

# Arkansas Representative Panel Farm Analysis of Loan Rates and Target Prices for the 2012 Farm Bill

Vuko Karov, Eric J. Wailes and K. Bradley Watkins

Department of Agricultural Economics & Agribusiness  
University of Arkansas, Fayetteville  
Division of Agriculture

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# Introduction

- The 2008 Farm Bill expires in 2012
- 11/2011: the “Super Committee” failed to reach an agreement
- The 2012 Farm Bill would have been included
- As a result, the need to draft a new legislation has emerged
- Such an Act will be a result of a much more open process
- The debate on how to modify the 2008 Act, given the prospects of reduced funding for the 2012 legislation is underway
- The need to examine the effects of alternative (or modified) safety net programs has surfaced

# Current Policy Environment

- High Federal budget deficits
- Relatively high crop prices and incomes in agriculture
- Increasing farm input costs
- Crop losses due to floods
- Interest groups
- WTO constraints

# Implications for Arkansas

- Currently, Arkansas producers do not receive:
  - a) loan deficiency payments (LDPs) (rare exceptions for cotton)
  - b) counter-cyclical payments (CCPs) (rare exceptions for cotton)
- Average Crop Revenue Election (ACRE) participation rates have remained low
- Historically, direct payments (DPs) have played a prominent role in providing a safety net for Arkansas producers
- In light of the current policy environment, most interest groups have endorsed a removal of DPs

# Goal and Objective

- **Goal:** *to assist Arkansas farmers and policy makers in developing their positions regarding the 2012 Farm Bill*
- **Objective:** *to examine the impacts of alternative proposals that would modify the 2008 Farm Bill*

# Scenarios

- [1.]: *A full continuation of 2008 Farm Bill commodity programs. Farmers do not choose to participate in ACRE (baseline)*
- [2.]: *A complete removal of DPs*
- [3.]: *What is the minimum level at which loan rates can be raised to trigger LDPs during 2012-2016?*
- [4.]: *Assuming DP rates remain at 2012 levels, what is the minimum level at which target prices can be raised to trigger CCPs during 2012-2016?*

# Methods

- Arkansas Representative Panel Farms Framework
- Following Richardson, Klose and Gray (2000), an empirical procedure for developing multivariate empirical probability distributions is employed
- Simetar is used to simulate stochastic baseline five-year projections for the period 2012-2016 with 500 iterations/variable/year for:
  - a) national and world crop prices
  - b) farm-specific yields
  - c) farm expenses (diesel fuel, fertilizer and electricity)

# Data

- Representative farms are developed by the Arkansas Cooperative Extension Service and the Agricultural Food and Policy Center (Texas A&M University)
- Every two-three years, economists work with panels of farmers to update and/or construct new representative farms sharing common features with farms of a certain geographical location
- Information such as planted acreage, crop mix, land tenure arrangements, participation in Federal programs, base acreage, historical yields, assets and expenses is collected
- Other data sources: FAPRI-MU; USDA/ERS; USDA/NASS

# Arkansas Representative Panel Farms

**Table 1: Arkansas Representative Panel Farms Characteristics**

Location	Wynne	Hoxie	Stuttgart	Leachville	McGehee
County	Cross	Lawrence	Arkansas	Mississippi	Desha
-----Planted Acres-----					
Rice	700	1,450	1,620	0	1,875
Soybeans	700	1,250	1,296	0	1,625
Cotton	0	0	0	5,000	1,500
Corn	0	300	0	0	1,500
Wheat	0	0	324	0	1,000
<b>Total</b>	<b>1,400</b>	<b>3,000</b>	<b>3,240</b>	<b>5,000</b>	<b>7,500</b>

# Stochastic Results: Scenario [1.]

Table 2.1: 2012-2016 Annual Average Net Farm Income, in \$/Acre (by Farm)

Farm Location	Wynne	Hoxie	Stuttgart	Leachville	McGehee
	Annual Average (2012-2016), in \$/acre				
<b>Market Receipts</b>	<b>638</b>	<b>656</b>	<b>539</b>	<b>935</b>	<b>721</b>
DPs	53	51	47	20	35
LDPs	0	0	0	4	1
CCPs	0	0	0	1	1
<b>Total Government Payments</b>	<b>53</b>	<b>51</b>	<b>47</b>	<b>26</b>	<b>36</b>
<b>Total Receipts</b>	<b>691</b>	<b>707</b>	<b>586</b>	<b>961</b>	<b>757</b>
Total Cash Expenses	672	649	469	737	642
Depreciation	167	49	61	60	61
<b>Net Farm Income</b>	<b>-148</b>	<b>9</b>	<b>56</b>	<b>164</b>	<b>54</b>

