

The New Risk Management Program in the US 2008 Farm Bill

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Food, Conservation, and Energy Act of 2008

- Every six years, US congress passes a new Farm Bill
- The 2008 Farm Bill was passed on June 18, 2008.
- The new Farm Bill will be in place through the 2012 crop year.

Titles of the Farm Bill

- Commodities
- Conservation
- Trade
- Nutrition
- Credit
- Rural Development
- Research
- Forestry
- Energy
- Horticulture and Organic Agriculture
- Livestock
- Crop insurance
- Commodity futures
- Miscellaneous
- Trade and Taxes

Market Price Risks

- Market prices are risky, resulting in farmers' income fluctuation
- Government tries to protect farmers from the market risks
- There are price risk protection programs in the commodity title of the farm bill in the past (2002 Farm Bill, and 1996 Farm Bill)
- New programs are added to the 2008 bill

Risk Management Components in the 2008 Commodity Programs

- Direct payments (DPs)
 - Marketing loan deficiency payments (LDPs)
 - Counter-cyclical payments (CCPs)
- Or**
- Average Crop Revenue Election (ACRE) Payments
 - Producer has to agree to direct payment and loan rate reductions

Direct Payment

- Direct Payment = $\text{payment rate} \times \text{base acres} \times \text{payment fraction} \times \text{direct payment yield}$
 - Payment rate: wh \$0.52/bu, cn \$0.28/bu, rc \$2.35/cwt, sy \$0.44/bu
 - Payment fraction is .85 for 2008 and 2012 and .833 for 2009 – 2011
- Advance Payments (22%)
 - For 2008, advances began being issued July 7th
 - For 2009-2011, beginning December 1 of the year before crop is harvested
 - For 2012, advance direct payments are not available
- Remaining 78% paid after October 1st

Direct Payment Example

- For wheat in 2008, \$0.52/bu
- Base acre of a farm, 1000 acres
- Payment fraction 0.85
- DP yields 100 bu

- Direct Payment = $0.52 \times 1000 \times 0.85 \times 100$
= \$44200

- Final payment \$40000, because this is the upper limit.

Loan Deficiency Payments (LDPs) /Marketing Loan Gains (MLGs)

- Farmers receive a loan from the government at a specific loan rate, pledging production as collateral.
- Commodity loans may be settled in three ways:
 - Repay at the loan rate plus interest costs
 - Repay at an alternative loan repayment rate, or
 - Forfeit the pledged crop
- Repayment rate is calculated based on the average market prices during the preceding 30-day period or an alternative developed by the Secretary

National loan rates for marketing assistance loans

	CY 08	CY09	CY 2010-12
● Wheat	\$2.75/bu	\$2.75/bu	\$2.94/bu
● Corn	\$1.95/bu	\$1.95/bu	\$1.95/bu
● Rice	\$6.5/cwt	\$6.5/cwt	\$6.5/cwt

LDPs / MLGs Example

- For an 1000 acre farm with yield 100 bu/ac
- If cash market price for wheat in 2010 is \$2.50/bu, and repayment loan rate is \$2.60/bu, then forfeit and gain
LDPs = $(2.94 - 2.50) \times 100 \times 1000 = \44000
- If cash market price for wheat in 2010 is \$2.70/bu, and repayment loan rate is \$2.60/bu, then repay at the low rate
MLGs = $(2.94 - 2.60) \times 100 \times 1000 = \34000

Counter Cyclical Payment

- Pays when effective price was less than the target price
- Effective price was equal to the sum of:
 - higher of national average farm price for the marketing year or national commodity program loan rate and
 - direct payment rate for the commodity
- 40% advance payments projected CCP
 - For 2008, after signup
 - For 2009-2010, after the first 180 days of the marketing year
 - No advance payments in 2011 or 2012
- Remaining 60% paid after October 1st

Target Price for CCP

	<u>CY 2008</u>	<u>CY 2009</u>	<u>CYs 2010-12</u>
● Wheat	\$3.92/bu	\$3.92/bu	\$4.17/bu
● Corn	\$2.63/bu	\$2.63/bu	\$2.63/bu
● Rice	\$10.5/cwt	\$10.5/cwt	\$10.5/cwt

Counter Cyclical Payment Example

- If in 2010, the national average farm price for wheat is \$4.00/bu, then
effective price = $4 + 0.52 = 4.52 > 4.17$
CCPs = 0
- If in 2010, the national average farm price for wheat is \$3.50/bu, then
effective price = $3.5 + 0.52 = 4.02$
CCPs $(4.17 - 4.02) \times 100 \times 1000 = \15000

Average Crop Revenue Election (ACRE) Payment

- One-time irrevocable option to choose:
 - CCP, DP (with full payment rates), and MLG/LDPs (with full loan rates) **or**
 - ACRE, DP (with a 20% reduction in payment rates) and MLG/LDPs (with a 30% reduction in loan rates)
- \$40,000 limit on DPs and \$65,000 limit on CCPs and ACRE
- If ACRE is chosen then reduction in DP is added to ACRE limitation
- LDP/MLG's are not limited

ACRE Coverage

- State-based revenue coverage =
90% x benchmark State yield x program guarantee price
 - ACRE benchmark State yield: 5-year Olympic average yield for commodity in the State
 - ACRE program guarantee price: 2-year national average market price received by producers
 - ACRE national average market price: greater of the national average commodity market price received by producers during the 12-month marketing year; or the reduced marketing assistance commodity loan rate.

ACRE Payments

- IF ACRE actual State revenue is less than ACRE program guarantee AND ACRE actual farm revenue is less than the ACRE benchmark farm revenue
- ACRE Payments per commodity equal:
 - 1) $\text{Min}(\text{ACRE program guarantee} - \text{actual State revenue}, 25\% \text{ of ACRE program guarantee}) \times$
 - 2) Planted crop acres: 83.3% in CY 2009-11 and 85% in CY 2012 of farm planted, not to exceed total base acres \times
 - 3) Farm-specific productivity ratio
- ACRE actual State (farm) revenue: actual State (farm) yield \times the 12-month ACRE national average market price
- ACRE benchmark farm revenue: 5-yr Olympic average farm crop yield \times ACRE program guarantee price + crop insurance premiums per acre
- Farm-specific productivity ratio: 5-year Olympic average farm crop yield per planted acre / ACRE benchmark State yield

ACRE Example

- If ACRE benchmark State wheat yield for 2010 is 70bu, and ACRE program guarantee price: \$4/bu
- State based revenue coverage = $90\% \times 70 \times 4 = \252
- If ACRE actual State yield is \$60/bu, revenue, and national price is \$4.1/bu, actual State revenue = $60 \times 4.1 = \$246$
- Farm yield is very low, 50bu.
- IF 5-year Olympic average farm crop yield is 90, farm-specific productivity ratio is: $90 / 70 = 1.3$
- ACRE Payments per commodity equal:
 $(252 - 246) \times 833 \times 1.3 = \64974

CCPs or ACRE

- Depending on correlation between prices, farm and state yields
- CCPs is preferable if downside price risk is the major concern
- ACRE is preferable is downside yield risk dominates
- In a volatile market with significant price swings (with possible high prices), ACRE is preferred to CCPs
- Results are going to be farm specific, size of farm may make a difference

Comments

- More risk management programs are provided by the federal governments to US farmers
- ACRE has revenue insurance feature, that may substitute to revenue insurance programs
 - However, ACRE is a very low level of revenue protection
 - Also, ACRE is state based revenue protection, may leave a large basis risk, depending on how farm yield correlates with state yield
 - ACRE is free, except some opportunity cost of giving up part of DPs and LDPs