any entity represented by the witness.*

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