# Stochastic Results: Scenario [1.] Cont'd

Table 2.2: 2012-2016 Annual Average Direct Payments, in \$/Acre (by Farm and Crop)

Farm Location	Wynne	Hoxie	Stuttgart	Leachville	McGehee
	Annual Average (2012-2016), in \$/acre, by Crop				
<b>DPs</b>	<b>53</b>	<b>51</b>	<b>47</b>	<b>20</b>	<b>35</b>
Long-Grain Rice	95	98	84	_____	91
Medium-Grain Rice	_____	94	_____	_____	_____
Irrigated Soybeans	11	10	9	_____	10
Dry Soybeans	11	10	_____	_____	0
Irrigated Cotton	_____	_____	_____	20	48
Dry Cotton	_____	_____	_____	21	_____
Corn	_____	0	_____	_____	0
Wheat	_____	_____	12	_____	0

# Stochastic Results: Scenario [2.]

Table 3: 2012-2016 Annual Average Net Farm Income, in \$/Acre (by Farm)

Farm Location	Wynne Hoxie Stuttgart Leachville McGehee				
	Annual Average (2012-2016), in \$/acre				
<b>Market Receipts</b>	<b>638</b>	<b>656</b>	<b>539</b>	<b>935</b>	<b>721</b>
DPs	0	0	0	0	0
LDPs	0	0	0	4	1
CCPs	0	0	0	1	1
<b>Total Government Payments</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>2</b>
<b>Total Receipts</b>	<b>638</b>	<b>656</b>	<b>539</b>	<b>941</b>	<b>722</b>
Total Cash Expenses	672	649	469	737	642
Depreciation	167	49	61	60	61
<b>Net Farm Income (Scenario 2)</b>	<b>-201</b>	<b>-42</b>	<b>9</b>	<b>144</b>	<b>19</b>
<b>Net Farm Income (Scenario 1)</b>	<b>-148</b>	<b>9</b>	<b>56</b>	<b>164</b>	<b>54</b>
<i>Difference (Scenario 2-Scenario 1)</i>	<i>-53</i>	<i>-51</i>	<i>-47</i>	<i>-20</i>	<i>-35</i>

# Stochastic Results: Scenario [3.]

**Table 4: Highest Potential Loan Rate Level Increases Without Triggering Loan-Deficiency Payments (2012-2016), by Crop, Farm and Year**

Crop	Unit	Loan Rate 2012	Farm	2012	2013	2014	2015	2016
Rice	\$/cwt	6.50	All	12.23	12.11	12.29	12.73	13.03
Cotton	\$/lbs	0.52	All	0.73	0.77	0.79	0.82	0.85
Soybeans	\$/bu	5.00	Stuttgart	11.14	11.14	11.08	11.18	11.32
Wheat	\$/bu	2.94	Stuttgart	6.07	5.62	5.78	6.03	6.13
Soybeans	\$/bu	5.00	Wynne	11.32	11.32	11.26	11.36	11.50
Soybeans	\$/bu	5.00	Hoxie	11.51	11.51	11.45	11.55	11.69
Corn	\$/bu	1.95	Hoxie	4.81	4.75	4.83	4.92	4.89
Soybeans	\$/bu	5.00	McGehee	11.28	11.28	11.22	11.32	11.46
Corn	\$/bu	1.95	McGehee	4.81	4.75	4.83	4.92	4.89
Wheat	\$/bu	2.94	McGehee	6.07	5.62	5.78	6.03	6.13

# Stochastic Results: Scenario [4.]

**Table 5: Highest Potential Target Price Level Increases Without Triggering Counter-Cyclical Payments (2012-2016), by Crop and Year**

Crop	Unit	Target Price (2012)	2012	2013	2014	2015	2016
Long-Grain Rice	\$/cwt	10.50	14.51	14.31	14.58	15.02	15.37
Medium-Grain Rice	\$/cwt	10.50	18.16	17.77	18.32	18.50	18.78
Cotton	\$/lbs	0.7125	0.8249	0.8446	0.8649	0.8796	0.8908
Soybeans	\$/bu	6.00	11.72	11.72	11.66	11.76	11.90
Wheat	\$/bu	4.17	6.59	6.14	6.30	6.55	6.65
Corn	\$/bu	2.63	5.09	5.03	5.11	5.20	5.17

# The End

- Questions?
- Comments?
- Suggestions?

# Arkansas Representative Panel Farms Characteristics

Farm Name	ARHR3000	ARNC5000	ARC7500	ARHR3240	ARWR1400
Location	Hoxie	Leachville	McGehee	Stuttgart	Wynne
County	Lawrence	Mississippi	Desha	Arkansas	Cross
Acres Owned	1,000	1,000	1,200	648	420
Acres Under Crop Share Lease	1,500	3,200	5,985	1,552	490
Acres Under Cash Lease	500	800	315	1,040	490
Cash Rent for Land (\$/acre)	100	125	130	100	100
<b>Planted Acres</b>	<b>3,000</b>	<b>5,000</b>	<b>7,500</b>	<b>3,240</b>	<b>1,400</b>
Medium Grain Rice	150	0	0	0	0
Long Grain Rice	1,300	0	1,875	1,620	700
Irrigated Soybeans	1,125	0	1,625	1,296	650
<i>Full-Season Irrigated Soybeans</i>	0	0	1,625	0	0
<i>Double-Crop Irrigated Soybeans</i>	0	0	750	0	0
Dryland Soybeans	125	0	0	0	50
Corn	300	0	1,500	0	0
Irrigated Cotton	0	4,750	1,500	0	0
Dryland Cotton	0	250	0	0	0
Wheat	0	0	1,000	324	0
<b>Base Acres</b>					
Medium Grain Rice	175	0	0	0	0
Long Grain Rice	1,575	0	2,375	1,620	700
Irrigated Soybeans	1,125	0	2,585	1,296	650
<i>Full Season Irrigated Soybeans</i>	0	0	2,585	0	0
<i>Double Crop Irrigated Soybeans</i>	0	0	0	0	0
Dryland Soybeans	125	0	0	0	50
Corn	0	0	0	0	0
Irrigated Cotton	0	4,250	2,375	0	0
Dryland Cotton	0	225	0	0	0
Wheat	0	0	0	235	0
Operator's Share of Acres - Rice	88%	0%	80%	76%	91%
Operator's Share of Acres - Soybeans	88%	0%	80%	84%	91%
Operator's Share of Acres - Cotton	0%	84%	83%	0%	0%
Operator's Share of Acres - Corn	88%	0%	80%	0%	0%
Operator's Share of Acres - Wheat	0%	0%	80%	84%	0%

# Direct Payments

- Introduced in the 2002 Farm Bill
- In the 2008 Farm Bill:
  - Rice is divided into: long and medium (includes short)-grain
  - Direct payment rates remain unchanged from the 2002 Farm Bill:
    - \$2.35/cwt (rice); \$0.28/bu (corn); \$0.0667/lb (upland cotton)
- 2008 and 2012 Total Direct Payments:  
Direct Payment Rate\*0.85\*Eligible Payment Acres\*Payment Yield
- 2009, 2010 and 2011 Total Direct Payments:  
Direct Payment Rate\*0.833\*Eligible Payment Acres\*Payment Yield

# Direct Payments Cont'd

- Direct payments:
  - Are fixed for the period 2008-2012
  - Provide farm revenue in addition to what producers can obtain through grain marketing
- Payment limit: \$40,000/farmer/year (excluding peanuts)
- Eligibility limits:
  - Farmers with adjusted gross income (AGI) < \$750,000 (three-year average) and in many cases \$1.5 million for married couples
  - Non-farmers with AGI < \$500,000 (three-year average) and in many cases \$1 million for married couples even if more than three-quarters of their overall joint income is from agriculture, farming or forestry

# Loan Deficiency Payments

- Provide risk protection against current low market prices
- Establish a price floor when crop prices are lower than the pre-determined national loan rates:
  - \$6.50/cwt for long&medium-grain rice; \$5.00/bu for soybeans; \$1.95/bu for corn (2008-2012)
  - \$2.75/bu (2008-2009), but \$2.94/bu (2010-2012) for wheat
- Crop market prices are based on 30-day average prices and are referred to as posted country prices (PCPs)
- Total Program Payment 2008-2012:  
LDP rate (national loan rate-PCP)\*actual farm-specific harvested acres\*actual farm-specific crop yield
  - For rice and upland cotton only, the adjusted world prices are used instead of the PCPs
- No program eligibility and payment limits

# Counter-Cyclical Payments

- Provide benefits to farmers when the effective price for a crop is less than the target price
- The effective price is the sum of the direct payment rate and the higher of the national loan rate and the national average farm price
- Some target prices are constant for the period 2008-2012:
  - Long&medium-grain rice (\$10.50/cwt); corn (\$2.63/bu); upland cotton (\$0.7125/lb)
- Some target prices increase for the 2010-2012 period:
  - Wheat (\$3.92/bu for 2008-2010, but \$4.17/bu for 2010-2012)
- Total Program Payment 2008-2012:  
CCP rate (target price-effective price)\*0.85\*Eligible Payment Acres\*Payment Yield
- Program payment limit=\$65,000/individual/year